CAPITAL INFRA TRUST
(*ERSTWHILE NATIONAL INFRASTRUCTURE TRUST*)

(Registered in the Republic of India as an irrevocable trust set up under the Indian Trusts Act, 1882 on September 25, 2023,pursuant to the Trust Deed read along with Amendment to the Trust Deed dated October 10, 2024 in Gurugram, Haryana, India and registered as an infrastructure investment trust under the Securities and Exchange Board of India (Infrastructure Investment Trusts) Regulations, 2014, as amended, ("**SEBI InvIT Regulations**") on March 7, 2024 having registration number IN/INVIT/23-24/00029. Subsequently, the Trust was issued an updated certificate of registration dated October 16, 2024, bearing registration number IN/InvIT/23-24/0029, pursuant to change of name of the Trust from *"National Infrastructure Trust"* to *"Capital Infra Trust"* in accordance with the SEBI InvIT Regulations.)

Principal place of business and registered office: Unit No. 1401-1403, 14th Floor, Tower B, SAS Tower, Medicity, Sector-38, Gurugram 122001, Haryana, India

Tel: +0124 4920139; **Compliance Officer**: Shubham Jain

E-mail: compliance@capitalinfratrust.com; **Website**: www.capitalinfratrust.com

SPONSOR	INVESTMENT MANAGER	TRUSTEE
Gawar Construction Limited	**Gawar Investment Manager Private Limited**	**Axis Trustee Services Limited**

Capital Infra Trust (*erstwhile National Infrastructure Trust*) (the "**InvIT**" or "**Trust**") is issuing up to [●] Units (*as defined below*) for cash at a price of ₹ [●] per Unit aggregating up to ₹ 15,780.00 million, comprising a fresh issue of up to [●] Units aggregating up to ₹ 10,770.00 million by the Trust (the "**Fresh Issue**") and the Sponsor Selling Unitholder (*as defined below*) is offering up to [●] Units aggregating up to ₹ 5,010.00 million (the "**Offer for Sale**" and together with the Fresh Issue, the "**Offer**").

INITIAL PUBLIC OFFER IN RELIANCE UPON REGULATION 14(4) OF THE SECURITIES AND EXCHANGE BOARD OF INDIA (INFRASTRUCTURE INVESTMENT TRUSTS) REGULATIONS, 2014, AS AMENDED.

The Units are proposed to be listed on the National Stock Exchange of India Limited (the "**NSE**") and BSE Limited (the "**BSE**", together with the NSE, the "**Stock Exchanges**"). In-principle approval for listing of the Units has been received from the BSE and NSE pursuant to their letters, each dated October 24, 2024. BSE is the Designated Stock Exchange. The Offer will constitute at least [●]% of the outstanding Units on a post-Offer basis.

The Price Band and the Minimum Bid Size *(as determined by the Investment Manager in consultation with the Lead Managers and in accordance with the applicable law)* will be announced on the websites of the Trust, the Sponsor, the Investment Manager and the Stock Exchanges, as well as advertised in all editions of Business Standard (*English and Hindi national daily newspaper, with wide circulation*) at least two Working Days prior to the Bid/Offer Opening Date. For further information, see "***Basis for Offer Price***" on page 78.

In case of any revision to the Price Band, the Bid/Offer Period will be extended by at least one Working Day, subject to the total Bid/Offer Period not exceeding 30 days, provided that there shall not be more than two revisions to the Price Band during the Bid/ Offer Period. Any revision to the Price Band and the revised Bid/ Offer Period, if applicable, will be widely disseminated by notification to the Stock Exchanges during the Bid/ Offer Period and by indicating the change on the websites of the Trust, the Sponsor, the Investment Manager and Stock Exchanges.

In case of force majeure, banking strike or similar circumstances, the Bid/ Offer Period may, for reasons to be recorded in writing, be extended by a minimum period of three Working Days, subject to the total Bid/ Offer Period not exceeding 30 days.

The Offer is being made through the Book Building Process and in compliance with the SEBI InvIT Regulations and the SEBI Guidelines, wherein not more than 75% of the Offer shall be available for allocation on a proportionate basis to Institutional Investors, provided that the Investment Manager may, in consultation with the Lead Managers, allocate up to 60% of the Institutional Investor Portion to Anchor Investors on a discretionary basis in accordance with the SEBI InvIT Regulations and the SEBI Guidelines. Further, not less than 25% of the Offer shall be available for allocation on a proportionate basis to Non-Institutional Investors, in accordance with the SEBI InvIT Regulations and the SEBI Guidelines, subject to valid Bids being received at or above the Offer Price.. For details, see "***Offer Procedure***" on page 360.

The Units have not been and will not be registered under the United States Securities Act of 1933, as amended (the "**U.S. Securities Act**") and may not be offered or sold within the United States except pursuant to an exemption from, or in a transaction not subject to, the registration requirements of the U.S. Securities Act and applicable U.S. state securities laws. Accordingly, the Units are only being offered and sold outside the United States in "offshore transactions" as defined in, and in reliance on, Regulation S under the U.S. Securities Act ("**Regulation S**") and the applicable law of the jurisdictions where such offers and sales occur. The Units are transferable only in accordance with the restrictions described under the section titled "***Selling and Transfer Restrictions***" on page 354.

RISKS IN RELATION TO THE OFFER

This being the first issue of units by the Trust, there has been no formal market for the Units. No assurance can be given regarding an active or sustained trading in the Units or regarding the price at which the Units will be traded after listing.

GENERAL RISKS

INVESTMENTS IN UNITS INVOLVE RISKS AND BIDDERS SHOULD NOT INVEST ANY FUNDS IN THE OFFER UNLESS THEY CAN AFFORD TO TAKE THE RISK OF LOSING THEIR ENTIRE INVESTMENT. FOR MAKING AN INVESTMENT DECISION, BIDDERS MUST RELY ON THEIR OWN EXAMINATION OF THE TRUST, THE UNITS, THE OFFER AND THIS OFFER DOCUMENT. BIDDERS ARE ADVISED TO CAREFULLY READ THIS OFFER DOCUMENT, INCLUDING THE SECTIONS "RISK FACTORS" AND "RIGHTS OF UNITHOLDERS" ON PAGES 21 AND 220, RESPECTIVELY, BEFORE MAKING AN INVESTMENT DECISION. THE UNITS HAVE NOT BEEN RECOMMENDED OR APPROVED BY SEBI OR THE STOCK EXCHANGES. SEBI AND THE STOCK EXCHANGES DO NOT GUARANTEE THE ACCURACY OR ADEQUACY OF THE CONTENTS OF THIS OFFER DOCUMENT. BIDDERS ARE ADVISED TO CONSULT THEIR OWN ADVISORS ABOUT THE CONSEQUENCES OF AN INVESTMENT IN THE UNITS BEING ISSUED PURSUANT TO THIS OFFER DOCUMENT.

INVESTMENT MANAGER'S, SPONSOR'S AND THE SPONSOR SELLING UNITHOLDER'S ABSOLUTE RESPONSIBILITY

The Investment Manager and the Sponsor, severally, having made all reasonable inquiries, accept responsibility for, and confirm that this Offer Document contains all information with regard to the Trust and this Offer, which is material in the context of this Offer, that the information contained in this Offer Document is true and correct in all material respects 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 Offer Document as a whole or any of such information or the expression of any such opinions or intentions misleading in any material respect. Further, the Sponsor Selling Unitholder accepts responsibility for and confirms only the statements specifically confirmed or undertaken by the Sponsor Selling Unitholder in this Offer Document, to be true and correct in all material respects and not misleading in any material respect, to the extent of the information specifically pertaining to the Sponsor Selling Unitholder and the respective proportion of the Units being sold by the Sponsor Selling Unitholder through the Offer for Sale.

LEAD MANAGERSS TO THE OFFER		REGISTRAR TO THE OFFER
SBI Capital Markets Limited 1501, 15th Floor, A & B Wing, Parinee Crescenzo G Block, Bandra Kurla Complex Bandra East, Mumbai 400 051 Maharashtra, India **Tel:** +91 22 4196 8300 **E-mail:** project3g_fy25@sbicaps.com **Website:** www.sbicaps.com **Contact Person:** Mandeep Singh **Investor grievance E-mail:** investor.relations@sbicaps.com **SEBI Registration No.:** INM000003531	**HDFC Bank Limited** Investment Banking Group, Unit No. 701, 702 and 702-A, 7th floor Tower 2 and 3, One International Centre Senapati Bapat Marg, Prabhadevi, Mumbai 400 013 Maharashtra, India **Tel:** +91 22 3395 8233 **E-mail:** capitalinfra.ipo@hdfcbank.com **Website:** www.hdfcbank.com **Contact Person:** Sanjay Chudasama/Bharti Ranga **Investor Grievance E-mail:** investor.redressal@hdfcbank.com **SEBI Registration No:** INM000011252	**KFin Technologies Limited** Selenium, Tower-B Plot 31 and 32, Financial District Nanakramguda, Serilingampally, Hyderabad 500 032 Telangana, India **Tel:** +91 49 6716 2222 **E-mail:** nationalinfra.units@kfintech.com **Website:** www.kfintech.com **Contact Person:** M.Murali Krishna **Investor Grievance E-mail:** einward.ris@kfintech.com **SEBI Registration No.:** INR000000221

BID/ OFFER PROGRAM

BID/ OFFER OPENS ON: TUESDAY, JANUARY 7, 2025*	BID/ OFFER CLOSES ON: THURSDAY, JANUARY 9, 2025**

**The Investment Manager may, in consultation with the Lead Managers, consider participation by Anchor Investors in accordance with the SEBI InvIT Regulations and SEBI Guidelines. The Anchor Investor Bidding Date shall be one Working Day prior to the Bid/Offer Opening Date.*

***The Investment Manager may, in consultation with the Lead Managers, consider closing the Bid/ Offer Period for QIBs one Working Day prior to the Bid/ Offer Closing Date in accordance with the SEBI Guidelines.*

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NOTICE TO THE INVESTORS

The statements contained in this Offer Document relating to the Trust and the Units are, in all material respects, true and accurate and not misleading. The opinions and intentions expressed in this Offer Document with regard to the Trust and the Units are honestly held and have been reached after considering all relevant circumstances. Such opinions and intentions are based on reasonable assumptions and information presently available to each of the Sponsor, Trustee and the Investment Manager. There are no material facts in relation to the Trust and the Units, the omission of which would, in the context of the Offer, make any statement in this Offer Document misleading in any material respect. Further, the Investment Manager and Sponsor have made all reasonable enquiries to ascertain such facts and to verify the accuracy of all such information and statements.

Bidders acknowledge that they have neither relied on the Lead Managers nor any of their respective shareholders, employees, counsel, officers, directors, representatives, agents or affiliates in connection with such person's investigation of the accuracy of such information or such person's investment decision, and each such person must rely on his/her own examination of the Trust and the merits and risks involved in investing in the Units. Bidders should not construe the contents of this Offer Document as legal, business, tax, accounting or investment advice.

No person is authorized to give any information or to make any representation not contained in this Offer Document and any information or representation not so contained must not be relied upon as having been authorized by or on behalf of the Trust or by or on behalf of the Lead Managers.

SEBI Disclaimer

It is to be distinctly understood that submission of Offer Document to SEBI should not in any way be deemed or construed that the same has been cleared or approved by SEBI. SEBI does not take any responsibility either for the financial soundness of any scheme or the project for which the Issue is proposed to be made or for the correctness of the statements made or opinions expressed in this Offer Document.

NSE Disclaimer

As required, a copy of this Offer Document has been submitted to National Stock Exchange of India Limited (hereinafter referred to as NSE). NSE has, vide its letter Ref.: NSE/LIST/C/2024/1177 dated October 24, 2024, given permission to the Issuer to use the Exchange's name in this Offer Document as one of the stock exchanges on which this Issuer's units are proposed to be listed. The Exchange has scrutinized the draft offer document for its limited internal purpose of deciding on the matter 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 offer document has been cleared or approved by NSE of 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 offer document; nor does it warrant that this Issuer's units will be listed or will continue to be listed on the Exchange; nor does it take any 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 offer document has responsibility for the financial or other soundness of this InvIT, its Sponsor, its Investment Manager or any project of this InvIT.

Every person who desires to apply for or otherwise acquire any units of this InvIT 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.

BSE Disclaimer

BSE Limited (the "**Exchange**") has given *vide* its letter dated October 24, 2024, permission to this Trust to use the Exchange's name in this offer document as one of the stock exchanges on which this Units of this Trust are proposed to be listed. The Exchange has scrutinized this offer document for its limited internal purpose of deciding on the matter of granting the aforesaid permission to this Trust. The Exchange does not in any manner: -

- warrant, certify or endorse the correctness or completeness of any of the contents of this offer document; or
- warrant that the Units of the Trust will be listed or will continue to be listed on the Exchange; or
- take any responsibility for the financial or other soundness of this Trust, its Investment Manager, its Sponsor(s), its Trustee or Project Manager(s);

and it should not for any reason be deemed or construed that this offer document has been cleared or approved by the Exchange. Every person who desires to apply for or otherwise acquires the Units of this Trust 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 for any other reason whatsoever.

Notice to Prospective Investors in the United States

The Units to be issued pursuant to the issue have not been approved, disapproved or recommended by any regulatory authority in any jurisdiction, including the United States Securities and Exchange Commission ("**SEC**"), any other federal or state authorities in the United States, the securities authorities of any non-United States jurisdiction or any other United States or non-United States regulatory authority. Further, the foregoing authorities have not confirmed the accuracy or determined the adequacy of this Offer Document or approved or disapproved the Units. Any representation to the contrary is a criminal offence in the United States and may be a criminal offence in other jurisdictions. In making an investment decision, investors must rely on their own examination of the Trust and the terms of the Offer, including the merits and risks involved. The Units have not been and will not be registered under the U.S. Securities Act or any other applicable state securities laws of the United States and, unless so registered, may not be offered or sold within the United States except pursuant to an exemption from, or in a transaction not subject to, the registration requirements of the Securities Act and applicable state securities laws. Accordingly, the Units are only being offered and sold outside the United States in "offshore transactions" as defined in, and in reliance on, Regulation S and the applicable law of the jurisdictions where such offers and sales occur. The Units are transferable only in accordance with the restrictions described under the section "***Selling and Transfer Restrictions***" on page 354 of this Offer Document.

Notice to Investors in certain other jurisdictions

The distribution of this Offer Document and the issue of the Units in certain jurisdictions may be restricted by law. As such, this Offer Document 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 authorised 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 Managers which would permit an issue of the Units or distribution of this Offer Document in any jurisdiction other than India. Accordingly, the Units may not be offered or sold, directly or indirectly, and neither this Offer Document nor any Offer 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.

Disclaimer

This Offer Document does not, directly or indirectly, relate to any invitation, offer or sale of any securities, instruments or loans (including listed non-convertible debentures or bonds, if any) that may be issued by Trust after the listing of the Units. Any prospective investor investing in such invitation, offer or sale of securities by Trust should consult its own advisors before taking any decision in relation thereto. Each prospective investor acknowledges that neither the Lead Managers, nor their associates or affiliates have any responsibility or liability for such invitation, offer or sale of securities by Trust.

IMPORTANT NOTICE

THE VALUE OF UNITS AND THE INCOME DERIVED FROM THEM MAY FALL AS WELL AS RISE. UNITS ARE NOT OBLIGATIONS OF, DEPOSITS IN, OR GUARANTEED BY, THE TRUST, THE TRUSTEE, THE SPONSOR, THE INVESTMENT MANAGER, THE LEAD MANAGERS OR ANY OF THEIR RESPECTIVE SHAREHOLDERS, EMPLOYEES, COUNSEL, OFFICERS, DIRECTORS, REPRESENTATIVES, AGENTS, ASSOCIATES OR AFFILIATES. AN INVESTMENT IN UNITS IS SUBJECT TO INVESTMENT RISKS, INCLUDING THE POSSIBLE LOSS OF THE PRINCIPAL AMOUNT INVESTED. FURTHER, LISTING OF THE UNITS ON THE STOCK EXCHANGES DOES NOT GUARANTEE A LIQUID MARKET FOR THE UNITS. INVESTORS HAVE NO RIGHT TO REQUEST THE TRUST, THE TRUSTEE, THE SPONSOR OR THE INVESTMENT MANAGER OR ANY OF THEIR RESPECTIVE SHAREHOLDERS, EMPLOYEES, COUNSEL, OFFICERS, DIRECTORS, REPRESENTATIVES, AGENTS, ASSOCIATES OR AFFILIATES TO REDEEM THEIR UNITS WHILE THE UNITS ARE LISTED, UNLESS OTHERWISE PERMITTED BY APPLICABLE LAW. THE PERFORMANCE OF ANY OF THE LISTED UNITS OF THE TRUST IS NOT NECESSARILY INDICATIVE OF THE FUTURE PERFORMANCE OF UNITS OF THE TRUST.

DEFINITIONS AND ABBREVIATIONS

This Offer Document uses certain definitions and abbreviations, which unless the context otherwise indicates or implies shall have the meanings ascribed to such terms herein below which you should consider when reading the information contained herein.

References to any legislation, act, regulation, rule, guideline, circular, notification, clarification or policy shall be to such legislation, act, regulation, rule, guideline, circular, notification, clarification or policy as amended, supplemented, or re-enacted from time to time and any reference to a statutory provision shall include any subordinate legislation made under that provision.

The words and expressions used in this Offer Document, but not defined herein shall have the meaning ascribed to such terms under the SEBI Regulations, SEBI Guidelines, the SEBI Act, the Companies Act, 2013, the Depositories Act, and the rules and regulations notified thereunder.

*Notwithstanding the foregoing, the terms not defined but used in the sections "**Special Purpose Combined Financial Statements**", "**Projections of Revenue from Operations and Cash Flows from Operating Activities**", "**Statement of Possible Tax Benefits**" and "**Material Litigation and Regulatory Action**" on pages* 227, 379, 87 *and* 337, *respectively, shall have the meanings ascribed to such terms in those respective sections.*

In this Offer Document, unless the context otherwise requires, a reference to "we", "us" and "our" refers to the Trust and the Project SPVs on a consolidated basis. For the sole purpose of the Special Purpose Combined Financial Statements, a reference to "we", "us" and "our" refers to the Project SPVs on a combined basis.

Trust Related Terms

Term	Description
Acquired SPVs	SNHL and SBHPL
Acquired SPVs Concession Agreements	Collectively, the concession agreements entered into between the Acquired SPVs and the NHAI. For details, see "***Summary of Concession Agreements***" on page 177
Amendment to the Investment Management Agreement	Amendment to the Investment Management Agreement dated October 7, 2024, entered between, the Trustee (on behalf of the Trust), the Investment Manager and the Initial SPVs.
Amendment to the Project Management Agreement	Amendment to the Project Management Agreement dated December 6, 2024, entered between the Trustee (*on behalf of the Trust*), the Project Manager, the Investment Manager and the Project SPVs
Amendment to the Trust Deed	Amendment to the Trust Deed dated October 10, 2024, entered between, the Sponsor and the Trustee.
Associate	Associate shall have the meaning set forth in Regulation 2(1)(b) of the SEBI InvIT Regulations
"Auditor" or "Statutory Auditor"	Walker Chandiok & Co. LLP, Chartered Accountants, statutory auditors of the Trust
Audit Committee	The audit committee of the IM Board, as described in the section titled *"**Corporate Governance−Committees of the IM Board–Audit Committee**"* on page 197
Bangalore Highways Asset	Road from km 287.52 of NH 209 to km 461.55 of NH 209 via BRT Tiger Reserve Boundary to Bangalore section under National Highways Development Project Phase- IV for the stretch of 164.34 km (the original length was 170.92 km and the descoped length is 6.58 km resulting into the revised project length of 164.34 km) in Karnataka by two/ four laning on a HAM basis
Borrowing Policy	The borrowing policy of the Trust adopted by the Investment Manager pursuant to a resolution of the IM Board dated August 20, 2024
Compliance Officer	The compliance officer of the Trust, i.e. Shubham Jain. For details, see "***Parties to the Trust−The Investment Manager−Gawar Investment Manager Private Limited−Brief profiles of the key personnel of the Investment Manager***" beginning on page 129
Concession Agreements	Collectively, the concession agreements entered into between the Project SPVs and the NHAI. For details, see "***Summary of Concession Agreements***" on page 177
Dewas Ujjain Highway Asset	Road from km 0.00 of NH 148 to km 19.733 of NH 148, the road from km 19.733 of NH 148 to km 26.90 of NH 148 and the road from km 0.00 of NH 148 to km 14.52 via Dewas Ujjain Section and thereof for the stretch of 41.42 km in Madhya Pradesh by four laning on a HAM basis
Distribution Policy	The distribution policy of the Trust adopted by the Investment Manager pursuant to a resolution of the IM Board dated August 20, 2024
DUHPL	Dewas Ujjain Highway Private Limited
DUHPL Concession Agreement	Concession agreement executed between DUHPL and NHAI dated December 11, 2020 for DBOT of Dewas Ujjain Highway Asset on a HAM basis
Formation Transactions	The transactions pursuant to which the Trust will acquire the Project SPVs and the Initial Portfolio Assets prior to the Allotment
Gawar SPVs	Project SPVs excluding GBHPL and GNHPL II
GBHPL	Gawar Bangalore Highways Private Limited
GBHPL Concession Agreement	SBHPL Concession Agreement, as amended and read with GBHPL Endorsement Agreement
GBHPL Endorsement Agreement	An endorsement agreement dated February 13, 2023 was entered by and among NHAI, SBHPL, GBHPL and State Bank of India wherein the concession rights, entitlements, interests, obligations and liabilities of SBHPL under the SBHPL Concession Agreement were transferred to GBHPL
GCL	Gawar Construction Limited
GKBHPL	Gawar Khajuwala Bap Highway Private Limited

Term	Description
GKBHPL Concession Agreement	Concession agreement executed between GKBHPL and NHAI dated September 28, 2018 for the DBOT of the Khajuwala Bap Highway Asset on a HAM basis
GKNHPL	Gawar Kiratpur Nerchowk Highway Private Limited
GKNHPL Concession Agreement	Concession agreement executed between GKNHPL and NHAI dated November 26, 2020 for the DBOT of the Kiratpur Nerchowk Highway Asset on a HAM basis
GNHPL	Gawar Narnaul Highway Private Limited
GNHPL Concession Agreement	Concession agreement executed between GNHPL and NHAI dated February 28, 2019 for the DBOT of the Narnaul Highway Asset on a HAM basis
GNHPL II	Gawar Nainital Highways Private Limited
GNHPL II Concession Agreement	SNHL Concession Agreement, as amended and read with GNHPL II Endorsement Agreement and GNHPL II Settlement Agreement.
GNHPL II Endorsement Agreement	An endorsement agreement dated July 14, 2023, was entered by and among NHAI, SNHL, GNHPL II and IndusInd Bank Limited wherein the concession rights, entitlements, interests, obligations and liabilities of SNHL under the SNHL Concession Agreement were transferred to GNHPL II
GNHPL II Settlement Agreement.	GNHPL II settlement agreement dated October 15, 2024, entered between, GNHPL II and NHAI, to waive the restriction under the endorsement agreement dated July 14, 2023, and allow NHAI to issue a provisional completion certificate for work completed up to July 11, 2024
GRJHPL	Gawar Rohna Jhajjar Highway Private Limited
GRJHPL Concession Agreement	Concession agreement executed between GRJHPL and NHAI dated May 9, 2018 for the DBOT of the Rohna Jhajjar Highway Asset on a HAM basis
GRSHPL	Gawar Rohna Sonepat Highways Private Limited
GRSHPL Concession Agreement	Concession agreement executed between GRSHPL and NHAI dated May 27, 2019 for the DBOT of Rohna Sonepat Highways Asset on a HAM basis
Hardiya Hasanpur Highway Asset	Road from km 54.405 of NH 31 (New NH 20) to km 101.630 of NH 31(New NH 20) via Rajauli-Bakhtiyarpur Section for the stretch of 47.225 km in Bihar by four laning on a HAM basis
HDFC	HDFC Bank Limited
HHHPL	Hardiya Hasanpur Highway Private Limited
HHHPL Concession Agreement	Concession agreement executed between HHHPL and NHAI dated October 28, 2020 for the DBOT of the Hardiya Hasanpur Highway Asset on a HAM basis
Initial Portfolio Assets	Assets proposed to be held directly or indirectly by the Trust in terms of the SEBI InvIT Regulations, in this case being, collectively: (i) Dewas Ujjain Highway Asset; (ii) Bangalore Highways Asset; (iii) Khajuwala Bap Highway Asset; (iv) Kiratpur Nerchowk Highway Asset; (v) Narnaul Highway Asset; (vi) Nainital Highways Asset; (vii) Rohna Jhajjar Highway Asset; (viii) Rohna Sonepat Highways Asset; and (ix) Hardiya Hasanpur Highway Asset.
IM Board	The board of directors of the Investment Manager
Investment Management Agreement	Investment management agreement dated November 10, 2023 entered between the Trustee (on behalf of the Trust) and the Investment Manager read with Amendment to the Investment Management Agreement
"Investment Manager" or "IM"	The investment manager of the Trust, being Gawar Investment Manager Private Limited
InvIT or Trust	Capital Infra Trust (*erstwhile National Infrastructure Trust*)
InvIT Committee	The InvIT committee of the IM Board, as described in *"**Corporate Governance–Committees of the IM Board–InvIT Committee**"* on page 196
InvIT Assets	InvIT assets as defined in Regulation 2(l)(zb) of the SEBI InvIT Regulations, in this case being the assets held by the Project SPVs
Khajuwala Bap Highway Asset	Road from km 0.00 of NH 911 to km 30.812 of NH 911 via Khajuwala- Poogal Section and the road from km 1.430 of NH 911 to km 182.725 of NH 911 via Poogal Dantour Jaggasar Gokul Goddu Ranjeetpura Charanwala Naukh Bap section under Bharatmala Pariyojna for the stretch of 212.107 km in Rajasthan by two laning on a HAM basis.
Kiratpur Nerchowk Highway Asset	Road from km 12.750 of NH 21 to km 26.500 of NH 21, km 126.500 to km 158.500 including ACC link road from km 0.00 of NH 21 to km 2.003 of NH 21 via Kiratpur to Nerchowk Section under Greenfield Alignment (excluding Sunder Nagar Bypass) for the stretch of 47.753 km in Himachal Pradesh by four laning on a HAM basis
On-Lending Agreement	An agreement to be entered by and between the Trust and the Project SPVs for an aggregate amount of ₹ [●] million from the Offer Proceeds to provide loans to the Project SPVs to repay/ prepay external borrowings from financial lenders
Nainital Highways Asset	Road from km 42.791 of NH 87 (New NH 9, 109) to km 88.00 of NH 87 (New NH 9, 109) via Rampur Kathgodam Section under NHDP Phase- III for the stretch of 49.78 km in Uttarakhand by four laning on a HAM basis
Narnaul Highway Asset	Road from km 39.400 of NH-148B to km 8.500 of NH- 148B at Paniyala Mor (at NH-48 junction) for a stretch of 34.000 km and the road from km 68.000 of NH- 11 to km 79.800 of NH-11 at Nizampur Link Road of 2.76 km and Narnaul Bypass crossing to Pacheri Kalan (Rajasthan/Haryana Border) in Haryana by 4/6 laning on a HAM basis

Term	Description
NCDs	Senior, rated, listed, secured, redeemable, non-convertible debentures issued by two Project SPVs, namely (i) GKBHPL; and (ii) GNHPL. For details, see "***Financial Indebtedness and Deferred Payments***", on page 321
Nomination and Remuneration Committee	The nomination and remuneration committee of the IM Board, as described in *"**Corporate Governance−Committees of the IM Board−Nomination and Remuneration Committee**"* on page 199
Parties to the Trust	The Sponsor Group, the Trustee, the Investment Manager and the Project Manager
"Project SPVs" or "Group SPV"	A special purpose vehicle, as defined under Regulation 2(1)(zy) of the SEBI InvIT Regulations, in this case being: (i) DUHPL; (ii) GBHPL; (iii) GKBHPL; (iv) GKNHPL; (v) GNHPL; (vi) GNHPL II; (vii) GRJHPL; (viii) GRSHPL; and (ix) HHHPL.
Project Management Agreement	Project management agreement dated August 23, 2024, entered into among the Trustee (*on behalf of the Trust*), the Project Manager, the Investment Manager and the Project SPVs read with Amendment to the Project Management Agreement
Project Manager	The project manager of the Trust, being Gawar Construction Limited
Projections of Revenue from Operations and Cash Flow from Operating Activities	Projections of revenue from operations and cash flow from operating activities of the Trust (*consisting of the Trust and the Project SPVs*) and the Project SPVs, individually, for the years ending March 31, 2025, March 31, 2026 and March 31, 2027 along with the basis of preparation and other explanatory information and significant assumptions
Related Parties	Related parties as defined under Regulation 2(1)(zv) of the SEBI InvIT Regulations
Risk Management Committee	The risk management committee of the IM Board, as described in "***Corporate Governance – Committees of the IM Board – Risk Management Committee***" on page 200
ROFO Agreement	The right of first offer agreement dated December 24, 2024, entered into among the Sponsor, the Trust (*acting through the Trustee*) and the Investment Manager
ROFO Securities	The fully paid-up equity shares, debt securities and other similar securities of the ROFO SPVs, held by the Sponsor (*along with its nominees*)
ROFO SPVs	The special purpose vehicles owning and operating road and highway projects and in which the Sponsor and its nominees have, directly or indirectly, legal and beneficial ownership of at least 51% of the paid-up share capital of such special purpose vehicles, or such other minimum shareholding as may be required under the SEBI InvIT Regulations in order to qualify as an 'SPV' of the Trust and shall include, but not limited to: (i) Hasanpur Bakhtiyarpur Highway Private Limited; (ii) Gawar Kangra Highways Private Limited; (iii) Korba Highway Private Limited; (iv) Gawar Sihuni Highway Private Limited; (v) Gawar Pathankot Highways Private Limited; (vi) Gawar Shimla Highway Private Limited; (vii) Gawar Bhiwani Highway Private Limited; (viii) Gawar Rudrapur Highway Private Limited; (ix) Gawar Fazilka Highway Private Limited; (x) Gawar Bijnor Highways Private Limited; (xi) Gawar Mandi Highways Private Limited; (xii) Gawar KBNC Highway Private Limited; (xiii) Gawar Basukinath Highways Private Limited; (xiv) Gawar Pathankot Mandi Highway Private Limited; (xv) JRR Highways Private Limited; (xvi) Gawar Kim Expressway Private Limited; and (xvii) Gawar Waranga Highways Private Limited
Rohna Jhajjar Highway Asset	Road from km 44.80 of NH-334B to km 80.250 of NH-334B via Rohna/ Hassangarh to Jhajjar section for the stretch of 35.45 kms in Haryana by four laning on a HAM basis
Rohna Sonepat Highways Asset	Road from km 0.00 of NH-334B to km 44.80 of NH-334B via Uttar Pradesh /Haryana border to Rohna section for the stretch of 40.500 km in Haryana by four laning on a HAM basis
RPT Policy	The policy on related party transactions of the Trust adopted by the Investment Manager pursuant to a resolution of the IM Board dated August 20, 2024
SBHPL	Sadbhav Bangalore Highway Private Limited
SBHPL Concession Agreement	Concession agreement executed between SBHPL and NHAI dated December 8, 2016 for of the Bangalore Highways Asset
SBICAPS	SBI Capital Markets Limited
"Sponsor" or the "Sponsor Selling Unitholder"	Gawar Construction Limited

Term	Description
Share Purchase Agreements	Collectively, the share purchase agreements dated December 26, 2024, entered between the Sponsor, the Trust (acting through the Trustee), the Investment Manager and each of the Project SPVs, for transfer of shares of the Project SPVs held by the Sponsor and its nominees to the Trust, in exchange for the consideration as specified therein. For further details, refer to the section titled "***Formation Transactions in Relation to the Trust – Acquisition of the Project SPVs by the Trust***" on page 109
SNHL	Sadbhav Nainital Highway Limited (*formerly known as Sadbhav Nainital Highway Private Limited)*
SNHL Concession Agreement	Concession agreement executed between SNHL and NHAI dated June 2, 2016 for DBOT of the Nainital Highways Asset on a HAM basis
Special Purpose Combined Financial Statements	Special purpose combined financial statements of the Trust and Group SPV comprising of the special purpose combined balance sheets as at September 30, 2024, March 31, 2024, March 31, 2023 and March 31, 2022; the special purpose combined statements of profit and loss (including other comprehensive income); the special purpose combined cash flow statements; and the special purpose combined statements of changes in equity for the six months period ended September 30, 2024 and financial year ended March 31, 2024, March 31, 2023 and March 31, 2022; special purpose combined statements of net assets at fair value as at September 30, 2024; special purpose combined statements of total returns at fair value for six months period ended September 30, 2024 and for the financial year March 31, 2024, and notes to the combined financial statements including a material accounting policy information and other explanatory information prepared in accordance with the requirements of the SEBI InvIT Regulations and Ind AS on which the Auditors have issued an audit report dated November 8, 2024.
Sponsor Group	Sponsor group as defined under Regulation 2(1)(zxc) of the SEBI InvIT Regulations. For details of the Sponsor Group, refer to the section titled, "***Parties to the Trust – The Sponsor Group***" on page 114
SPV(s)	Special purpose vehicles, as defined in Regulation 2(l)(zy) of the SEBI InvIT Regulations, in this case the Project SPVs
Stakeholders' Relationship Committee	The stakeholders' relationship committee of the IM Board, as described in the section titled *"**Corporate Governance – Committees of the IM Board – Stakeholders' Relationship Committee**"* on page 200
Technical Consultant	Cube Highways Technologies Private Limited
Technical Reports	Technical consultant reports dated July, 2024 and approved by the IM Board on August 20, 2024 (*for each of the Project SPVs*), concerning the Initial Portfolio Assets, which are contained in this Offer Document as included in Annexure II beginning on page 504
Trust NCD(s)	Senior secured rated listed redeemable non-convertible debentures proposed to be issued by the Trust, to certain external lenders post listing of the Units of the Trust. For details, see "***Financial Indebtedness and Deferred Payments – Trust Borrowing - Principal terms of the borrowing to be availed by the Trust from external lender****"* on page 326
Trust Deed	Trust deed dated September 25, 2023, executed between the Sponsor and the Trustee, read with Amendment to the Trust Deed.
Trust Documents	The Trust Deed, the Investment Management Agreement, the Project Management Agreement, the Share Purchase Agreements and any other document, letter or agreement with respect to the Trust or the Units, executed for the purpose of the Trust, the offer documents and such other documents in connection therewith, as originally executed and amended, modified, supplemented and restated from time to time, together with their respective annexures, schedules and exhibits, if any
Trust Loan(s)	Unsecured rupee term loans of an estimated amount of ₹ [●] million proposed to be provided by the Trust into the Project SPVs from the Net Proceeds. For details, see "***Use of Proceeds – Providing loans to the Project SPVs for repayment of unsecured loans availed by the Project SPVs from the Sponsor****"* on page 81
Trustee	The trustee of the Trust, being, Axis Trustee Services Limited
Unitholder(s)	Any Person or entity who holds Units (as hereinafter defined)
Unit	An undivided beneficial interest in the Trust, and such units together represent the entire beneficial interest in the Trust
UPSI Policy	The policy on unpublished price sensitive information and dealing in units by the Parties to the Trust, adopted by the Investment Manager pursuant to a resolution of the IM Board dated August 20, 2024
Valuation Report	The valuation report dated November 8, 2024, issued by the Valuer, which sets out their opinion as to the fair enterprise value of the Initial Portfolio Assets as on September 30, 2024, which is set out in Annexure I to this Offer Document beginning on page 406
Valuer	S. Sundararaman, Registered Valuer

Offer Related Terms

Term	Description
Acknowledgement Slip	The slip or document issued by the Designated Intermediary to a Bidder as proof of registration of the Bid cum Application Form
Allocated/ Allocation	Allocation of Units, following the determination of the Offer Price by the Investment Manager, in consultation with the Lead Managers, to Bidders on the basis of the Application Form submitted by the Bidder
Allot/ Allotment/ Allotted	Unless the context otherwise requires, the issue and allotment of Units pursuant to the Offer

Term	Description
Allotment Advice	Note, advice or intimation of Allotment sent to the Bidders who have been or are to be Allotted Units after the Basis of Allotment has been approved by the Designated Stock Exchange
Allottees	Bidders to whom Units are Allotted
Amendment to the Offer Agreement	Amendment to the Offer Agreement dated December 10, 2024, entered between the Trust (*acting through the Trustee*), the Investment Manager, the Trustee, the Sponsor and the Lead Managers.
Amendment to the Registrar Agreement	Amendment to the Registrar Agreement dated December 6, 2024, entered between the Registrar to the Offer, the Trustee (on behalf of the Trust), the Investment Manager and the Sponsor.
Anchor Investor	An Institutional Investor, making an application of a value of at least ₹ 100 million, applying under the Anchor Investor Portion in accordance with the requirements specified in the SEBI InvIT Regulations and the SEBI Guidelines in terms of this Offer Document
Anchor Investor Allocation Price	Price at which Units will be allocated to Anchor Investors in terms of this Offer Document, decided by the Investment Manager in consultation with the Lead Managers
Anchor Investor Application Form	The form used by an Anchor Investor to make a Bid in the Anchor Investor Portion and which will be considered as an application for Allotment in terms of this Offer Document
Anchor Investor Bidding Date	One Working Day prior to the Bid/Offer Opening Date, on which Bids by Anchor Investors are to be submitted and allocation to Anchor Investors shall be completed
Anchor Investor Portion	Not more than 60% of the Institutional Investor Portion, which may be allocated by the Investment Manager in consultation with the Lead Managers on a discretionary basis
Anchor Investor Offer Price	Final price at which Units will be Allotted to Anchor Investors in terms of this Offer Document and the Final Offer Document, which price will be equal to or higher than the Offer Price but not higher than the Cap Price. The Anchor Investor Offer Price will be decided by the Investment Manager in consultation with the Lead Managers
Application Supported by Blocked Amount or ASBA	An application, whether physical or electronic, used by ASBA Bidders to make a Bid by authorizing an SCSB to block the Bid Amount in the ASBA Account
ASBA Account	A bank account maintained with an SCSB and specified in the ASBA Form for blocking the Bid Amount mentioned in the ASBA Form
ASBA Bid	A Bid made by an ASBA Bidder including all revisions and modifications thereto as permitted under the SEBI InvIT Regulations and SEBI Guidelines
ASBA Bidder	All Bidders other than Anchor Investors
ASBA Form	An application form, whether physical or electronic, used by ASBA Bidders which will be considered as the application for Allotment in terms of this Offer Document and the Final Offer Document
Basis of Allotment	The basis on which Units will be Allotted to successful Bidders under the Offer and which is described in "***Offer Procedure***" on page 360
Bid	An indication to make an offer during the Bid/Offer Period by an ASBA Bidder pursuant to submission of the ASBA Form, or on the Anchor Investor Bidding Date by an Anchor Investor pursuant to submission of the Anchor Investor Application Form, to subscribe to or purchase Units of the Trust at a price within the Price Band, including all revisions and modifications thereto as permitted under the SEBI InvIT Regulations and SEBI Guidelines
Bid Amount	The highest value of optional Bids indicated in the Bid cum Application Form and payable by the Bidder or blocked in the ASBA Account of the ASBA Bidder, as the case may be, upon submission of the Bid in the Offer
Bid cum Application Form	The Anchor Investor Application Form or the ASBA Form, as the context requires
Bid/Offer Closing Date	Except in relation to any Bids received from the Anchor Investors, the date after which the Designated Intermediaries will not accept any Bids, being Thursday, January 9, 2025, which will be published in (i) all editions of Business Standard (*English and Hindi national daily newspaper, with wide circulation*)
Bid/Offer Opening Date	Except in relation to any Bids received from the Anchor Investors, the date on which the Designated Intermediaries shall start accepting Bids, being Tuesday, January 7, 2025, which will be published in (i) all editions of Business Standard (*English and Hindi national daily newspaper, with wide circulation*)
Bid/ Offer Period	Period between the Bid/Offer Opening Date and the Bid/ Offer Closing Date, inclusive of both days, during which Bidders, other than Anchor Investors can submit their Bids, including any revisions thereof
Bidder	Any prospective investor who makes a Bid pursuant to the terms of this Offer Document and the Bid cum Application Form and unless otherwise stated or implied, includes an Anchor Investor.
Bidding Centres	Centres at which the Designated Intermediaries shall accept ASBA Forms, i.e. Designated SCSB Branch for SCSBs, Specified Locations for Syndicate, Broker Centres for Registered Brokers, Designated RTA Locations for RTAs and Designated CDP Locations for CDPs
Book Building Process	The book building process, as provided in Part A of Schedule XIII of the SEBI ICDR Regulations
Broker Centres	Broker centres notified by the Stock Exchanges where Bidders can submit the ASBA Forms to a Registered Broker. The details of such broker centres, along with the names and contact details of the Registered Brokers are available on the websites of the respective Stock Exchanges (www.bseindia.com and www.nseindia.com)
Cash Escrow and Sponsor Bank Agreement	Agreement dated December 24, 2024, entered into amongst the Trustee (*on behalf of the Trust*), the Investment Manager, the Registrar to the Offer, the Escrow Collection Bank, the Public Offer Account Bank, the Refund Bank, Syndicate Member and the Lead Managers for, among other things,

Term	Description
	collection of the Bid Amounts and for remitting refunds, if any, of the amounts collected, to the Bidders
Cap Price	The higher end of the Price Band, being ₹ [●] per Unit, above which the Offer Price will not be finalized and above which no Bids will be accepted
Client ID	Client identification number maintained with one of the Depositories in relation to a demat account
Confirmation of Allocation Note or CAN	Notice or intimation of allocation of Units sent to Anchor Investors who have been allocated Units, after the Anchor Investor Bidding Date
Collecting Depository Participant or CDP	A depository participant as defined under the Depositories Act, registered with SEBI and who is eligible to procure Bids at the Designated CDP Locations in terms of circular no. CIR/CFD/POLICYCELL/11/2015 dated November 10, 2015 issued by SEBI
Closing Date	Date on which Allotment shall be made, i.e. on or about Wednesday, January 15, 2025
Demographic Details	Details of the Bidders including the Bidder's address, name of the Bidder's father/husband, investor status, occupation and bank account details, PAN, DP ID and Client ID
Depository Participant or DP	A depository participant as defined under the Depositories Act, 1996
Designated CDP Locations	Such locations of the CDPs where Bidders can submit the ASBA Forms. The details of such Designated CDP Locations, along with names and contact details of the Collecting Depository Participants eligible to accept Bid cum Application Forms are available on the respective websites of the Stock Exchanges (www.bseindia.com and www.nseindia.com)
Designated Date	The date on which funds are transferred from the Escrow Accounts and the amounts blocked by the SCSBs are transferred from the ASBA Accounts, as the case may be, to the Public Offer Account or the Refund Account, as appropriate
Designated Intermediaries	Syndicate, sub-syndicate/agents, SCSBs, Registered Brokers, CDPs and RTAs, who are authorized to collect ASBA Forms from the ASBA Bidders, in relation to the Offer
Designated RTA Locations	Such locations of the RTAs where Bidders can submit ASBA Forms to RTAs. The details of such Designated RTA Locations, along with names and contact details of the RTAs eligible to accept Bid cum Application Forms are available on the respective websites of the Stock Exchanges (www.bseindia.com and www.nseindia.com)
Designated SCSB Branches	Such branches of the SCSBs which shall collect the ASBA Forms, a list of which is available on the website of SEBI at https://www.sebi.gov.in/sebiweb/other/OtherAction.do?doRecognised=yes or at such other website as may be prescribed by SEBI from time to time
Designated Stock Exchange	BSE
DP ID	Depository Participant's Identification
Draft Offer Document	The draft offer document dated August 26, 2024, issued in accordance with the SEBI InvIT Regulations and SEBI Guidelines, which did not contain complete particulars of the price at which the Units will be Allotted and the size of the Offer, read along with addendum to the Draft Offer Document dated October 17, 2024, or any addenda or corrigenda thereto
Eligible NRI(s)	NRI(s) from jurisdictions outside India where it is not unlawful to make an offer or invitation under the Offer and in relation to whom the ASBA Form and this Offer Document will constitute an invitation to subscribe to the Units
Escrow Accounts	'No-lien' and 'non-interest bearing' account opened with the Escrow Collection Bank(s) and in whose favour Anchor Investors will transfer money through direct credit/NEFT/NACH/RTGS in respect of the Bid Amount when submitting a Bid
Escrow Collection Bank(s)	Axis Bank Limited
Final Offer Document	Final offer document to be filed with SEBI and the Stock Exchanges after the Pricing Date in accordance with the SEBI InvIT Regulations and the SEBI Guidelines containing, amongst other things, the Offer Price that is determined at the end of the Book Building Process, the size of this Offer and certain other information, including any addenda or corrigenda thereto
First Bidder	Bidder whose name shall be mentioned first in the Bid cum Application Form or the Revision Form and in case of joint Bids, whose name shall also appear as the first holder of the beneficiary account held in joint names
Floor Price	The lower end of the Price Band, subject to any revision thereto, in this case being ₹ [●] at or above which the Offer Price and the Anchor Investor Offer Price will be finalised and below which no Bids will be accepted
Fresh Issue	A fresh issue of up to [●] Units aggregating up to ₹ 10,770.00 million by the Trust
Institutional Investors	Institutional investor means (i) a Qualified Institutional Buyer, or (ii) a family trust or systemically important non-banking financial companies registered with RBI or intermediaries registered with SEBI with net-worth of more than ₹5,000 million as per the last audited financial statements
Institutional Investor Portion	Portion of the Offer (including the Anchor Investor Portion) being not more than 75% of the Offer, comprising not more than [●] Units which shall be available for allocation to Institutional Investors (including Anchor Investors), subject to valid Bids being received at or above the Offe Price
Lead Managers	SBI Capital Markets Limited and HDFC Bank Limited
Listing Agreement	Any listing agreement to be entered into with the Stock Exchanges by the Trust, in line with the format as specified under the Securities and Exchange Board of India circular number CIR/CFD/CMD/6/2015 dated October 13, 2015 on "Format of uniform Listing Agreement"
Listing Date	Date on which the Units will be listed on the Stock Exchanges
Minimum Bid Size	₹ [●]
Mutual Funds	Mutual funds registered with SEBI under the Securities and Exchange Board of India (Mutual Funds) Regulations, 1996

Term	Description
Non-Institutional Investors	All Bidders, that are not (i) QIBs (including Anchor Investors) or (ii) a family trust or systematically important non-banking financial companies registered with RBI or intermediaries registered with SEBI with net-worth of more than ₹5,000 million as per the last audited financial statements, who have Bid for Units in the Offer
Non-Institutional Investor Portion	Portion of the Offer being not less than 25% of the Offer, comprising at least [●] Units, which shall be available for allocation on a proportionate basis to Non-Institutional Investors, subject to valid Bids being received at or above the Offer Price
Non-Resident Indian/ Non- Resident	An individual resident outside India who is a citizen or is an 'overseas citizen of India' cardholder within the meaning of Section 7A of the Citizenship Act, 1955 and includes a Non-Resident Indian, FVCIs, FIIs and FPIs
Offer	The offer of up to [●] Units (as defined below) for cash at a price of ₹[●] per Unit aggregating up to ₹ 15,780.00 million. The Offer comprises a Fresh Issue of up to [●] Units aggregating up to ₹ 10,770.00 million by the Trust and an Offer for Sale of up to [●] Units aggregating up to ₹ 5,010.00 million by the Sponsor Selling Unitholder
Offer Agreement	The offer agreement dated August 26, 2024, between the Trust (*acting through the Trustee*), the Investment Manager, the Trustee, the Sponsor and the Lead Managers, read along with the Amendment to the Offer Agreement
Offer Document	This Offer Document dated December 27, 2024, to be issued in accordance with the provisions of the SEBI InvIT Regulations and the SEBI Guidelines, which does not have complete particulars of the Price Band and the Offer Price at which the Units will be offered and the size of this Offer including any addenda, corrigenda thereto**.** This Offer Document will be filed with SEBI and the Stock Exchanges and shall become the Final Offer Document which shall be filed with SEBI and the Stock Exchanges after the Pricing Date
Offer for Sale	The offer for sale of up to [●] Units, aggregating up to ₹ 5,010.00 million by the Sponsor Selling Unitholder
Offer Price	₹ [●] per Unit, being the final price at which Units will be Allotted to successful Bidders, other than Anchor Investors in terms of this Offer Document. The Offer Price will be decided by the Investment Manager in consultation with the Lead Managers on the Pricing Date in accordance with the Book Building Process and in terms of this Offer Document and the Final Offer Document
Offer Proceeds	The proceeds of the Fresh Issue that are available to the Trust. The Selling Unitholder will be entitled to the proceeds of the Offer for Sale. The Trust will not receive any proceeds from the Offer for Sale. For further details about the use of the Offer Proceeds and the Offer Expenses, see '***Use of Proceeds***' on page 80
Offer Size	[●] Units aggregating up to ₹ 15,780.00 million
Price Band	Price band between the minimum price of ₹ [●] per Unit (Floor Price) and the maximum price of ₹ [●] per Unit (Cap Price) including any revision thereof. The Price Band will be decided by the Investment Manager, in consultation with the Lead Managers, and will be announced at least two Working Days prior to the Bid/ Offer Opening Date, on the websites of the Trust, the Sponsor and the Investment Manager, and shall be made available to the Stock Exchanges for the purpose of uploading on their respective websites
Pricing Date	The date on which the Investment Manager in consultation with the Lead Managers, finalizes the Offer Price in accordance with the Book Building Process and in terms of this Offer Document and the Final Offer Document.
Public Offer Account	'No-lien' and 'non-interest bearing' bank account opened to receive monies from the Escrow Accounts and from the ASBA Accounts on the Designated Date
Public Offer Account Bank	Kotak Mahindra Bank Limited
Qualified Institutional Buyers or QIB(s)	Qualified institutional buyers, as defined under Regulation 2(1)(ss) of the SEBI ICDR Regulations, which currently includes (i) a mutual fund, a VCF, an AIF and an FVCI registered with SEBI, (ii) an FPI, other than individuals, corporate bodies and family offices, (iii) a public financial institution as defined in section 2(72) of the Companies Act, 2013, (iv) a scheduled commercial bank as included in the second schedule to the Reserve Bank of India Act, 1934, (v) a multilateral and bilateral development financial institution, (vi) a state industrial development corporation, (vii) an insurance company registered with the IRDAI, (viii) a provident fund with minimum corpus of ₹ 250 million, (ix) a pension fund with minimum corpus of ₹ 250 million, (x) National Investment Fund set up by resolution no. F. No. 2/3/2005-DDII dated November 23, 2005 of the GoI published in the Gazette of India, (xi) insurance funds set up and managed by army, navy or air force of the Union of India, (xii) insurance funds set up and managed by the Department of Posts, India, and (xiii) systemically important non-banking financial companies.
Refund Account(s)	'No-lien' and 'non-interest bearing' account(s) opened with the Refund Bank(s), from which refunds, if any, of the whole or part of the Bid Amount to Anchor Investors shall be made
Refund Bank	Axis Bank Limited
Registered Brokers	Stock brokers registered with the stock exchanges having nationwide terminals, other than Lead Managers and the Syndicate Member, eligible to procure Bids in terms of Circular No. CIR/CFD/14/2012 dated October 4, 2012 issued by SEBI
Registrar Agreement	The agreement dated August 23, 2024 entered into between the Trustee (on behalf of the Trust), the Investment Manager, the Sponsor Selling Unitholder and the Registrar to the Offer in relation to the responsibilities and obligations of the Registrar to the Offer pertaining to the Offer, read with the Amendment to the Registrar Agreement.

Term	Description
Registrar and Share Transfer Agents or RTAs	Registrar and share transfer agents registered with SEBI and eligible to procure Bids at the Designated RTA Locations in terms of circular no. CIR/CFD/POLICYCELL/11/2015 dated November 10, 2015 issued by SEBI
Registrar to the Offer	KFin Technologies Limited
Revision Form	Form used by the Bidders to modify the quantity of Units or the Bid Amount in any of their ASBA Forms or any previous Revision Forms. Bidders are not allowed to withdraw or lower their Bids (in terms of number of Units or the Bid Amount) at any stage
Self Certified Syndicate Bank(s) or SCSB(s)	Banks registered with SEBI, offering services in relation to ASBA, a list of which is available on the website of SEBI at https://www.sebi.gov.in/sebiweb/other/OtherAction.do?doRecognisedFpi=yes&intmId=34 or https://www.sebi.gov.in/sebiweb/other/OtherAction.do?doRecognisedFpi=yes&intmId=35, as applicable, or such other website as updated from time to time, and updated from time to time
Share and Unit Escrow Agent	KFin Technologies Limited
Share and Unit Escrow Agreement	Agreement dated December 24, 2024, entered into amongst the Trust (*acting through its Trustee*), Trustee, the Investment Manager, the Sponsor Selling Unitholder and the Share and Unit Escrow Agent in connection with, *inter alia* ,the deposit of the equity shares of the Project SPVs by the Sponsor Selling Unitholder, the deposit of the Units issued pursuant to the Formation Transactions, debit of the Units offered in the Offer for Sale for the credit of such Units to the demat account of the Allottees
Specified Locations	Bidding centres where the Syndicate shall accept ASBA Forms from Bidders
Sponsor Bank(s)	Kotak Mahindra Bank Limited and Axis Bank Limited
Syndicate Agreement	Agreement dated December 26, 2024, entered between the Trust (*through the Trustee*), the Investment Manager, the Trustee, the Sponsor, the Lead Managers, the Syndicate Member and the Registrar to the Offer in relation to collection of Bid cum Application Forms by the Syndicate
Syndicate/ Members of the Syndicate	The Lead Managers and the Syndicate Member
Syndicate Members	Intermediaries, registered with SEBI who are permitted to carry out activities as an underwriter, being, SBICAP Securities Limited and HDFC Securities Limited
UPI	Unified Payments Interface which is an instant payment mechanism, developed by NPCI
UPI Bidder(s)	Individual Non-Institutional Investors with an application size of up to ₹ 500,000 in the Non-Institutional Category, and Bidding under the UPI Mechanism through ASBA Form(s) submitted with Syndicate Members, Registered Brokers, Collecting Depository Participants and Registrar and Share Transfer Agents.
UPI ID	ID created on the UPI for single-window mobile payment system developed by the NPCI
UPI Mandate Request	A request (intimating the UPI Bidders, by way of a notification on the UPI linked mobile application and by way of an SMS directing the UPI Bidders to such UPI linked mobile application) to the UPI Bidders using the UPI Mechanism initiated by the Sponsor Bank(s) to authorise blocking of funds equivalent to the Bid Amount in the relevant ASBA Account through the UPI linked mobile application, and the subsequent debit of funds in case of Allotment
UPI Mechanism	The Bidding mechanism that may be used by UPI Bidders to make Bids in the Offer in accordance with the SEBI Guidelines
Working Day	Working day, with reference to (a) announcement of Price Band; and (b) Bid/ Offer Period, shall mean all days, excluding Saturdays, Sundays and public holidays, on which commercial banks in Mumbai are open for business; and (c) the time period between the Bid/ Offer Closing Date and the listing of the Units on the Stock Exchanges, shall mean all trading days of Stock Exchanges, excluding Sundays and bank holidays

Technical and Industry related terms

Term	Description
Bid Project Cost	The estimated cost of a project at which it was awarded to the Sponsor
BOT	Build Operate Transfer
BSE	BSE Limited
CCEA	Cabinet Committee on Economic Affairs
CCI	Competition Commission of India
CDSL	Central Depository Services (India) Limited
CIN	Corporate Identity Number
COD	Commercial operations date of the relevant Project SPVs as described in *"**Summary of Concession Agreements**"* on page 177
Companies Act	Companies Act, 2013 read with the rules and regulations thereunder
Companies Act, 1956	Erstwhile, Companies Act, 1956, read with the rules and regulations thereunder
Companies Act, 2013	Companies Act, 2013, read with the rules and regulations thereunder
Competition Act	Competition Act, 2002
Contract Labour Act	Contract Labour (Regulation and Abolition) Act, 1970
CPC	Code of Civil Procedure, 1908
DBOT	Design, build, operate and transfer.

Term	Description
Depository	A depository registered with SEBI under the Securities and Exchange Board of India (Depositories and Participants) Regulations, 2018
Depositories Act	Depositories Act, 1996
DIN	Director Identification Number
EPC	Engineering, procurement and construction
FEMA	Foreign Exchange Management Act, 1999, read with rules and regulations thereunder
FEMA Rules	Foreign Exchange Management (Non-debt Instruments) Rules, 2019
Financial Year or Fiscal Year or Fiscal	Period of 12 months ended March 31 of that particular year, unless otherwise stated
FDI	Foreign direct investment
FPI	Foreign portfolio investors
FVCI	Foreign venture capital investors, as defined under the SEBI FVCI Regulations
GAAP	Generally Accepted Accounting Principles
GAAR	General Anti-Avoidance Rules
GDP	Gross domestic product
GoI or Government	Government of India
GST	Goods and Services Tax
HAM	Hybrid Annuity Mode
ICAI	The Institute of Chartered Accountants of India
IFRS	International Financial Reporting Standards
Income Tax Act or IT Act	The Income-tax Act, 1961
Ind AS or Indian Accounting Standards	Indian Accounting Standards as defined in Rule 2(1)(a) of the Companies (Indian Accounting Standards) Rules, 2015 prescribed under Section 133 of the Companies Act, 2013, including any amendments or modifications thereto
Indian GAAP	Accounting standards notified under section 133 of the Companies Act, 2013, read with Companies (Accounting Standards) Rules, 2006, as amended and the Companies (Accounts) Rules, 2014, as amended
Indian GAAS	Generally Accepted Auditing Standards in India
IRDAI	Insurance Regulatory and Development Authority of India
Km	Kilometre
MCA	Ministry of Corporate Affairs, Government of India
MCLR	Marginal cost of funds based lending rate
MoEF	Ministry of Environment, Forest and Climate Change
MoRTH	Ministry of Road Transport and Highways, Government of India
NACH	National Automated Clearing House
NCD	Non-convertible debentures
NSDL	National Securities Depository Limited
NEFT	National Electronic Funds Transfer
NSE	The National Stock Exchange of India Limited
NHAI	National Highways Authority of India
NH	National Highway
NHDP	National Highways Development Project
NOC	No-objection certificate
O&M	Operations and Maintenance
PCOD	Provisional commercial operation date
PAN	Permanent account number
RBI	Reserve Bank of India
Regulation	Regulation under the SEBI InvIT Regulations
Regulation S	Regulation S under the U.S. Securities Act
RoC	Registrar of Companies, Delhi and Haryana at New Delhi
Rs./Rupees/INR/₹	Indian Rupees
RTGS	Real Time Gross Settlement
SAE 3400	Standard on Assurance Engagement 3400, "The Examination of Prospective Financial Information", issued by the ICAI
SCRA	Securities Contracts (Regulation) Act, 1956
SCRR	Securities Contracts (Regulation) Rules, 1957
SEBI	Securities and Exchange Board of India constituted under the SEBI Act
SEBI Act	The Securities and Exchange Board of India Act, 1992
SEBI AIF Regulations	Securities and Exchange Board of India (Alternative Investments Funds) Regulations, 2012
SEBI Debenture Trustees Regulations	Securities and Exchange Board of India (Debenture Trustees) Regulations, 1993
SEBI FPI Regulations	Securities and Exchange Board of India (Foreign Portfolio Investors) Regulations, 2019
SEBI Guidelines	SEBI master circular SEBI/HO/DDHS-PoD-2/P/CIR/2024/44 dated May 15, 2024 and any other circulars, guidelines and clarifications issued by SEBI and/or the Stock Exchanges under the SEBI InvIT Regulations, from time to time
SEBI ICDR Regulations	Securities and Exchange Board of India (Issue of Capital and Disclosure Requirements) Regulations, 2018

Term	Description
SEBI InvIT Regulations	Securities and Exchange Board of India (Infrastructure Investment Trust) Regulations, 2014, including circulars, notifications, clarifications and guidelines issued thereunder
SEBI Listing Regulations	Securities and Exchange Board of India (Listing Obligations and Disclosure Requirements) Regulations, 2015
SEBI Merchant Bankers Regulations	Securities and Exchange Board of India (Merchant Bankers) Regulations, 1992
SEBI PIT Regulations	Securities and Exchange Board of India (Prohibition of Insider Trading) Regulations, 2015
SEBI VCF Regulations	Securities and Exchange Board of India (Venture Capital Fund) Regulations, 1996, as repealed by the SEBI AIF Regulations
Stock Exchanges	Together, BSE and NSE
Total Borrowings	Total Secured/Unsecured long-term borrowing (including current maturities) and short-term borrowing
Trusts Act	The Indian Trusts Act, 1882
U.S./U.S.A./United States	United States of America, its territories and possessions, any State of the United States, and the District of Columbia
USD/US$	United States Dollars
U.S. GAAP	Generally Accepted Accounting Principles in the United States of America
U.S. Securities Act	United States Securities Act of 1933, as amended

PRESENTATION OF FINANCIAL, INDUSTRY AND MARKET DATA

Certain Conventions

All references in this Offer Document to "India" are to the Republic of India and its territories and possessions and all references herein to the "Government", "Indian Government", "GoI", "Central Government" or the "State Government" are to the Government of India, central or state government, as applicable.

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

Financial Data

The financial year for the Trust, the Project SPVs and our Investment Manager commences on April 1 of the immediately preceding calendar year and ends on March 31 of that particular calendar year. Accordingly, all references to a particular financial year are to the 12-month period commencing on April 1 of the immediately preceding calendar year and ending on March 31 of that particular calendar year.

The Special Purpose Combined Financial Statements have been prepared by the Investment Manager of the Trust to comply with the requirements of the SEBI InvIT Regulations as amended including any guidelines and circulars issued thereunder and for inclusion in this Offer Document prepared by the Investment Manager in connection with the Offer.

The Special Purpose Combined Financial Statements have been prepared in accordance with Indian Accounting Standards (Ind AS) and/or any addendum thereto as defined in the Rule 2(1)(a) of the Companies (Indian Accounting Standards) Rule, 2015, as amended ('**Ind AS**') and the Guidance Note on Combined and Carve-Out Financial Statements issued by the Institute of Chartered Accountants of India ("**Guidance Note**") including minimum disclosures specified in the SEBI InvIT Regulations.

In accordance with the requirements of the SEBI InvIT Regulations, since the Trust is set up on September 25, 2023 and has been in existence for a period lesser than three completed financial years and the historical financial statements of Trust are not available for the entire portion of the reporting period of three years, these Special Purpose Combined Financial Statements have been prepared for the periods when such historical financial statements were not available. Further, as required by the SEBI InvIT regulations, the Special Purpose Combined Financial Statements are prepared, based on an assumption that all Project SPVs were part of Trust for such period when Trust was not in existence. However, the Special Purpose Combined Financial Statements may not be representative of the position which may prevail after the Project SPVs are transferred to Trust.

Further, in accordance with the SEBI Circular no. SEBI/HO/DDHS-PoD-2/P/CIR/2024/44 dated May 15, 2024 the Special Purpose Combined Financial Statements have been presented after making necessary adjustments and accordingly, these may be different from the general purpose audited financial statements of the SPV's. For further details, refer to the section titled "***Special Purpose Combined Financial Statements***" on page 227.

Further, this Offer Document includes (i) summary consolidated financial statements of the Sponsor, as of and for the financial years ended March 31, 2024, March 31, 2023 and March 31, 2022, prepared in accordance with Ind AS notified under the Companies (Indian Accounting Standards) Rules, 2015 (as amended from time to time) and other relevant provisions of the Companies Act, 2013, and (ii) summary financial information of the Investment Manager, as of and for the financial year ended March 31, 2024, prepared in accordance with Ind AS specified under section 133 of the Companies Act 2013 as amended read with Companies (Indian Accounting Standards) Rules, 2015, relevant amendment rules issued thereunder and other accounting principles generally accepted in India. The Investment Manager was incorporated as a private company under the Companies Act, 2013 on August 26, 2023 and accordingly, the financial statements of the Investment Manager are not available for the previous financial years. For further details, refer to the section titled "***Summary Financial Information of the Sponsor***" and "***Summary Financial Information of the Investment Manager"*** on pages 57 and 60.

This Offer Document includes projections of revenue from operations and cash flows from the operating activities, and the underlying assumptions thereto, of the Trust and the Project SPVs for the financial years ending March 31, 2025, March 31, 2026 and March 31, 2027. For further details, refer to the section titled "***Projections of Revenue from Operations and Cash Flow from Operating Activities***" on page 379.

The degree to which the financial information included in this Offer Document 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 SEBI InvIT Regulations. Any reliance by persons not familiar with Indian accounting policies and practices on the financial disclosures presented in this Offer Document should accordingly be limited.

In this Offer Document, any discrepancies in any table between the total and the sums of the amounts listed are due to rounding off. All figures and percentage figures have been rounded off to two decimal places.

Currency and Units of Presentation

All references to:

- "Rupees" or "Rs." or "INR" or "₹" are to Indian Rupees, the official currency of the Republic of India; and
- "USD" or "US$" or "$" or "U.S. dollars" are to United States Dollars, the official currency of the United States.

Except otherwise specified, numerical information in this Offer Document has been presented in "million" units where one million represents 1,000,000 and one billion represents 1,000,000,000.

Unless the context requires otherwise, any percentage amounts, as set forth in this Offer Document, have been calculated on the basis of the Special Purpose Combined Financial Statements.

Exchange Rates

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

The following table sets forth, for the periods indicated, information with respect to the exchange rate between the Rupee and the US$:

(in ₹)

Currency	Exchange Rate as on September 30, 2024	Exchange Rate as on March 31, 2024	Exchange Rate as on March 31, 2023	Exchange Rate as on March 31, 2022
1 US$	83.78	83.37	82.22	75.81

Source: www.fbil.org.in
Note: (1) Exchange rates rounded off to two decimal places
(2) In case March 31 or any date of any of the respective years is a public holiday, the previous working day, not being a public holiday, has been considered

Industry and Market Data

Unless stated otherwise, industry and market data used in this Offer Document has been obtained or derived from publicly available information as well as other Government and industry publications and sources.

Industry publications as well as government publications generally state that the information contained in such publications has been obtained from various sources believed to be reliable but that their accuracy and completeness are not guaranteed, and their reliability cannot be assured. Accordingly, no investment decisions should be based solely on such information. Although the Investment Manager and the Sponsor believe that the industry and market data used in this Offer Document is reliable, such data has not been independently verified by the Investment Manager or the Sponsor or the Trustee or the Lead Managers and none of such entities make any representation as to the accuracy of such information. The data used in these sources may have been re-classified for the purposes of presentation. Data from these sources may also not be comparable. Such data involves risks, uncertainties and numerous assumptions and is subject to change based on various factors, including those disclosed in the section titled "***Risk Factors***" on page 21. Accordingly, investment decisions should not be based solely on such information.

Considering that there are no standard methodologies for compiling data with respect to the industry in which the Trust operates, the methodologies and assumptions adopted may widely vary among different industry sources and accordingly, the extent to which the market and industry data used in this Offer Document is meaningful depends on the reader's familiarity with and understanding of the methodologies used in compiling such data.

FORWARD LOOKING STATEMENTS AND FINANCIAL PROJECTIONS

This Offer Document contains certain statements that are not statements of historical fact and accordingly constitute 'forward-looking statements'. These forward-looking statements include statements which can generally be identified by words or phrases such as 'aim', 'anticipate', 'believe', 'continue', 'can', 'could', 'estimate', 'expect', 'intend', 'may', 'objective', 'plan', 'potential', 'project', 'propose', 'pursue', 'seek', 'shall', 'should', 'will', 'would', or other words or phrases of similar import. Similarly, statements that describe our strategies, objectives, plans or goals, including the Trust business strategy, revenue and profitability (including, without limitation, any financial or operating projections or forecasts) and other matters discussed in this Offer Document that are not historical facts, are also forward-looking statements. However, these are not the exclusive means of identifying forward-looking statements.

All statements regarding the Trust's expected financial conditions, results of operations, cash flows, business plans and prospects including the Projections of Revenue from Operations and Cash Flow from Operating Activities are forward-looking statements.

These forward-looking statements and any other projections contained in this Offer Document (whether made by us or any third party), are based on current plans, estimates, presumptions and expectations. In accordance with the SEBI InvIT Regulations, the Projections of Revenue from Operations and Cash Flow from Operating Activities included in this Offer Document are based on a number of assumptions and should be read together with the underlying assumptions and notes thereto. For further details, refer to the section titled "***Projections of Revenue from Operations and Cash Flows from Operating Activities***" on page 379.

The Valuation Report included in this Offer Document, is based on certain projections and accordingly, should be read together with assumptions and notes thereto. For further details, see the "***Valuation Report***" attached as Annexure I on page 406 and "***Industry Overview****"* on page 146.

Actual results may differ materially from those suggested by forward-looking statements and financial projections due to certain known or unknown risks or uncertainties associated with the Investment Manager's expectations with respect to, but not limited to, the actual growth in the infrastructure sector, the Investment Manager's ability to successfully implement the strategy, growth and expansion plans, technological changes, cash flow projections, exposure to market risks, general economic and political conditions in India, changes in competition in the infrastructure sector, the outcome of any legal or regulatory proceedings and the future impact of new accounting standards. By their nature, certain of the market risk disclosures are only estimates and could be materially different from what actually occurs in the future. As a result, actual future gains, losses or impact on net income could materially differ from those that have been estimated.

Factors that could cause actual results, performance or achievements of the Trust to differ materially include, but are not limited to those discussed under "***Risk Factors***", "***Industry Overview***", "***Business***" and "***Management's Discussion and Analysis of Financial Condition and Results of Operations***", on pages 21, 146, 150 and 301, respectively. Some of the factors that could cause the Trust's actual results, performance or achievements to differ materially from those in the forward-looking statements, financial projections and financial information include, but are not limited to, the following:

- The Trust is a newly settled trust and does not have an established operating history, which will make it difficult to accurately assess our future growth prospects;
- Consummation of the Formation Transactions pursuant to which we will acquire the Project SPVs are subject to certain conditions;
- If any of our Initial Portfolio Assets are terminated prematurely, we may not receive payments due to us which may result in a material adverse effect on our financial condition.
- Our revenues from our Initial Portfolio Assets are dependent on receiving consistent annuity income and interest on annuity income from NHAI;
- Our failure and inability to identify and acquire new infrastructure assets that generate comparable revenue, profits or cash flows may have an adverse effect on our business, financial condition, cash flows and results of operations and our ability to make distributions; and
- We may be subject to increase in costs, including O&M costs, which we cannot recover by increasing annuity income under the relevant Concession Agreement.

The forward-looking statements, Projections of Revenue from Operations and Cash Flow from Operating Activities and the Valuation Report reflect current views as of the date of this Offer Document and are not a guarantee of future performance or returns to Bidders. These statements and projections are based on certain beliefs and assumptions, which in turn are based on currently available information. Although the Investment Manager and the Sponsor believe that the expectations and the assumptions upon which such forward-looking statements are based, are reasonable at this time, we cannot assure Bidders that

such expectations will prove to be correct or accurate. Given these uncertainties, investors are cautioned not to place undue reliance on such forward-looking statements and not to regard such statements as a guarantee of future performance.

In accordance with the SEBI InvIT Regulations, the assumptions underlying the Projections of Revenue from Operations and Cash Flow from Operating Activities have been examined by the Auditors in accordance with SAE 3400 "The Examination of Prospective Financial Information", issued by the Institute of Chartered Accountants of India. The Projections of Revenue from Operations and Cash Flow from Operating Activities have been prepared for inclusion in this Offer Document for the purposes of this Offer, using a set of assumptions that include hypothetical assumptions about future events and management's actions that are not necessarily expected to occur, and have been approved by the IM Board. Consequently, Bidders are cautioned that the Projections of Revenue from Operations and Cash Flow from Operating Activities may not be appropriate for purposes other than that described above.

In any event, these statements speak only as of the date of this Offer Document or the respective dates indicated in this Offer Document, and the Trust, the Investment Manager, the Sponsor Selling Unitholder, the Sponsor, the Trustee or the Lead Managers or their respective affiliates or advisors, (financial, legal or otherwise), undertake no obligation to update or revise any of the statements reflecting circumstances arising after its date or to reflect the occurrence of underlying events, whether as a result of new information, future events or otherwise after the date of this Offer Document. In the event any of these risks and uncertainties materialize, or if any of the Investment Manager's underlying assumptions prove to be incorrect, the actual results of operations or financial condition or cash flows of the Trust could differ materially from that described herein as anticipated, believed, estimated or expected. All subsequent forward-looking statements attributable to the Trust are expressly qualified in their entirety by reference to these cautionary statements. Given these uncertainties, Bidders are cautioned not to place undue reliance on such forward-looking statements and financial projections, and not to regard such statements to be a guarantee or assurance of the Trust's future performance or returns to investors.

THE OFFER

The following summarizes the terms of the Offer. This summary should be read in conjunction with, and is qualified in its entirety by, the detailed information appearing elsewhere in this Offer Document.

Offer	Up to [●] Units aggregating up to ₹ 15,780.00 million
Of which	
Fresh Issue[#]	Up to [●] Units aggregating up to ₹ 10,770.00 million
Offer for Sale[##]	Up to [●] Units aggregating up to ₹ 5,010.00 million
Offer	
Of which	
Institutional Investor Portion (not more than 75% of the Offer)[*]	Not more than [●] Units
Non-Institutional Investor Portion (not less than 25% of the Offer)	Not less than [●] Units
Floor Price	₹[●]
Cap Price	₹[●]
Offer Price	₹[●]
Minimum Bid Size	₹[●]
Bid/Offer Opening Date[**]	January 7, 2025
Bid/Offer Closing Date[***]	January 9, 2025
Trust	Capital Infra Trust (*erstwhile National Infrastructure Trust*)
Sponsor/ Sponsor Selling Unitholder	Gawar Construction Limited
Trustee	Axis Trustee Services Limited
Investment Manager	Gawar Investment Manager Private Limited
Project Manager	Gawar Construction Limited
Authority for this Offer	This Offer was authorised, and approved by the IM Board on August 20, 2024, and the InvIT Committee on August 26, 2024. The Offer was amended *vide* resolution by the IM Board on December 5, 2024. The Offer for Sale has been authorised by the board of directors of the Sponsor Selling Unitholder on August 22, 2024 read with resolution of board of directors of the Sponsor Selling Unitholder dated December 5, 2024.
Tenure of the Trust	The Trust shall stand settled until it comes to an end or is wound up in accordance with the Trust Deed and applicable law. For details, refer to the section titled "***Parties to the Trust***" on page 114
Units issued and outstanding as of the date of this Offer Document	As of the date of this Offer Document, there are no issued and outstanding Units
Units issued and outstanding immediately after this Offer	[●] Units
Sponsor Units	Up to [●] Units The Units to be held by the Sponsor will be allotted to the Sponsor, simultaneously with the Allotment pursuant to this Offer. Such Units held by the Sponsor shall rank *pari passu* with, and have the same rights as, the Units to be Allotted.
Distribution	Refer to the section titled "***Distributions***" on page 217
Indian Taxation	For statement of possible tax consideration / benefits available to the Trust and its Unitholders under applicable laws in India, refer to the section titled "***Statement of Possible Tax Benefits***" on page 87
Use of Proceeds	Refer to the section titled "***Use of Proceeds***" on page 80
Listing	Prior to this Offer, there has been no market for the Units. The Units are proposed to be listed on the BSE and NSE. In-principle approval for listing of the Units has been received from BSE and NSE pursuant to their letters, both dated October 24, 2024. The Investment Manager shall apply to the Stock Exchanges for the final listing and trading approval, after the Allotment and the credit of the Units to the demat accounts of the Allottees
Designated Stock Exchange	BSE
Closing Date	The date on which Allotment of the Units pursuant to this Offer shall be made, i.e., on or about January 15, 2024
Ranking	The Units being issued shall rank *pari passu* in all respects, including rights in respect of distribution. Refer to the section titled "***Rights of Unitholders***" on page 220
Lock-in and Rights of Unitholders	For details, refer to the section titled "***Information Concerning the Units***" on page 77 and "***Rights of Unitholders***" on page 220
Risk Factors	Prior to making an investment decision, Bidders should carefully consider the matters discussed in the section titled "***Risk Factors***" on page 21

[#] *The Offer has been authorized by a resolution of the IM Board dated August 20, 2024 and the InvIT Committee on August 26, 2024 and amended vide resolution of the IM Board dated December 5, 2024.*

[##] *The Sponsor Selling Unitholder has consented to participate in the Offer for Sale pursuant to a resolution of the board of directors of the Sponsor dated August 22, 2024 read with resolution of board of directors of the Sponsor Selling Unitholder dated December 5, 2024. Further, with respect to the Units offered by the Sponsor Selling Unitholder in the Offer for Sale, the Sponsor Selling Unitholder has held equity shares in the Initial Portfolio Assets (against which such Units are to be received), for a period of at least one year immediately preceding the date of this Offer Document.*

[*] *The Investment Manager may, in consultation with the Lead Managers, consider participation by Anchor Investors in the Offer for up to 60% of the Institutional Investor Portion in accordance with the SEBI InvIT Regulation and SEBI Guidelines.*

[**] *The Anchor Investor Bidding Date shall be one Working Day prior to the Bid/Offer Opening Date.*

[***] *The Investment Manager may, in consultation with the Lead Managers, consider closing the Bid/ Offer Period for QIBs one Working Day prior to the Bid/ Offer Closing Date in accordance with the SEBI Guidelines.*

Allocation in all categories, except the Anchor Investor Portion, if any, shall be made on a proportionate basis. In case of under-subscription in any category, the unsubscribed portion in either category may be Allotted to investors in the other category at the discretion of the Investment Manager, in consultation with the Lead Managers and the Designated Stock Exchange.

The Offer is being made through the Book Building Process, wherein not more than 75% of the Offer shall be available for allocation to Institutional Investors on a proportionate basis, provided that the Investment Manager, in consultation with the Lead Managers, may allocate up to 60% of the Institutional Investor Portion to Anchor Investors on a discretionary basis in accordance with the SEBI InvIT Regulations and SEBI Guidelines. Further, not less than 25% of the Offer shall be available for allocation on a proportionate basis to Non-Institutional Investors, subject to valid Bids being received at or above the Offer Price.

The Units will be allotted only in dematerialized form, in accordance with the SEBI InvIT Regulations. Upon listing of the Units on the Stock Exchange, the Units shall be traded only on the dematerialized segment of the Stock Exchanges.

In accordance with the SEBI InvIT Regulations and SEBI Guidelines, the Investment Manager undertakes that at any given time, there shall only be one denomination for Units, and no Unitholder shall enjoy preferential voting or any other rights over another Unitholder. Further, there shall not be multiple classes of Units of the Trust, unless permitted by applicable law.

For further information in relation to the Offer, refer to the section titled "***Offer Procedure***" on page 360.

OVERVIEW OF THE TRUST

*The following overview is qualified in its entirety by, and is subject to, the more detailed information contained in, or referred to elsewhere in this Offer Document. Statements contained in this summary that are not historical facts may be forward looking statements. Such statements are based on certain assumptions and are subject to certain risks, uncertainties and assumptions that could cause actual results of the Trust to differ materially from those forecasted or projected in this Offer Document. Under no circumstances should the inclusion of such information herein be regarded as a representation, warranty or prediction of the accuracy of the underlying assumptions by the Trust or the Parties to the Trust or the Lead Managers or any other person that these results will be achieved or are likely to be achieved. Investment in Units involves risks. Bidders are advised not to rely solely on this overview and should read this Offer Document in its entirety and, in particular, the sections entitle "**Forward-Looking Statements and Financial Projections**" and "**Risk Factor**" on page 15 and 21, respectively.*

Structure and description of the Trust

The Trust has been settled by Gawar Construction Limited (the Sponsor and the settlor), as an irrevocable trust under the provisions of the Trusts Act in Gurugram, Haryana, India pursuant to the Trust Deed. The Trust has been registered with SEBI as an infrastructure investment trust under the SEBI InvIT Regulations on March 7, 2024, having registration number IN/INVIT/23-24/00029 (updated *vide* SEBI registration certificate dated October 16, 2024, bearing registration number IN/InvIT/23-24/0029). The Sponsor has irrevocably transferred to the Trust an amount of ₹5,100 towards the initial corpus of the Trust, with an intention to settle and establish the Trust.

For details of the principal place of business and contact person of the Sponsor, refer to the section titled *"**General Information**"* on page 72.

Further, Gawar Investment Manager Private Limited has been appointed as the Investment Manager. For further details, refer to the section titled "***General Information***" and "***Parties to the Trust***" on pages 72 and 114, respectively.

Investment Objectives

The object and purpose of the Trust, as described in the Trust Deed, is to carry on the activities of, and to make investments as an infrastructure investment trust as permissible under the SEBI InvIT Regulations. The investment of the Trust shall be in any manner permissible under, and in accordance with the Trust documents, the SEBI InvIT Regulations and applicable law, including in such holding companies and/or SPVs, investment entities and/or infrastructure projects and/or securities in India as permitted under the SEBI InvIT Regulations and in accordance with the investment strategy as detailed in any offer document. The Trustee through the Investment Manager shall ensure that the trust fund shall be utilized solely for the purposes of making investments, as stated above, in accordance with the SEBI InvIT Regulations and applicable law.

For further details in relation to the business and investment strategy of the Trust, refer to the section titled "***Business***" on page 150.

The Trust is required to make distributions to the Unitholders in accordance with the SEBI InvIT Regulations and the Distribution Policy. For details in relation to the distribution policy of the Trust, refer to the section titled "***Distributions***" on page 217.

Fees and expenses

The expenses in relation to the Trust and the Initial Portfolio Assets, other than such expenses incurred in relation to the operations of Project SPVs would broadly include fee payable to: (i) the Trustee; (ii) the Investment Manager; (iii) the Project Manager; (iv) the Auditors, (v) the Valuer; and (vi) other intermediaries and consultants.

The estimated recurring expenses on an annual basis (exclusive of out of pocket expenses, taxes and escalations) including but not limited to, are as follows:

Payable by the Trust	Estimated Expenses* ^*(In ₹ million)*
Fee payable to the Trustee	1.00
Fee payable to the Valuer	1.62
Fee payable to the Auditor	7.50
Fee payable to the Investment Manager	101.00
Fee payable to the Project Manager	775.55
Fee payable to the Registrar	1.50
Fee payable to the Stock Exchange and Depositories	~5.50
Fee payable to credit rating agencies	6.50

^ *The abovementioned expenses are excluding GST.*

* *The abovementioned expenses relate to the first full year of operation for the Trust i.e. 2025-26.*

Offer expenses

The total expenses of the Offer are estimated to be approximately ₹ [●] million which will be borne by the Trust and the expenses incurred by the Sponsor or the Investment Manager (on behalf of the Trust) will be reimbursed by the Trust. For details in relation to the Offer expenses, refer to the section titled "***Use of Proceeds***" on page 80.

Set-up costs

In connection with expenses in relation to the establishment and registration of the Trust, Sponsor has incurred approximately ₹ 1.30 million as expenses, which will be reimbursed by the Trust.

Details of credit ratings

The Trust has received rating of 'Provisional CRISIL AAA/Stable (Assigned) 'from Crisil Ratings Limited for the Trust NCD(s) and proposed long term bank loan facility on November 11, 2024, each, , the rationale(s) for which are available on their respective websites.

RISK FACTORS

*An investment in the Units involves a high degree of risk. Before investing in the Units, prospective investors should pay particular attention to the fact that the Trust, the Parties to the Trust, the Project SPVs and each of their activities are governed by the legal, regulatory and business environment in India, which differs from such regime prevailing in other countries. Prospective investors should carefully consider all the information in this Offer Document, including the risks and uncertainties described below, before making an investment in the Units. To obtain a complete understanding, prospective investors should read this section together with the other sections "**Business**", "**Special Purpose Combined Financial Statements**", "**Management's Discussion and Analysis of Financial Condition and Results of Operations**" and "**Rights of Unitholders**", on pages 150, 227, 301 and 220, respectively as well as the other information contained in this Offer Document. 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, the Sponsor 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, the Sponsor and the Investment Manager are not in a position to specify or quantify the financial or other risks mentioned herein.*

This Offer Document 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 Offer Document.

Prospective 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 occur, our business and prospects could be materially and adversely affected, the trading price of the Units could decrease and investors could lose all or part of their original investment.

In making an investment decision, prospective investors must rely upon their own examinations, the information as provided in this Offer Document, and the terms of the Offer, 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 Offer. In this section, unless the context otherwise requires, a reference to "we", "us" and "our" refers collectively to the Trust and the Project SPVs. Further, unless the context otherwise requires, the financial information used in this section is derived from the Special Purpose Combined Financial Statements.

Risks Related to Our Business and Industry

1. The Trust is a newly settled trust and does not have an established operating history, which will make it difficult to accurately assess our future growth prospects.

The Trust was set-up as an infrastructure investment trust and registered with the SEBI on March 7, 2024 (and a new certificate of registration was issued by SEBI on October 16, 2024, pursuant to the change of name of the Trust) and subject to receipt of requisite approvals, proposes to acquire 100% of the equity shares in each of the Project SPVs, pursuant to the Share Purchase Agreements, prior to the Allotment of Units. For further details, please see the section titled "***Formation Transactions in Relation to the Trust***" on page 102. The Trust does not have any operating history or its own historical financial information by which its past performance may be assessed. This will make it difficult for investors to assess its future performance. Further, growth prospects as an infrastructure investment trust can be affected by a wide variety of factors, including, inability to raise funds required for our operations, adverse developments in tax regulations affecting our Unitholders, operational performance, distribution, and acquiring new assets. Any inability to meet these challenges could cause disruptions to our operations and could be detrimental to our long-term business outlook. There can be no assurance that the Initial Portfolio Assets will be able to generate sufficient revenue from their operations to generate sufficient cash flows to make distributions to the Unitholders, or that such distributions will be in line with those set out in the section titled "***Projections of Revenue from Operations and Cash Flow from Operating Activities***" on page 379. Additionally, the historical financial information of the Project SPVs on a combined basis has been included in this Offer Document in the section titled "***Special Purpose Combined Financial Statements***" on page 227. There can be no assurance that our future performance will be consistent with the historical financial information on a combined basis included in this Offer Document.

2. Consummation of the Formation Transactions pursuant to which we will acquire the Project SPVs are subject to certain conditions.

Certain terms and conditions of the Concession Agreements require NHAI's prior written approval to be obtained for one or more of the following actions, among others:

- undertaking or permitting any change in the ownership of the Project SPVs from national security and public interest perspective;

- amendment, modification or replacement by the Project SPV of any project agreements (including financing agreements) relating to the operation of the Initial 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 NHAI;

- 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

- refinancing of a certain portion of the outstanding indebtedness of the Project SPVs, as described in this Offer Document.

Pursuant to the terms of the Concession Agreements entered into by the Project SPVs, the consent of the NHAI is required to make additions to amend or replace any of the financing arrangements entered into with the existing lenders of the Project SPVs.

The Project SPVs have made applications dated February 26, 2024, to the NHAI seeking approval under the terms of the respective Concession Agreements for undertaking Formation Transactions and related actions. The Project SPVs have received the approval from NHAI in connection with undertaking the Formation Transactions and other related actions, subject to certain conditions, including:

- submission of an undertaking that the transaction of ownership does not involve transfer of beneficial ownership, directly or indirectly to any entity or person which/ who is situated in or a citizen of any such country who shares land border with India;

- replacement of the Project Manager shall be only to an entity which is equal or better in terms of the prescribed O&M capacity requirements for the project subject to the prior approval of the NHAI;

- the remaining work, if any, and maintenance of the project, within the time assessed by the independent engineer will be completed by the Project SPV and the Trust;

- no objection certificate or no dues certificate from all the existing lenders with respect to above transfer of shareholding/stake in shares and securities to be submitted by the Project SPV;

- to comply with all the statutory compliances as required by SEBI;

- an undertaking from the Project SPV that the proposal shall not have the effect of increasing any financial liability on NHAI and shall not jeopardize the interests of NHAI in any manner; and

- adequate fund-based provisioning shall be made for any anticipated shortfall on actual requirement vis-a-vis the O&M receipts from NHAI for proper maintenance including that for major maintenance of the project;

- incorporation of a suitable clause in this Offer Document for the 'Trust' to the effect that Unitholders shall require to be qualified to invest or hold interest in highway projects of NHAI in India in respect to applicable laws (FEMA and FDI regulations) and in the event of change in ownership of the Project SPV, it will require prior approval from NHAI from national security and public interest perspective, in accordance with the Concession Agreement and the SEBI InvIT Regulations;

- all the provisions including the limitations placed on quantum of termination payment will be applicable in totality and no relaxation in the same would be made;

- Sponsor of the Trust will disclose in this Offer Document that they are monetizing the annuity payments which are due only;

- adequate fund-based provisioning will be made for any anticipated shortfall on actual requirement vis-à-vis the O&M receipts from NHAI for proper maintenance including that for major maintenance of the project. The Project SPV will inform the escrow bank for the proposed transfer of shareholding to the 'Trust'; and

- Project SPV will execute a supplementary agreement for the instant transfer of shareholding proposal in the prescribed format circulated vide NHAI Policy Circular No. 8.4.38/2023 dated February 13, 2023, read with policy circular no. 8.4.40/2023 dated April 27, 2023.

Further, the lenders of the respective Project SPVs have created certain encumbrance (by way of charges) over the Initial Portfolio Assets which includes pledge over the equity shares of the Project SPVs. The pledge over the equity shares of the Project SPVs created in favour of the lenders will be released in order to consummate the Formation Transactions. As on the date of the filing of this Offer Document, the Project SPVs have submitted non-disposal

undertakings to their respective lenders, in order to release the pledge over the equity shares on condition that such equity shares will be re-pledged by the Trust within 60 days from the date of release. In the event the Trust fails to make the Offer and/ or if the shares of the Project SPVs are not re-pledged by the Trust the same may be considered as a default under the existing financing documents of the Project SPVs.

Further, in relation to the pledged equity shares of the Project SPVs namely, GBHPL and GNHPL II, the lender, pursuant to its approval for the consummation of the Formation Transactions, has released the equity shares provided, that the Sponsor will prepay the outstanding loan within a period of 5 working days from the date of receipt of proceeds by the Sponsor. In case the Trust fails to make the Offer, the Project SPVs will re-pledge the equity shares within a period of 60 days from date of release of pledge. Notwithstanding the release of the pledge, the lender's rights to the secured assets of the Sponsor shall remain unaffected until the outstanding loan is repaid in full.

3. If any of our Initial Portfolio Assets are terminated prematurely, we may not receive payments due to us which may result in a material adverse effect on our financial condition.

The concessions in respect of our Initial Portfolio Assets are our principal assets. Our ability to receive annuity payments and apply such amounts to make distributions to our Unitholders will depend on the respective Project SPV's continuing concession right from the NHAI to operate the Initial Portfolio Assets. NHAI may terminate the Concession Agreements and revoke the concessions for reasons set forth in the Concession Agreements, including, but not limited to, one or more of the following:

- failure to comply with operational or maintenance standards;
- failure to replenish performance security upon encashment and appropriation;
- failure to cure the default, within the cure period, for which the performance security was appropriated in terms of the Concession Agreements;
- abandonment or intention to abandon construction or operation of a project by us without the prior written consent of the concessioning authority;
- failure to comply with the provisions of the escrow agreements entered into with the regulatory authorities;
- occurrence of a financial default and substitution by the lenders in terms of the substitution agreement;
- creation of encumbrance in breach of the Concession Agreements;
- occurrence of a material adverse effect due to a breach of any of the agreements in relation to our Initial Portfolio Assets;
- transfer of rights, obligations, assets or undertaking or execution of assets that causes a material adverse effect;
- continuation of a force majeure event, categorised as (i) non-political event including an act of God, industrial strikes, etc., (ii) indirect political event including act of war, public agitation, etc. or (iii) any political event including change in law, expropriation or compulsory acquisition of any project assets by the Government, etc., beyond 180 days within a continuous period of 365 days; and
- temporary or permanent suspension of operations of the Initial Portfolio Assets.

In the event that the early termination of the Concession Agreements is due to a breach by the Project SPVs, we are entitled to receive a termination payment equal to 65.00% of the annuity payments remaining unpaid, including interest thereon, and in the manner prescribed under the Concession Agreements. In certain situations, upon an event of default by the Project SPV, the concessioning authority may terminate the arrangement and pay such Project SPV an amount equal to 90% of the debt due, less any insurance claims, provided that if any of the insurance claims are not admitted and paid, an amount equal to 80% of such unpaid sums will be included in the calculation of the debt due. In the event that the early termination of the Concession Agreements is due to a breach by the NHAI, we are entitled to receive a contractually agreed termination amount, as set out in "***Summary of Concession Agreements***" on page 177. Further, NHAI credits the termination payment payable by NHAI to the escrow account created in accordance with the terms of the relevant Concession Agreement. The senior lenders to the Project SPVs have a first and primary charge on such escrow account and pursuant to the terms of the financing documents, these amounts may be appropriated against the outstanding debt towards by the senior lenders to the Project SPVs. If the termination payments are appropriated by the senior lenders, we may not be able to adequately recoup the actual costs and investments associated with the Initial Portfolio Assets. As the termination payment payable to us in the event of a breach by us would be lower than what we would have otherwise been entitled to receive in the event that the Concession Agreement had not been terminated,

we may not be adequately compensated for the actual costs and investments associated with the Initial Portfolio Assets and, therefore, may adversely affect our ability to make distributions to Unitholders.

There can be no assurance that the concessioning authority will pay such termination payments in time or not pay at all. The Concession Agreements specify the termination payment shall become due and payable within 15 days of demand being made by the Project SPVs to the NHAI and with the necessary particulars, and in the event of any delay, the NHAI is required to pay an interest at a rate equal to 3% (three per cent) above the daily average bank rate on the amount of termination payment remaining unpaid, however, such delay cannot exceed 90 (ninety) days.

In the event of a delay in the disbursement of a termination payment by the NHAI, in particular, if any dispute arises in respect of such payment, or in the event the NHAI fails to make the termination payment at all or if total amounts comprising the termination payments are appropriated by the Senior Lenders against their outstanding debt, we may be unable to make distributions to Unitholders. Further, there can be no assurance that the termination payments from the concessioning authority, if any, will be adequate to enable us to recover our investments made in our Initial Portfolio Assets. If the Concession Agreements are terminated prematurely, our business, results of operations, cash flows and financial condition may be adversely affected. Further, if there is any delay or premature termination of any project due to our fault, our reputation may be adversely affected and we may also be blacklisted or debarred from participation in similar types of projects.

4. Our revenues from our Initial Portfolio Assets are dependent on receiving consistent annuity income and interest on annuity income from NHAI.

All of our Initial Portfolio Assets are operated on hybrid annuity basis. Pursuant to the relevant Concession Agreements, a fixed amount along with interest at a rate as prescribed under the Concession Agreement, is paid bi-annually as annuity by NHAI. Any reduction or non-receipt of annuity income from NHAI may adversely affect our distributions. Further, as per the Projections of Revenue from Operations and Cash Flow from Operating Activities, the revenue from operations for Fiscals 2025, 2026 and 2027 arising from the nine Initial Portfolio Assets is projected to be ₹10,444.26 million, ₹6,953.56 million and ₹6,864.60 million, respectively. In compliance with the SEBI InvIT Regulations, this Offer Document includes certain forward-looking statements, such as the Projections of Revenue from Operations and Cash Flows from Operating Activities, expectations, plans and analysis of the Projections, see "– ***The Special Purpose Combined Financial Statements and Projections of Revenue from Operations and Cash Flow from Operating Activities presented in this Offer Document may not be indicative of the future financial condition, cash flows and results of operations of the Trust***" and the section titled "***Projections of Revenue from Operations and Cash Flow from Operating Activities***" on pages 30 and 379, respectively. Further, any new taxation law applicable to the Trust may also have impact on the revenue of the Initial Portfolio Assets. Any adverse impact on the revenue from operations of the Initial Portfolio Assets will have an adverse impact on the business, cash flows and revenue from operations of the Trust.

5. Our failure and inability to identify and acquire new infrastructure assets that generate comparable revenue, profits or cash flows may have an adverse effect on our business, financial condition, cash flows and results of operations and our ability to make distributions.

The Initial Portfolio Assets will comprise nine road assets, all operating on a hybrid annuity mode in the states of Haryana, Rajasthan, Bihar, Himachal Pradesh, Madhya Pradesh, Karnataka and Uttarakhand that the Project SPVs operate and maintain pursuant to concessions granted by the NHAI. The Concession Agreements of the Project SPVs stipulate a limited concession period at the end of which the operation of the relevant project will be transferred to NHAI. As at September 30, 2024, the residual average period for the concessions of the Initial Portfolio Assets is approximately 11.7 years. For further details on the residual concession period of each of the Initial Portfolio Assets, see "***Business – Details of the Project SPVs and the Initial Portfolio Assets***" on page 159.

Our growth strategy in the future may involve strategic acquisitions and takeovers of infrastructure assets. We may not be able identify or consummate acquisitions in a timely manner. The success of our initial acquisitions and any future acquisitions will depend upon several factors, including:

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

Further, our Sponsor is currently developing additional 17 HAM assets consisting of approximately 546.164 km of roads across eleven states in India. However, we cannot assure you that we will be able to acquire new infrastructure assets upon the expiry of the term 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. Further, even if new infrastructure assets are added to our portfolio, we cannot assure you that such infrastructure assets will be able to generate comparable cash flows, revenues and profits. If we are unable to acquire new road assets that generate comparable cash flows, revenue or profits, our business, financial condition, cash flows and results of operations and our ability to make distributions to Unitholders may be adversely affected. For further details on the terms of each of the Concession Agreements, see "***Summary of Concession Agreements***" on page 177.

Additionally, we cannot assure you 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 adversely affect our profits, financial condition and distributions. The concession agreements for future road projects may also contain terms and conditions that are more restrictive than those under the existing Concession Agreements for the InvIT Assets. These restrictions may restrict our flexibility in managing our business or projects and could in turn adversely affect our business prospects, financial condition and results of operation. Moreover, if the operating periods of Initial Portfolio Assets are shortened or disrupted or the Project SPVs right to operate the Initial Portfolio Assets is terminated before the expiration of the concessions, the business, financial condition, cash flows and results of operations of the Trust may be adversely affected.

6. We may be subject to increase in costs, including O&M costs, which we cannot recover by increasing annuity income under the relevant Concession Agreement.

The terms and conditions of the Concession Agreements are fixed and are not negotiable during the concession period. The Concession Agreements typically specify certain O&M standards and specifications to be met by us while undertaking our O&M activities and require us to develop a maintenance manual. These specifications and standards require us to incur O&M costs on a regular basis. The O&M costs of our Initial Portfolio Assets may increase due to factors beyond our control, including:

- unanticipated increase in material and labour costs, traffic volume or environmental stress leading to more extensive or more frequent heavy repairs or maintenance costs;
- the Project SPVs being required to restore their project roads in the event of any landslides, floods, road subsidence, other natural disasters, accidents or other events causing structural damage or compromising safety;
- changes to the laws and regulations relating to insurance in India which results in an increase in the insurance premiums payable by the Project SPVs;
- an increase in minimum wages or other operating costs;
- the introduction of a levy on the usage of water for maintenance of the roads and highways;
- unforeseen legal, tax and accounting liabilities relating to assets;
- increase in electricity or fuel costs resulting in an increase in the cost of energy;
- implementation of stringent environment laws by NHAI pursuant to impact of global warming and carbon emissions norms;
- adoption of new technology or upgrade in technology used by the NHAI for maintenance of Initial Portfolio Assets resulting in an increase in cost of O&M;
- higher interest costs in relation to our borrowings; or
- any other unforeseen operational and maintenance costs.

In addition, our operations may be adversely affected by interruptions or failures in the technology and infrastructure systems that we use to support our operations. Any significant increase in O&M costs beyond our budget and any failure by us to meet quality standards may reduce our profits and could expose us to regulatory penalties and could adversely affect our business, financial condition, cash flows and results of operations.

Further, our Project SPVs have entered into O&M agreements with the O&M contractor, pursuant to which the contractor, among other obligations, is required to (i) maintain the project in a neat and clean condition and in conformity with applicable laws and applicable permits; (ii) obtain and maintain all applicable permits; (iii) take all

reasonable precautions for the prevention of accidents on or about the project; (iv) be responsible for quality, soundness, durability, safety and the overall O&M requirements under the agreement; (v) obtain at its own cost and charge special or temporary right of access, occupation or use of any property that may be required by it for the purposes of performance of its obligations under the O&M agreement. The O&M contractor is liable for any defect of materials or workmanship for the work done under the O&M agreement. The Project SPV has the right to recover from the O&M contractor any penalties charged by NHAI for defaults in the project or even terminate the agreement in the event there is a material breach of the O&M agreement. In the event, the O&M agreement is terminated, the O&M cost may increase which may have adverse effect on our business, financial conditions and result of operations.

In the event that our costs increase, we may be unable to offset such increases with higher revenues by increasing annuity payments due to the restrictions of the Concession Agreements. Any significant increase in O&M costs beyond the amounts budgeted by us, or any failure to meet quality standards, may reduce our profits, could expose us to penalties imposed by the concessioning authorities and could have a material, adverse effect on our business, financial condition, cash flows and results of operations.

Such events may also impact the ability of the Project SPVs to repay the debt obtained from the Trust and our ability to make distributions to Unitholders. As such, the inability to change the terms and conditions, may materially and adversely affect our operational and financial flexibility.

7. If we fail to maintain the roads constructed by us pursuant to and as per the relevant requirements under the Concession Agreements, we may be subject to penalties or even termination under such Concession Agreements, which may have a material adverse effect on our reputation, business, financial conditions, results of operations and cash flows.

Our Initial Portfolio Assets require us to carry out regular repairs or maintenance (in accordance with the terms of such Concession Agreements) for various factors which would also include natural disasters, accidents and other factors beyond our control. Further, under the terms of the Concession Agreements, as long as Project SPVs are the concessionaire, Project SPVs have obligations to maintain our Initial Portfolio Assets for a period of 15 years from the relevant appointed date (as defined under the respective Concession Agreements), or for the remaining concession period of the respective Project SPVs as per the Concession Agreement, in good working condition and are required to maintain the roads periodically, among other conditions specified under the Concession Agreements. NHAI periodically carries out tests through one or more engineering firms to assess the quality of roads and their maintenance. In the event we fail to maintain the roads to the standards set forth in the relevant Concession Agreements, NHAI may impose damages or penalties, including recovery from annuity payments and demand remedies within cure periods. Further, in the event Project SPVs are required to cure any defaults and we fail to cure such defaults within such time as may be prescribed under the Concession Agreements, the Concession Agreements may be terminated.

Further, under the terms of the Concession Agreements, any Project SPV may be liable to pay damages to the concessioning authority for non-compliance or delayed compliance with certain terms of the Concession Agreements, including for a delay in the fulfilment of the conditions precedent, delays in achieving COD, delays in completing list items specified in provisional completion certificates or for a failure to comply with the maintenance obligations set out in the agreements. The Project SPVs have made payments to the NHAI in the past, towards damages for non-compliance of punch list items, insurance policy, maintenance requirement etc. NHAI recovered these costs by deducting them from the annuity payments due to the Project SPVs. We cannot assure you that NHAI shall not levy any damages in future or that we will be able to make the payments in a timely manner or at all.

Any failure by the Project SPVs to fulfil the conditions precedent to the Concession Agreements or to maintain compliance with the operation and maintenance specifications set out in the agreements may result in the imposition of financial penalties on us that may have a material adverse effect on our results of operations and our ability to make distributions to the Unitholders.

8. The Project SPVs may incur additional costs due to change in law/ change in scope under the Concession Agreements. NHAI may not compensate the respective Project SPVs in a timely manner or at all which may have material adverse effect on our financial conditions, results of operations and cash flows.

In the event of any variation in price index, change of scope, change in law, force majeure or breach of the concession agreement imposes a financial burden on the affected Project SPV, the Project SPV may be entitled to approach the relevant concessioning authority to amend its concession agreement or seek compensation such that the Project SPV is placed in its former financial condition. If compensation is sought under such provisions in the concession agreements, there is no assurance that the affected Project SPV will receive such compensation from the relevant concessioning authority in the amounts claimed, in a timely manner, or at all. This could have an adverse effect on the Trust's financial performance. As of date of this Offer Document, the Project SPVs have periodically made certain

change in law claims to NHAI, for which a notice has been issued by the Project SPVs to the NHAI. Such claims are disclosed in the table mentioned below:

S.No.	NHAI Claims	Total amount claimed (in ₹ million)
1.	DUHPL, *vide* its letter dated April 13, 2024, requested NHAI to approve the additional amount incurred due to increased liability under the Goods and Services Tax Act, 2017, for annuity payments due to DUHPL under the DUHPL Concession Agreement. The claim amount includes GST on annuity payment amounting to ₹ 448.18 million and GST on EPC cost amounting to ₹ 139.53 million. The independent engineer, *vide* its letter dated July 20, 2024, has recommended the claim amount for ₹590.93 million. The matter is pending with NHAI.	590.93
2.	HHHPL *vide* its letter dated April 12, 2024 requested NHAI to approve the additional amount incurred due to increased liability under the Goods and Services Tax Act, 2017 for annuity payments due to HHHPL under the HHHPL Concession Agreement. The claim amount includes GST on annuity payment amounting to ₹ 654.19 million and GST on EPC cost amounting to ₹ 176.32 million. HHHPL has received in-principle approval dated December 04, 2024 from NHAI approving a claim amounting to ₹ 712.10 million.	830.51
3.	GRJHPL *vide* its letter dated March 14, 2023 requested NHAI to approve the additional amount incurred due to increased liability under the Goods and Services Tax Act, 2017 for annuity payments due to GRJHPL under the GRJHPL Concession Agreement. The claim includes GST on annuity payment amounting to ₹ 443.18 million. The independent engineer, *vide* its letter dated June 18, 2024, has recommended an amount of ₹ 450.86 to Project Director, Sonepat, NHAI. GRJHPL has received in-principle approval dated September 25, 2024 from NHAI approving a claim amounting to ₹392.80 million.	450.86
4.	GRSHPL *vide* its letter dated March 14, 2023 requested NHAI to approve additional amount incurred due to increased liability under the Goods and Services Tax Act, 2017 for annuity payments due to GRSHPL under the GRSHPL Concession Agreement. The claim amount includes GST on annuity payment amounting to ₹ 728.77 million. The independent engineer, *vide* its letter dated April 15, 2024, has recommended an amount of ₹ 732.61 to the Project Director, Sonepat, NHAI. GRSHPL has received in-principle approval dated August 19, 2024 from NHAI approving a claim amounting to ₹631.60 million.	732.61
5.	GKNHPL *vide* its letter dated April 29, 2023 requested NHAI to approve additional amount incurred due to increased liability under the Goods and Services Tax Act, 2017 for annuity payments due to GKNHPL under the GKNHPL Concession Agreement. The claim amount includes GST on annuity payment amounting to ₹ 1,602.16 million and GST on EPC cost amounting to ₹ 332.03 million. The independent engineer, *vide* its letter dated July 27, 2023, has recommended an amount of ₹ 1,934.19 million to the Project Director, Mandi, NHAI. GKNHPL has received in-principle approval dated August 19, 2024 from NHAI approving a claim amounting to ₹1,501.63 million.	1,934.19
6.	GKBHPL *vide* its letter dated April 7, 2023 requested NHAI to approve additional amount incurred due to increased liability under the Goods and Services Tax Act, 2017 for annuity payment due to GKBHPL under the GKBHPL Concession Agreement. The claim amount includes GST on annuity payment amounting to ₹ 717.21 million. GKBHPL has received in-principle approval dated August 6, 2024 from NHAI approving a claim amounting to ₹590.72 million.	717.21
7.	GNHPL *vide* its letter dated March 13, 2023, requested NHAI to approve additional amount incurred due to increased liability under the Goods and Services Tax Act, 2017 for annuity payments due to GNHPL under the GNHPL Concession Agreement. The claim amount includes GST on annuity payment amounting to ₹ 779.30 million. The independent engineer, *vide* its letter dated March 22, 2023, has recommended the claim to the Project Director, Rewari, NHAI. The matter is pending with NHAI.	779.30

As of date of this Offer Document, application made to NHAI seeking such claims due to change in law for certain Project SPVs are still pending. However, there is no assurance that NHAI will approve these claims in a timely manner. Delays in approval could lead to increased costs, which may adversely affect our business, financial condition, and results of operations.

9. We may face limitations and risks associated with debt financing, refinancing and restrictions on investment, which may adversely affect our operations and our ability to make distributions to Unitholders.

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 nature of financing or refinancing

that we may undertake. Under the SEBI InvIT Regulations, the aggregate consolidated borrowings and deferred payments of the Trust and the Project SPVs, (net of cash and cash equivalents) shall not exceed 70% of the value of the InvIT assets. Any borrowings above 25% of the value of the Initial Portfolio Assets are subject to certain conditions, including Unitholders' approval. For borrowings up to 49% of the value of InvIT assets, the Trust shall obtain: (a) credit rating from a credit rating agency registered with SEBI; and (b) seek Unitholders' approval in the manner provided under the SEBI InvIT Regulations. Further for borrowings exceeding 49% of the value of the InvIT assets, the Trust: (a) shall utilise the funds only for acquisition or development of infrastructure projects; (b) shall obtain the prescribed credit rating for its consolidated borrowing and proposed borrowing; (c) have a track record of at least six distributions on a continuous basis post listing in the year preceding the financial year in which the enhanced borrowings are proposed to be made; and (d) obtain the Unitholders' approval in accordance with the SEBI InvIT Regulations. There is no assurance that the relevant approval can be obtained in a timely manner, or at all. The Trust will rely on debt and equity financing to expand its portfolio of projects through acquisitions, which may not be available on favourable terms or at all. Debt financing to fund the acquisition of a project may not be available on short notice or may not be available on acceptable terms. Since the timing and size of acquisitions cannot be readily predicted, the Trust may need to be able to obtain funding on short notice to benefit fully from such opportunities. In addition, the level of indebtedness of the Project SPVs may affect the Trust's ability to borrow without prior Unitholders' approval.

Restrictions imposed by the Reserve Bank of India may limit the Trust's ability to borrow overseas for projects under development and hence could constrain its ability to obtain financing on competitive terms and refinance existing indebtedness. In addition, there can be no assurance that any required regulatory approvals or borrowing in foreign currencies will be granted to the Trust without onerous conditions, or at all.

Debt financing may increase the Trust's vulnerability to general adverse economic and industry conditions by limiting its flexibility in planning for or reacting to changes in its business and its industry. The Trust will also be subject to the risk that certain covenants in connection with any future borrowings may limit or otherwise adversely affect its operations and its ability to make distributions to its Unitholders. There can be no assurance that we will be able to obtain financing for new projects as we have done in the past or that the interest rates and the other terms of available financing will remain attractive. In addition, rising interest rates could adversely affect our ability to secure financing on favourable terms and increase our cost of capital. Any additional equity financing may be dilutive to our Unitholders and any debt financing may contain restrictive covenants that limits our flexibility going forward. Such covenants may also restrict the Trust's ability to acquire additional projects or undertake other capital expenditure by requiring it to dedicate a substantial portion of its cash flows from operations to interest and principal payments on its debt.

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 adversely affect our ability to make distributions to Unitholders. 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 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 and Deferred Payments***" on page 321.

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 an adverse effect on our cash flow and the amount of distributions available to Unitholders.

10. Certain of the Project SPVs, the Sponsor and the Trustee are involved in certain legal and other proceedings, which may not be decided in their favour.

Certain of the Project SPVs and the Sponsor are involved in legal proceedings or claims which are pending at different levels of adjudication before various courts, tribunals and regulatory authorities. There are also certain legal proceedings initiated by state authorities pending against our Sponsor and associates of the Sponsor for delays in completion of projects undertaken by them. Such matters are currently pending before various courts and tribunals. For details of such material outstanding legal proceedings, see "***Material Litigation and Regulatory Action****"* on page 337. There is no assurance that these legal proceedings and regulatory matters will be decided in favour 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, cash flows and results of operations. If the courts, tribunals or regulatory authorities decide against the Project SPVs 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. Further, there may be legal proceedings involving the Project SPVs as well in the future. Pursuant to the completion of the Formation Transactions, we are responsible for any legal proceedings involving the Project SPVs that may arise in the future. While the Sponsor (as the seller of such Project SPVs) will provide certain indemnities under the relevant Share Purchase Agreements, we cannot assure you that the relevant Project SPV or the Trust will be able to successfully bring a claim against the Sponsor (as the seller of such Project SPVs) 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 or the consequences thereof.

11. Our contingent liabilities could adversely affect our financial condition, results of operations and cash flows.

As of September 30, 2024, we had contingent liability of ₹ 110.43 million that is determined as per Ind AS 37— Provisions, Contingent Liabilities and Contingent Assets. If any of our contingent liabilities materialize, it could have an adverse effect on our financial condition, results of operations and cash flows. For further details, please see the sections entitled "***Management's Discussion and Analysis of Factors Affecting the Financial Condition and Results of Operations — Contingent Liabilities***" and "***Special Purpose Combined Financial Statements"*** on pages 319 and 227, respectively.

12. The acquisition by the Trust of the Project SPVs may be subject to certain risks, which may result in damages and losses, and conditions that may prevent the Trust from acquiring the Project SPVs, operating and maintaining the Initial Portfolio Assets or providing debt financing to them.

While the Investment Manager believes that reasonable due diligence will have been carried out on the Project SPVs prior to their acquisition by the Trust, there can be no assurance that the Initial Portfolio Assets will not have defects or deficiencies that are unknown or unquantified and that may require additional capital expenditure or obligations to third parties, including to the relevant concessioning and statutory authorities, which may have an adverse effect on the Trust's earnings and cash flows and the distributions to the Unitholders.

The Sponsor (seller of the Project SPV), under each Share Purchase Agreement, has agreed to indemnify the Trust and the Investment Manager for any losses resulting from (i) actual or alleged breach, inaccuracy or misrepresentation in any of the warranties or breach of any covenant; or (ii) any pending or threatened claims against the Project SPVs from the period prior and including the closing date as defined under the respective Share Purchase Agreement. Further, the Seller has agreed to indemnify the Trust from the losses suffered or incurred by the Trust or the Project SPVs arising out of, or in relation to, any difference arising between the amount of claims made by the Project SPV from NHAI under the 'change in laws' provisions under the Concession Agreement, and the amount actually received by the Project SPV from NHAI. Notwithstanding the above, the Sponsor shall at all times be responsible for the Formation Transactions in accordance with Regulations 12(3)(a) and 12(3)(b) of the SEBI InvIT Regulations. For further details, see the section titled "***Formation Transactions in Relation to the Trust – Arrangements pertaining to Project SPVs entered into with parties to the Trust prior to the Offer – Share Purchase Agreements***" on page 109.

Further, in the event of failure or default by the Project Manager under the Project Management Agreement, the aggrieved party shall be entitled to recover damages from the Project Manager, including on account of any penalty or deduction in annuity payments levied by the NHAI and such damages shall be based on actual loss or actual damage incurred by the aggrieved party. Claims exceeding the amount limits, not indemnified by the Project Manager, would have an adverse effect on the Project SPVs' financial performance.

The Project SPVs may, from time to time, receive letters and notices from the respective concessioning authorities imposing penalties and seeking claims for any deficiencies or non-compliance with the terms of the respective Concession Agreement or other project agreements. However, there would be an adverse effect on the relevant Project SPV's operations and financial condition if a claim is decided against such Project SPV. Further, the Projects SPVs have applied to concessioning authorities for their consent in relation to, amongst others, undertaking or permitting any change in the ownership from national security and public interest perspective.

In addition, the Project SPVs may be subject to unknown or contingent liabilities for which the Trust may have limited or no recourse against the Sponsor. Such unknown or contingent liabilities may also include tax liabilities and other liabilities whether incurred in the ordinary course of business or otherwise.

13. There are risks associated with the potential acquisition of the ROFO SPVs by the Trust pursuant to the ROFO Agreement.

The Sponsor has entered into the ROFO Agreement with the Trust, pursuant to which the Sponsor proposes to grant a right of first offer to the Trust to acquire the ROFO SPVs. For more details, see the sections titled "***Business — Assets***

under ROFO" and *"**Formation Transactions in Relation to the Trust – Acquisition of future assets by the Trust – ROFO Agreement***" on pages 172 and 112, respectively.

The concession agreements entered into by the ROFO SPVs may require the Sponsor to maintain a specified percentage of equity shareholding, both during and after the construction period, and certain ROFO SPVs may necessitate the prior approval of NHAI before undertaking any 'change in ownership' (as defined under the relevant concession agreement). As certain of these projects are currently under different phases of construction, such projects are subject to various construction related risks, including time and cost overruns and delays in obtaining regulatory approvals, which may delay or prevent the Sponsor from selling its shareholding in the ROFO SPVs to the Trust pursuant to the ROFO Agreement. Further, the ROFO SPVs may also be subject to restrictive covenants in respect of maintaining the management control under their financing documents with the senior lenders and such ROFO SPVs would also require prior approvals of such senior lenders. Moreover, any future acquisition pursuant to the ROFO Agreement will have to be undertaken by the Trust in compliance with, and subject to any restrictions prescribed under, the then prevailing policy framework for divestment of equity by concessionaires/developers, as set out by the NHAI.

Pursuant to the ROFO Agreement, the Trust will undertake a diligence and valuation exercise prior to making an offer to buy ROFO SPVs. For additional details, see the section titled "***Formation Transactions in Relation to the Trust – Acquisition of future assets by the Trust – ROFO Agreement***" on page 112. Accordingly, the ROFO SPVs might not be free from defects or be subject to approval requirements and other restrictions when they are offered to the Trust under the ROFO Agreement and the Trust may decide not to acquire any of the ROFO SPVs.

14. The Trust and the Project SPVs have entered into certain related party transactions and expect to continue to enter into related party transactions and there can be no assurance that such transactions will not have an adverse effect on our results of operations, cash flows and financial condition.

The Trust has entered and will in the future enter into certain transactions with related parties, including the Project Manager, Associates of the Sponsor and the Investment Manager. Further, such transactions were undertaken at arms length basis and in accordance with Companies Act, 2013. Such related party transactions include the transactions entered into the Formation Transactions and the Project Management Agreement. As on date of this Offer Document, the Trust has entered into the Project Management Agreement with respective Project SPVs on arm's length basis and as under applicable law. For detailed information on related party transactions, see the section titled "***Related Party Transactions***" on page 214. Such transactions in the future or any other future transactions with related parties may potentially involve conflicts of interest and impose certain liabilities on the Trust or the Project SPVs. Further, the promoter of the Trustee may have exposure in the same line of business as of the Trust. We cannot assure that duties of our Trustee would be independent of any related business.

Pursuant to its resolutions dated August 20, 2024, the IM Board has adopted the RPT Policy in accordance with applicable SEBI Guidelines, which provides a framework of supervision and review in respect of all related party transactions to be undertaken by the Trust in the future. However, there can be no assurance that previous related party transactions could not have been made on more favourable terms with unrelated parties, and there can be no assurance that such in the future or any other future transactions or future transactions, individually or in the aggregate, will not have an adverse effect on our results of operations, cash flows and financial condition. For detailed information on related party transactions, see the section titled "***Related Party Transactions***" on page 214.

15. The Special Purpose Combined Financial Statements and Projections of Revenue from Operations and Cash Flow from Operating Activities presented in this Offer Document may not be indicative of the future financial condition, cash flows and results of operations of the Trust.

The Special Purpose Combined Financial Statements included in this Offer Document are prepared by combining the historical financial data of the Project SPVs, as required under the SEBI InvIT Regulations and have been prepared on the assumption that all the Project SPVs will be acquired pursuant to the Share Purchase Agreements. The Special Purpose Combined Financial Statements have been prepared and presented on the basis that the Trust will hold 100% of the shareholding in all the Project SPVs on or prior to the date of the Allotment of the Units pursuant to the Offer.

The Special Purpose Combined Financial Statements of the Project SPVs for the six months period ended September 30, 2024 and for the Financial Years ended March 31, 2024, March 31, 2023 and March 31, 2022, have been prepared in accordance with Ind AS in order to present the financial position on a combined historical basis and constitute a different presentation of information and may not necessarily reflect the consolidated financial position, results of operations or cash flows of the Trust, and nor will they necessarily give an indication of the financial position, results of operations or cash flows of the Trust or the Project SPVs in the future.

After the listing and trading of units, there may be certain changes to the Trust's cost structure, levels of indebtedness and operations, and these could differ materially from the historical combined cost structure and levels of indebtedness presented in the Special Purpose Combined Financial Statements. For example, there are certain costs, such as the

Investment Manager's fee, the Project Manager's fee and other costs relating to shared services for the Project SPVs and the Trust, that will be incurred by the Trust going forward, some of which were not incurred by the Project SPVs historically. For details of recurring expenses, see the section titled *"**Overview of the Trust**"* on page 19. In addition, the Project SPVs will be valued at fair value at the time of the actual acquisition of such assets by the Trust in accordance with the Valuation Report, which will occur prior to the Closing Date, for the purpose of a purchase price allocation exercise required under Ind AS for financial reporting purposes. Furthermore, the future consolidated financial statements of the Trust will be prepared considering the acquisition of and control over the Project SPVs in line with Ind AS 103, business combination and Ind AS 110, consolidated financial statements, which may be substantially different from the accounting policies used for the preparation of the Special Purpose Combined Financial Statements.

The financial projections contained in this Offer Document are based on historical financial information and certain estimates and assumptions. There can be no assurance that the Project SPVs will be able to generate sufficient cash from the operations of the Initial Portfolio Assets for the Trust to make distributions to Unitholders or that such distributions will be in line with those set out in the section titled *"**Projections of Revenue from Operations and Cash Flow from Operating Activities**"* on page 379. The future financial performance of the Trust could vary materially from the Special Purpose Combined Financial Statements included in this Offer Document and the financial projections and some of such projections' underlying assumptions might change or not materialise as expected. Unfavourable events or circumstances not anticipated may also arise. There can be no assurance that the assumptions will be realised or actual distributions will be as anticipated.

16. The audit reports on our Special Purpose Combined Financial Statements contains an emphasis of matters.

The audit reports on the Special Purpose Combined Financial Statements contain the following emphasis of matters:

The Auditors have drawn attention to a note to the Special Purpose Combined Financial Statements, which describes basis of preparation and restriction on distribution or use. The Special Purpose Combined Financial Statements have been prepared by the Investment Manager solely to comply with the requirements of SEBI InvIT Regulations, for the inclusion in this Offer Document and the Final Offer Document in connection with the Offer and it may not be suitable for any other purpose. Consequently, the Special Purpose Combined Financial Statements may not necessarily be indicative of financial performance, financial position and cash flows of the Project SPV Group that would have occurred if it had operated as a single group of entities during the periods presented.

We cannot assure you that our audit reports in the future will not contain similar or other emphasis of matters or other observations which affect our results of operations in such future periods. For further details, see "***Special Purpose Combined Financial Statements***" on page 227.

17. Our Project SPVs are subject to restrictive covenants and variable interest rates under their financing agreements that could limit our flexibility in managing our business or to use cash or other assets. Any default under the existing 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.

We expect that certain financing arrangements of the Project SPVs will remain in place after the allotment of the Units. Please see the section entitled "***Use of Proceeds***" on page 80. These financing agreements entail interest at variable rates with a provision for the periodic reset of interest rates. Under the Project SPV's financing agreements, the lenders are entitled to change the applicable rate of interest on any date and accordingly, the Project SPV is susceptible to changes in interest rates and the risks arising therefrom. Any increase in interest rates may have an adverse effect on our results of operations, financial condition and cash flows.

Financing agreements that the Project SPVs have entered into with certain banks and financial institutions contain certain restrictive covenants. GRJHPL, GKBHPL, GNHPL, GRSHPL, HHHPL, GKNHPL, DUHPL, GBHPL and GNHPL II have obtained consents from its lenders for the Offer and the Formation Transactions. The consents obtained from certain of the lenders in relation to the Formation Transactions impose certain obligations on the Trust. Such obligations include, among others:

(i) to maintain all necessary approvals/ clearances from central government, state government and other statutory bodies during the concession period;

(ii) permit lenders and their authorized officers, employees consultants to visit and inspect facilities, properties records and documents in relation to the project;

(iii) to submit a credit rating from external rating agency as accredited by the RBI;

(iv) not effect any change in its capital structure including reduction, purchase, buy-back, re-organisation of share capital;

(v) not formulate any scheme for winding up, merger, de-merger, consolidation, amalgamation with its shareholders or creditors;

(vi) not dispose of the project assets (excluding subleasing of land/facilities);

(vii) not acquire assets of any other person or make any investment in any entity, give any loans, extend financial assistance to any person, undertake any obligation on behalf of or for the benefit of any other person;

(viii) not enter into long term contractual arrangement/obligations except as permitted; and

(ix) not declare or pay any restricted payments, as specified in the financing agreements.

For details, see "***Financial Indebtedness and Deferred Payments***" on page 321. Additionally, these restrictive covenants may also affect some of the Trust's rights as the shareholder of the Project SPVs and the Project SPVs ability to pay dividends if it is in breach of its obligations under the applicable financing agreements.

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 or pre-payment penalties as required under the financing agreements.

In addition, our ability to meet the debt service obligations and repay the outstanding borrowings of the Project SPVs will depend primarily on the cash generated by our business. We cannot assure you that we will generate sufficient cash to service existing or proposed borrowings or fund other liquidity needs, which could have an adverse effect on our business, cash flows and results of operations. We may be required to refinance our outstanding borrowings in the future. There is no assurance that we will be able to obtain such financing, on favorable terms, or at all, which may have a material adverse effect on our business, financial condition and results of operations.

If the Project SPV is suspended under the relevant Concession Agreements in relation to any default by such Project SPV, at any time during such suspension, NHAI has the right to trigger the substitution process and require the lenders of such Project SPV to exercise their rights to substitute the concessionaire in accordance with the agreement with senior lenders. Also, on occurrence of a financial default by the Project SPV, the lenders to that Project SPV have the right to trigger the substitution process in terms of the substitution agreement.

Further, GNHPL II and GBHPL had entered into endorsement agreements with Sadbhav Nainital Highway Limited (*formerly known as Sadbhav Nainital Highway Private Limited)* and Sadbhav Bangalore Highway Private Limited (collectively "**Sadbhav Entities**"), respectively along with NHAI and senior lenders of each of the Sadbhav entities, pursuant to which, concession rights, entitlements, interests, obligations and liabilities of the Sadbhav Entities under their respective Concession Agreements were transferred to our Project SPVs. As per the endorsement agreements, the liabilities and obligations of the Sadbhav Entities towards NHAI under their erstwhile concession agreements and liability to pay outstanding debt of the senior lender was assumed by our Project SPVs, namely GNHPL II and GBHPL. As on September 30, 2024, the outstanding debt of GBHPL and GNHPL II is ₹ 4,273.61 million and ₹ 1,934.98 million, respectively. However, we may acquire any other asset through harmonious substitution from other concessionaire in future upon receiving approval from NHAI and may have to pay the outstanding debt under such endorsement agreements entered into with senior lender. In such event, there is no assurance that we will be able to pay the outstanding debt under financial agreements on timely manner, which may in turn result in default. Any of such breach thereof may adversely affect our results of operations, cash flows and financial condition. Further, pursuant to term sheet dated February 15, 2023 entered between Sadbhav Infrastructure Project Limited, Sadbhav Nainital Highway Limited (*formerly known as Sadbhav Nainital Highway Private Limited)* and the Sponsor, the amount received under change in law/ change in rate from NHAI belongs to Sadbhav Infrastructure Project Limited/ Sadbhav Nainital Highway Limited (*formerly known as Sadbhav Nainital Highway Private Limited)* and the Sponsor or the Project SPVs has to make payment of such amounts, without deducting any direct or indirect taxes, to the respective the Sadbhav Entities. For further details on endorsement agreements with the Sadbhav Entities, NHAI and Project SPVs, please see "***Summary of Concession Agreements***" on page 177.

Any downgrading of the credit rating of the Project SPVs by a credit rating agency below a certain scale may qualify as an event of default under the relevant financing agreements of our 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 or observer 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 upon occurrence of event of default. 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, cash flows and financial condition.

18. 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 impact the ability of the Project SPVs to meet their payment obligations to the Trust in relation to unsecured subordinate loans provided by the Sponsor and loans owned to the senior lenders.

The debt financing proposed to be provided by the Trust to each of the Project SPVs comprises (i) unsecured subordinate loans by the Trust ("**Subordinate Trust Financing**") and (ii) loans which, subject to the approval of the concessioning authority and the senior lenders, may be classified as debt owned to a senior lender and secured by a first-ranking exclusive charge, *pari passu* to the charge created to secure the debt owed to the other senior lenders on, inter-alia (a) the escrow account of such Project SPV; (b) the rights, title, interest, claims and demands of the relevant Project SPV in its concession agreement, other project agreements, insurance policies and project clearances; and (c) all other movable assets of the relevant Project SPVs, save and except the Project Assets (as defined under the relevant concession agreements)("**Senior Trust Financing**"). The payment obligations of the Project SPVs in relation to the Subordinate Trust Financing and, in the event the Project SPVs are unable to obtain the relevant approvals, the Senior Trust Financing, will be subordinated to all existing and future obligations of the Project SPVs towards any secured senior lenders. The Subordinate Trust Financing, and, in the event the Project SPVs are unable to obtain the relevant approvals, the Senior Trust Financing, would 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 fees collection expenses, expenses for repair works, payment of concession fees, debt service payments to senior lenders (as defined under the relevant concession agreements), additional concession fees or premium, 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**").

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 Subordinate Trust Financing and, in the event the Project SPVs are unable to obtain requisite approvals, the Senior Trust Financing. 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 Subordinate Trust Financing and, in the event that the Project SPVs are unable to obtain approval from the lenders and the concessioning authority, the Senior Trust Financing. Any inability on the part of any of the Project SPVs to meet their payment obligations to the Trust may adversely impact the ability of the Trust to make distributions to the Unitholders in the manner described in this Offer Document or at all. For further details in relation to the financing arrangements entered into by the Project SPVs, please see the section entitled "***Financial Indebtedness and Deferred Payments***" on page 321.

19. The Project SPVs have entered into Concession Agreements which contain certain onerous provisions and any failure to comply with such Concession Agreements could result in adverse consequences including penalties and the substitution of the concessionaire.

The Project SPVs have entered into Concession Agreements that contain terms that may be onerous to the Project SPVs in relation to, among other things, compliance with and monitoring of O&M requirements. The O&M requirements include, among other things, permitting the safe, smooth and uninterrupted flow of project during normal operating conditions, undertaking routine maintenance, including repairs of potholes, cracks, joints, drains, embankments, structures, markings, lighting, signage and other control devices, undertaking major maintenance in accordance with the relevant Concession Agreements, including but not limited to resurfacing, repairs to structures, and repairs and refurbishment of system and equipment and preventing, with the assistance of the concerned law enforcement agencies, any encroachments on, or unauthorized entry to the project. Failure to comply with these requirements could result in adverse consequences, including the Project SPVs being liable for compensating the relevant concessioning authorities for such breach or termination.

There are terms in the Concession Agreements which require the relevant concessioning authority's prior written approval before a Project SPV can create encumbrance or security interest over, or transfer its rights and benefits under, the respective Concession Agreement. The terms of the Concession Agreements limit the creation of security interest to secure the loans taken by the Project SPV(s) to finance the project cost of the respective project only. There is no assurance that the concessioning authority will approve the actions of any Project SPV in time or at all. Even if approval from the concessioning authority is obtained, there is no assurance that the transfer of the rights and benefits under the respective Concession Agreement would have no adverse effect on the Unitholders. The restrictions and uncertainties impose constraints on the flexibility of the Trust to conduct its business and its financial conditions and results of operations may be adversely affected.

In addition, the Concession Agreements also contain clauses which will allow the concessioning authority to step in, in place of a Project SPV, in the event of a suspension or termination of the Concession Agreement. Further, the NHAI or the lenders of such Projects may substitute a Project SPV in the event that the Project SPV is in financial default; that is, for example, if the NHAI or the lenders of such Project have a reason to believe that a Project SPV is likely to face financial distress and is likely to default in its obligations under the terms of the relevant Concession Agreement. The NHAI may also impose a penalty on the defaulting Project SPV.

The Concession Agreements also require the Project SPVs to indemnify the concessioning authority, including for losses arising out of, or with respect to, the failure of the concessionaire to comply with applicable laws and permits, payment of taxes payable by the concessionaire or the non-payment of amounts arising out of materials or services provided to the relevant concessioning authority, among others. In the past, there have been no instances where the concessioning authority have awarded/ assigned portion of the concession agreement to a third party contractor in accordance with concession agreements. There can be no assurance that such situations will not arise in the future and in such cases the Trust will have no control over the third party. As a result, our business, results of operations, financial condition and cash flows could be materially and adversely affected.

Pursuant to the endorsement agreement entered between GNHPL II and Sadbhav Nainital Highway Limited (*formerly known as Sadbhav Nainital Highway Private Limited)*, our Project SPV, GNHPL II was vested with the concession rights, entitlements, interests, obligations and liabilities of the Sadbhav Entity. As per the endorsement agreement, the annuity for the remaining length will be released only upon completion of all pending works and issuance of the provisional completion certificate ("**PCC**") for the balance stretch, with no part PCC issued before that. However, PCC of only 18.085 km substantially completed 4-lane length was issued so far out of total project length of 49. 78 km. Due to certain unforeseen event, GNHPL II failed to obtain PCC for the work completed from the independent engineer as per the terms of the Concession Agreement. Subsequently, GNHPL II and NHAI agreed to enter into settlement agreement dated October 15, 2024, pursuant to which the parties agreed to waive the restriction under the endorsement agreement dated July 14, 2023, and allow NHAI to issue a provisional completion certificate for work completed up to July 11, 2024, following the procedures of the Concession Agreement and NHAI policies. However, in case of any slippage in completion of the road over bridge and the balance work as mentioned in the agreement and if the delay is attributable to Concessionaire, NHAI will have the right to impose damages as per provision of Concession Agreement.

In the event that any change in law under a Project's concession agreement imposes a financial burden on the affected Project SPV, the Project SPV may be entitled to approach the relevant concessioning authority to amend its concession agreement or seek compensation such that the Project SPV is placed in its former financial condition. The Project SPV have, in the past, have raised claims for compensation against the concessioning authorities, under the concession agreement. For details, see "−***The Project SPVs may incur additional costs due to change in laws/ change in scope under the Concession Agreements. NHAI may not compensate the respective Project SPVs in a timely manner or at all which may have material adverse effect on our financial conditions, results of operations and cash flows***" However, if compensation is sought under such provisions in the concession agreements, there is no assurance that the affected Project SPV will receive such compensation from the relevant concessioning authority in the amounts claimed, in a timely manner, or at all.

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

The Project SPVs' insurance coverage include fire, burglary, public liability, contractor all-risk insurance and commercial general liability insurance. However, we cannot assure you 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 Initial Portfolio Assets are 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; and
- adverse developments in the overall economic environment in India.

Further, we are subject to various risks in the operation of the InvIT Assets, including on account of accidents on the InvIT Assets. 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 adversely affect our financial condition, business, cash flows and results of operations.

21. The Trust has received in-principle sanction from certain external lenders, with the key terms being non-binding and indicative which may change.

The Trust proposes to issue Trust NCD(s), post receipt of listing and trading approval from the Stock Exchanges, for the purpose of refinancing of the existing debt/debentures availed by the Project SPVs in accordance with the SEBI InvIT Regulations. The terms of the in-principle sanction are non-binding in nature and may change in the definitive documents to be executed between the Trust and the lenders. For the indicative terms in relation to the Trust NCD(s), please see section titled "***Financial Indebtedness - Trust Borrowing - Principal terms of the borrowing to be availed by the Trust from external lender***" on page 326.

22. We will depend on various third parties to undertake certain activities in relation to the operation and maintenance of the Initial Portfolio Assets and any delay, default or unsatisfactory performance by these third parties could materially and adversely affect our ability to effectively operate or maintain the InvIT Assets.

We will depend on the availability and skills of third-party employees and contractors pertaining to the operation and maintenance of the InvIT Assets. We can also make no assurance that the services of such third parties will continue to be available at reasonable rates in the areas in which we conduct our operations or at all. We may be exposed to risks relating to the inability of such third parties to obtain requisite approvals for the operation and maintenance activities, as well as the quality of their services, equipment and supplies. In particular, non-availability of, or our inability to engage an independent engineer may impact our ability to take timely decisions which could impact our operations. We may also be exposed to civil and criminal liability in relation to the actions of other third parties, including our employees and contractors.

We can make no assurance that such contractors or their sub-contractors will continue to hold or renew valid registrations under the relevant labour laws in India or be able to obtain the requisite approvals for undertaking such construction and operation. Furthermore, in case of failure by the sub-contractor to pay the labour costs of the workers engaged by them, we may be liable to pay such costs to the contracted labourers. Any violation of the provisions of the Contract Labour Act by the Project SPV may result in penalties pursuant to the provisions of the Contract Labour Act. If any penalty is imposed on the Project SPV under the Contract Labour Act, the reputation, results of operations, cash flows and financial condition of the Trust could be adversely affected. Any delay, default or unsatisfactory performance by these third parties could materially and adversely affect our ability to manage the operation and maintenance of the Initial Portfolio Assets under the Concession Agreements in a timely manner or at all. Any of the foregoing factors could have a material adverse effect on our business, financial condition, reputation, cash flows and results of operations.

23. We may be required to pay additional stamp duty if any Concession Agreement is subject to payment of stamp duty as a deed creating leasehold rights, or as a development agreement.

For the purposes of stamp duty payment, a stamp duty ranging between ₹100 and ₹500 is typically paid on the concession agreements under the category of general agreement/other agreements. However, revenue departments of certain states in India have issued notices to some concessionaires alleging inadequate stamp duty on the concession agreements executed between the concessionaires and the NHAI treating the concession agreements as lease deeds. The stamp authorities have claimed that since concession agreements relate to the letting of tolls to the concessionaires in the form of leases, or as development agreements, such agreements were required to be stamped as lease agreements or development agreements, as applicable. The stamp duty for a lease agreement or a development agreement ranges between 1.00% and 11.00% of the annual rent or premium payable or the market value of the property. The revenue departments of any state may impose penalties for payment of inadequate stamp duty, which could extend up to 10 times the amount of the stamp duty payable. The High Courts of Uttar Pradesh, Madhya Pradesh and Maharashtra have also held that a concession agreement ought to be stamped as a lease agreement and have upheld the imposition of a higher stamp duty on such agreements. Pursuant to the judgments issued by the Hon'ble Supreme Court of India, a concession agreement for a toll road has been categorized as a "lease" under the Indian Stamp Act, 1899. As a result, the stamp duty provisions that apply to leases are now applicable to these agreements. This change could lead to substantial financial consequences for the concessionaire, as lease agreements are typically subject to significant ad valorem stamp duties, which vary across different States, potentially increasing the financial burden on the concessionaire.

If any of the Concession Agreements were determined to be inadequately stamped, then such agreements would be inadmissible as evidence in any legal action, until the deficient amount of stamp duty together with penalties, if any,

was paid. Any deficiently stamped documents can also be impounded by any person having authority, by law or consent, to receive evidence or every person who is in-charge of a public office, and such impounded documents could be made subject to stamp duty and penalty. In addition, a person who signs an instrument chargeable with stamp duty will be subject to a fine if such instrument is not duly stamped.

While we believe we have discharged our obligation of stamp duty on each of the Concession Agreements adequately, if any demand for payment of a higher stamp duty or penalty is imposed which would increase the costs of the InvIT Assets, then to the extent such additional costs are not recoverable from the concession authorities, such demand could adversely affect our business, cash flows, results of operations and prospects.

Even in case where Initial Portfolio Assets are demanded payment of a higher stamp duty or penalty, the Concession Agreements of our Initial Portfolio Assets contain change in law provisions which extend to a change in the interpretation or application of any Indian law by a court of record after the date of the Concession Agreement or the submission of the bid documents, as the case may be. Under the terms of the Concession Agreements, if any financial burden exceeding a certain prescribed threshold is imposed on a concessionaire as a result of such change in law, then it may be entitled to approach the concessioning authority to amend the Concession Agreements or seek compensation to place the concessionaire in its former financial condition. However, relief under the Concession Agreements may be limited in nature. There can be no assurance that the concessioning authority will consider additional stamp duty on the Concession Agreements as a change in law for which they will amend the Concession Agreements or agree to provide compensation to the concessionaire. Any disagreement between the concessionaire and the concessioning authority may result in arbitration proceedings between the parties which could lead to increased costs.

24. We may be unable to renew or maintain the statutory and regulatory permits and approvals required to operate the Initial Portfolio Assets which may have an adverse effect on our business, results of operation and financial condition.

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 the construction and operation of the InvIT Assets. These include approvals under applicable labour legislations, consents to operate and establish issued by state pollution control boards, permissions for drawing groundwater and licenses to use explosives for undertaking construction and related works of under-construction projects that may be acquired by the Trust in the future. For further details, see section titled "***Regulatory Approvals***" on page 347. We cannot assure you that the Project SPVs will continue to obtain the necessary approvals or have been and will continue to be in compliance with all applicable laws and regulations. If the Project SPVs and/or the third-party contractor(s) fail to obtain or maintain them for any reason whatsoever, including on account of unforeseen changes in law or regulation, or if there is any delay in obtaining or renewing them, our business, financial condition, cash flows and results of operations could be adversely affected. For instance, if we are unable to obtain any of the material approvals or consents during the construction stage of projects that may be acquired by the Trust in the future, then we may be unable to complete our construction activity in a timely period or at all, which may result in liquidated damages being sought by the concessioning authority and, in certain instances, may also result in the termination of the concession granted by the concessioning authority. Further, for our completed and revenue generating projects, our inability to renew any of the material licenses and approvals in a timely manner or at all may restrict our ability to carry on certain business activities and may also result in fines or penalties being imposed by the respective regulatory authorities on the Project SPVs, which may have an adverse impact on our financial condition. Any such regulatory order may impact our business, reputation and results of operations. Further, these permits, approvals, licenses, registrations and permissions could be subject to several conditions which may undergo changes from time to time, 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. Any changes to current regulatory bodies or existing regulatory regime as well as changes in certain significant terms of any of such approvals, sanctions, licenses, registrations and permissions, such as their duration, the charges payable under the approvals, sanctions, licenses, registrations and permissions, the range of services permitted or the scope of exclusivity, if any, could have a material adverse effect on our business and prospects. Any non-compliance may lead to the cancellation, revocation or suspension of relevant permits, licenses or approvals, which may result in the interruption of our operations and may adversely affect our business, financial condition, cash flows and results of operations.

25. We may not be able to obtain trademark registration or continue to use our intellectual property.

As of the date of this Offer Document, our Trustee on our behalf has made an application dated October 11, 2024, bearing number 6665314 and 6665315, for trademark registration with the Registrar of Trade Marks, Delhi for the logo of the Trust CAPITAL Infra Trust GROWTH | GOVERNANCE | GOAL, under class 35 and 36 of the Trade Marks Act, 1999. The registration of trademark is a time-consuming process and there can be no assurance that such registration will be granted by the concerned authority. If we fail to register our logo, we would not be able to protect relevant intellectual property or may have to cease the usage of the logo.

26. A portion of the Net Proceeds may be utilized for repayment or pre-payment of loans taken from HDFC, which is one of the Lead Managers to the Offer.

We propose to repay certain loans obtained by the Project SPVs from HDFC from the Net Proceeds as disclosed in the "***Use of Proceeds***" on page 80. In this regard, loans and facilities sanctioned to the Project SPVs by HDFC are part of their normal commercial lending activity and we cannot assure that there is any conflict of interest under the SEBI (Merchant Bankers) Regulations, 1992, as amended, or any other applicable SEBI rules or regulations. However, the amount of Net Proceeds utilized towards such repayment or prepayment to HDFC, will not be available for use in our business for any other purposes. For details, see "***Use of Proceeds***" on page 80.

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

Our business is subject to environmental, health and safety laws and regulations and various labour, workplace and related laws and regulations in India and requirements under the Concession Agreements. For further details, see section titled "***Regulations and Policies in India***" on page 205. 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. 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 on may also disrupt our business and operations.

For instance, our Project SPVs listed on the Stock Exchanges namely, GNHPL and GKBHPL received notices from Stock Exchanges levying fine for non-disclosure of line items prescribed under regulation 52(4) of SEBI Listing Regulations along with the half yearly/annual financial results for the period ended March 31, 2022 and for non-compliance of regulation 60(2) SEBI Listing Regulations, respectively. As of date of this Offer Document, GNHPL and GKBHPL have paid their fines and have taken corrective actions and has received no other notices from the Stock Exchanges or any other regulatory authorities.

We cannot assure you that we will not become involved in future litigation, enforcement action taken by regulator or statutory authorities or other proceedings or be held responsible in any such future litigation, enforcement action taken by regulator or statutory authorities 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 adversely affect our business, prospects, financial condition, cash flows and results of operations.

28. The Project SPVs' financing agreements entail interest at floating 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 section titled "***Financial Indebtedness and Deferred Payments***" on page 321. These financing agreements entail interest at floating rates with a provision for periodic reset of interest rates. Currently, all of the Project SPVs' borrowings are at floating rates of interest. Further, in recent years, the Government has taken measures to control inflation, which have included tightening monetary policy by raising interest rates. Any increase in interest rates may have an adverse effect on our results of operations, financial condition and cash flows.

29. As a proposed shareholder of the Project SPVs, the Trust's rights are subordinated to the rights of creditors, debt holders and other parties specified under Indian law in the event of insolvency or liquidation of the Project SPVs.

In the event of liquidation of any Project SPV, the secured and unsecured creditors of the relevant Project SPV will be entitled to payment from the liquidation proceeds in priority to us in our capacity as an equity shareholder of the Project SPVs. Under the Insolvency and Bankruptcy Code, 2016, in the event of winding-up of any Project SPV, workmen's dues and debts due to secured creditors which rank *pari passu* are required to be paid in priority over all other outstanding debt, followed by wages and salaries of employees, debts due to unsecured creditors, any amounts due to the central or state government, any other debts, preference shareholders and equity shareholders. Further, amounts payable to us in respect of any unsecured debt issued to the relevant Project SPV will be subordinated in the manner set forth above. Further, should the Trust be dissolved, depending on the circumstances and the terms upon which our assets 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 insolvency of a trust under the Insolvency and Bankruptcy Code, 2016.

30. Our actual results may be materially different from the expectations expressed or implied in the Projections of Revenue from Operations and Cash Flow from Operating Activities to this Offer Document and are inherently uncertain and subject to significant business, economic, financial, regulatory and competitive risks and uncertainties that could cause actual results to differ materially from those projected.

This Offer Document contains certain forward-looking statements regarding, among other things, the projections of revenue, profit and cash flows for Fiscals 2027, 2026 and 2025 for the Trust set out in the section "***Projections of Revenue from Operations and Cash Flow from Operating Activities***" on page 379. The Projections of Revenue from Operations and Cash Flow from Operating Activities have been prepared on the basis of best-estimate (i.e. assumptions as to future events which are expected to take place and the actions expected to take place as of the date the information is prepared) and hypothetical assumptions (about future events and actions which may or may not necessarily take place), which are, by their nature, subject to significant risks and uncertainties. Such events and circumstances may not occur as expected or assumed. Certain assumptions have been made regarding our future financial and operating performance, including but not limited to the revenue from operations, operating and maintenance costs, Trust expenses, the portfolio remaining unchanged through the projections period and no outflow on account of any litigation related matters during the projections period. Such risks, uncertainties, contingencies and other factors which may cause the actual results or performance of the Trust and the Project SPVs to be materially different from any future results or performance expressed or implied by these financial projections. The actual future results or performance of the Trust and the Project SPVs will be affected by numerous factors, including those discussed in the section titled "***Forward Looking Statements and Financial Projections***" on page 15. Our revenue will be dependent on the cash flows from dividends, buyback of SPV shares, and principal and interest payments (net of applicable taxes and expenses) from the Project SPVs. Accordingly, we cannot assure you that we will be able to achieve the financial projections or make the distributions as set out in the Projections of Revenue from Operations and Cash Flow from Operating Activities in the future. As a result, investors should not rely upon the projections in making an investment decision given the possibility that actual results may differ from the underlying estimates and assumptions.

31. The Valuation Report by S. Sundaraman is not an opinion on the commercial merits and structure of the Offer nor is it an opinion, express or implied, as to the future trading price of Units or the financial condition of the Trust upon the Listing, and the valuation of the Project SPVs contained in such Valuation Report may not be indicative of the true value of the Project SPVs.

S. Sundaraman has been appointed as the Valuer to undertake independent appraisals of the Project SPVs. The Valuation Report which sets out the opinion as to the fair enterprise value of the Initial Portfolio Assets as of September 30, 2024. In order to issue the Valuation Report, the Valuer based his assumptions regarding the revenue cash-flows, expenditure, capital expenditure, direct taxes, working capital and GST claims, on information provided by and discussions with or on behalf of us, the Sponsor and the Investment Manager. Accordingly, the Valuation Report reflects current expectations and views regarding future events and therefore, necessarily involves known and unknown risks and uncertainties.

The Valuation Report is neither an opinion on the commercial merits and structure of the Offer, nor is it an opinion, express or implied, as to the future trading price of Units or the financial condition of the Trust upon Listing. The Valuation Report does not purport to contain all the information that may be necessary or desirable to fully evaluate the commercial or investment merits of the Offer or the Trust. The Valuation Report does not confer rights or remedies upon investors or any other person, and does not constitute and should not be construed as any form of assurance as to the financial condition or future performance of the Trust or the Project SPVs. The Valuation Report has not been updated since the date of its issue and does not take into account any developments subsequent to the date of its issue.

We cannot assure you that the Valuation Report reflects the true value of the Project SPVs or that other independent valuers would arrive at the same valuation. Accordingly, investors should not rely unduly on the Valuation Report in making an investment decision to purchase Units in the Offer. For details, see the section titled "***Annexure I – Valuation Report***" on page 406.

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

The Project SPVs derive almost all of their revenue from their respective Concession Agreements with the NHAI and must maintain good relationships with the NHAI, the Government of India and the various state governments. The operations of the Project SPVs and any future projects that the Trust may acquire, are and will be significantly dependent on various central and state government entities, in terms of policies, incentives, budgetary allocations and other resources provided by these entities for the surface transportation industry, as well as the terms of the contractual arrangements, concessions and other incentives available from these government entities for the projects. We expect that after the consummation of the Formation Transactions, 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 expect to benefit from and depend on the NHAI and Government of India and various state government entities in terms of policies, incentives, budgetary allocations and other resources provided by these entities for the infrastructure sector comprising of roads, highways in general. There can be no assurance that the Government or State Governments will not implement new regulations and policies which will require the Trust to obtain additional approvals and licenses from governmental and other

regulatory bodies or impose onerous requirements and conditions on our operations. We cannot predict the terms of any new policy, and there can be no assurance that such policy will not be onerous. Any adverse change in any existing governmental policies, incentives, allocations or resources, or any change in our relationships with governmental entities, could adversely affect our business, financial condition, cash flows and results of operations. Also see section titled "***Regulations and Policies in India***" on page 205.

Additionally, 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, 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, or change in the Trust's relationships with the, NHAI, Government of India or various government entities in India, even if not quantifiable monetarily, may lead to the Concession Agreements being restructured or renegotiated or the concession period being decreased, which could adversely affect the Project SPVs' financing, capital expenditure, revenues, development or operations.

33. The results of operations of the Project SPVs could be adversely affected by strikes, work stoppages or increased wage demands by its employees and sub-contractors.

The Project SPVs' employees are currently not represented by any labour union. In the event of any strikes or work stoppages due to increased wage demands by the employees and sub-contractors or the inability by the Project SPVs to either retain or recruit employees and sub-contractors with suitable credentials, the ability of the Project SPVs to maintain and operate the projects will be adversely affected. In addition, any disruption to the services provided by the Project SPVs' employees will have an adverse effect on the operations of the Project SPVs. We cannot assure you that such disruptions, strikes or work stoppages by the employees will not be experienced due to disputes or other problems with the work force in the future, which may adversely affect the business and results of operations of the Project SPVs.

34. The ability of the Trust to make or maintain consistency in distributions to Unitholders depends on the financial performance of the Project SPVs and their profitability.

The amount of future distributions, if any, will depend upon various factors including future earnings, financial condition, cash flows, working capital requirements and capital expenditures of the Project SPVs and the dividends, interest payments and repayments of indebtedness that are distributed to the Trust. The income earned from the Initial Portfolio Assets depends on, among other things, the level of operating and other expenses incurred. If the Initial Portfolio Assets do not generate sufficient operating profit, the income of the Trust, cash flows and ability to make distributions to Unitholders will be adversely affected.

The ability of the Project SPVs to make dividend payments is subject to, among other things, applicable laws and regulations in India and other contractual restrictions that they may be bound by. Under the terms of the SEBI InvIT Regulations, in the event any assets are sold by the Trust or any Project SPV or if the equity shareholding or interest in any Project SPV is disposed of by the Trust and the proceeds of such sale are proposed to be reinvested in another infrastructure asset, then the Trust is not obligated to make any distributions from such proceeds to the Unitholders.

In addition, the SEBI InvIT Regulations provide that the Trust must distribute not less than 90% of net distributable cash flows of each Project SPV in proportion of its holding in each Project SPV subject to applicable provisions of the Companies Act. The distributions to the Unitholders must be declared and made not less than once every six months in each Fiscal and must not be made later than 15 days from the date of such declaration. For detailed information on distributions, see the section titled "***Distributions***" on page 217. There is no assurance that the Trust will be able to make distributions to the Unitholders or that such distributions will be consistent across various periods.

Further, the method of calculating the net distributable cash flows of a Project SPV is subject to change and any change in the applicable laws in India or elsewhere may limit the Trust's ability to pay or maintain consistency in distributions to Unitholders. There is also no assurance that the expansion of the Trust's portfolio of infrastructure assets will increase the Trust's cash flows and thereby result in an increase in the level of distributions to Unitholders over time.

35. The Project SPVs' concessions are illiquid in nature, which may make it difficult for the Trust to realize, sell or dispose of its non-performing assets.

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 NHAI as per the Concession Agreements, and a scarcity of disposal options and/or potential acquirers. As a result, in the event that any of the Initial Portfolio Assets are performing poorly, the Trust may experience difficulty in realizing, selling or disposing of its shareholding in the Project SPVs at an attractive price, or at the appropriate time, or at all,

and this may have an adverse effect on our market value, business, prospects, financial condition, cash flows and results of operations.

36. We will assume liabilities in relation to the Initial Portfolio Assets and Project SPVs and these liabilities, if realised, may adversely affect our results of operations, cash flows, the trading price of the Units and our profitability and ability to make distributions.

Pursuant to the Formation Transactions, we will assume liabilities of the Initial Portfolio Assets and of the Project SPVs that own the Initial Portfolio Assets. While we have conducted due diligence on the Initial Portfolio Assets and of the Project SPVs with the objective of identifying any material liabilities, we may not be able to identify all such liabilities prior to the consummation of the Formation Transactions. Further, the terms of the Share Purchase Agreements contain limited representations and warranties, which are qualified by any disclosure in this Offer Document. The indemnities under the Share Purchase Agreements also include limitations on account of monetary or time limits, which may adversely affect our ability to recover monetary compensation. Any losses or liabilities suffered by us in relation to our portfolio for which we are unable to recover under these agreements will adversely affect our results of operations, cash flows, the trading price of our Units and our ability to make distributions to the Unitholders.

Risks related to our organization and the structure of the Trust

37. We must maintain certain investment ratios, which may present additional risks to us.

Pursuant to the SEBI InvIT Regulations, we are required to invest not less than 80% of the value of our assets proportionate to our holding in completed and revenue generating infrastructure projects subject to conditions specified in the SEBI InvIT Regulations. In addition, we must not invest more than 20% of the value of our assets in under-construction infrastructure projects and certain financial instruments subject to the thresholds specified in the SEBI InvIT Regulations. If these conditions are not fulfilled or breached on account of market movements of the price of the underlying assets or securities, the Investment Manager must inform the Trustee and ensure that these conditions are satisfied within six months of such breach (or within one year with Unitholder approval in accordance with SEBI InvIT Regulations). Failure to comply with these conditions may present additional risks to us, including divestment of some or all of our assets, delisting of the units from the stock exchanges and other penalties, which could have a material adverse effect on our business, financial condition, cash flows and results of operations.

38. We depend on the Investment Manager, the Project Manager and the Trustee to manage our business and InvIT Assets, and our financial condition, results of operations and cash flows and our ability to make distributions may be harmed if the Investment Manager, Project Manager or the Trustee fail to perform satisfactorily. The rights of the Trust and the rights of the Unitholders to recover claims against the Project Manager, the Investment Manager or the Trustee may be limited.

The success of our business and growth strategy and the operational success of our assets will depend significantly upon the Investment Manager, the Project Manager and the Trustee's satisfactory performance of their respective services. Our recourse against the Project Manager, the Trustee and Investment Manager is limited in accordance with the Project Management Agreement, Trust Deed and Investment Management Agreement.

The aggregate maximum liability of the Project Manager under the Project Management Agreement in each financial year will cumulatively not exceed ₹100 million , provided further that such aggregate maximum liability will not be applicable in the event such liability of the project manager arises out of any gross negligence, wilful default or fraud of the project manager. Further, cap on liability provided under the terms of the Project Management Agreement is not applicable to any Unremedied Breach *(as defined under the Project Management Agreement)*. As the Project Manager is not a captive company of the Trust and is not bound by an exclusivity arrangement with the Trust, the Project Manager may fail to dedicate appropriate and adequate resources to us/ the Project SPVs at all times, which may affect their operations and performance.

If the Trustee is required by the SEBI InvIT Regulations or any applicable law to provide information regarding the Trust or the Sponsor or the Unitholders, the investments made by the Trust and income therefrom and provisions of such presents, and complies with such request in good faith, whether or not it was in fact enforceable, the Trustee shall not be liable to the Unitholders or to any other party as a result of such compliance or in connection with such compliance. The Trustee is also not liable on account of anything done or omitted to be done or suffered by the Trustee in good faith in accordance with, or in pursuance of any request or advice of the Investment Manager. Further, the Trustee is not liable for any act or omission or (as the case may be) failing to do any act or thing which may result in a loss to a Unitholder (by reason of any depletion in the value of the Project SPVs or otherwise), except in the event that such loss is a direct result of fraud, gross negligence or wilful default on the part of the Trustee or results from a breach by the Trustee of the Trust Deed, as determined by a court of competent jurisdiction. The liability of the Trustee shall be limited to the extent of the fees received by it, in all circumstances whatsoever except (a) in case of any negligence or misconduct or fraud on the part of the Trustee as may be determined by a court of competent jurisdiction, or (b) any failure on the part of the Trustee to protect the interests of the Unitholders.

The Investment Manager's liability to Trustee, its directors, employees and officers for breach of its obligations under the Investment Management Agreement in each financial year is limited to the aggregate fees paid to the Investment Manager for the immediately preceding financial year under the agreement, except in the event that such liability arises out of any gross negligence, wilful default or misconduct or fraud of the Investment Manager, as determined by the competent court of jurisdiction. Further, the Investment Manager is not liable for any act or omission which may result in a loss to a Unitholder (by reason of any depletion in the value of the Project SPVs or otherwise), except in the event that such loss is a result of the Investment Manager's fraud or gross negligence or wilful default. Accordingly, the Unitholders may not be able to recover claims against the Project Manager, the Trustee or the Investment Manager.

If the abovementioned agreements were to be terminated or if their terms were to be altered, our business could be adversely affected, as the Trustee may not be able to immediately replace such services provided by the Investment Manager and Project Manager, and even if replacement services were immediately available, the terms offered or obtained with the new managers could be less favourable than the ones currently offered by the Investment Manager and the Project Manager.

39. The interests of the Project SPVs and ROFO SPVs, may conflict with the interests of the Trust in the future.

After the completion of the Offer, the Sponsor, seller of the Project SPVs, will hold an aggregate of [●]% of the issued and outstanding Units. Further, the Sponsor has entered into a ROFO Agreement with the Trust, pursuant to which Sponsor shall grant a right of first offer to the Trust to acquire the ROFO SPVs. Also see, "– ***There are risks associated with the potential acquisition of the ROFO SPVs by the Trust pursuant to the ROFO Agreement.***" on page 29. Sponsor's business interests may differ from the business interests of the Trust and Sponsor's interests may conflict with the interests of the Trust, in respect of any future acquisitions undertaken pursuant to the ROFO Agreement entered into between Sponsor and the Trust.

40. 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 Indian Registration Act, 1908 and it may only be extinguished: (i) if it is impossible to continue with the Trust or if the Trustee, on the advice of the Investment Manager, deems it impracticable to continue with us; (ii) on the written recommendation of the Investment Manager and upon obtaining the prior written consent of such number of the Unitholders as is required under the SEBI InvIT Regulations; (iii) if our Units are delisted from the Stock Exchange; (iv) if the SEBI passes a direction to wind up the Trust or the delisting of the Units; or (v) in the event our activities are rendered illegal. Should the Trust be dissolved, depending on the circumstances and the terms upon which our assets are disposed of, there is no assurance that our Unitholders will recover all or any part of their investment. Under the Trust Deed, in the event of dissolution, the net assets of the Trust, remaining after settlement of all liabilities as on the date of dissolution shall be distributed to the Unitholders. If a default is triggered under the financing documents the Trust is a party to, the Trustee will take steps to cure such default and/or to repay the affected lender by appropriate means, including divesting or liquidating the assets of the Trust or raising additional financing, in accordance with such financing documents and applicable laws. If such default is not cured, and the affected lender initiates proceedings against the Trust, the Trust will be dissolved immediately in accordance with applicable laws. In the event of a dissolution of the Trust, the net assets which will be paid to the Unitholders will take into account the debt, liabilities and obligations of the Trust. There is no assurance that Unitholders will recover all or any part of their investments.

41. The interpretation and enforcement of the regulatory framework governing infrastructure investment trusts in India is still evolving, any adverse interpretation or order by any regulatory authority or courts may have an adverse effect on our business, financial condition and results of operations and our ability to make distributions to Unitholders.

The SEBI issued the SEBI InvIT Regulations with effect from September 26, 2014. The SEBI InvIT Regulations have been amended pursuant to various notifications, and further supplemented with additional guidelines and circulars issued by SEBI from time to time. As the regulatory framework governing infrastructure investment trusts in India comprises a relatively new set of regulations, interpretations and enforcement by regulators and courts involves uncertainties. For example, with effect from April 1, 2021, units and other instruments issued by the Trust were included in the definition of 'securities' under section 2(h) of the SCRA. Further, the SEBI InvIT Regulations underwent certain amendments in 2023 and certain concepts, such as sponsor groups, perpetual unitholding for sponsors and sponsor groups and robust corporate governance regimes in line with the SEBI Listing Regulations, were made applicable to Trusts. The implementation and interpretation of these amendments is untested and evolving. Accordingly, the applicability of several regulations (including regulations relating to intermediaries, underwriters, merchant bankers, insider trading, takeovers and fraudulent and unfair trade practices) to the Trust is subject to the interpretation and clarifications issued by regulatory and statutory bodies such as SEBI. Infrastructure investment trusts operate in a new and relatively unclear regulatory environment. Changes to the Offer structure, corporate governance, changes to agreements entered into or proposed to be entered into in connection with the Offer, 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 SEBI 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, cash flows and results of operations.

Because we will operate in a new and evolving regulatory environment, it is difficult to forecast how any new laws, regulations or standards or future amendments to the SEBI 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, cash flows, results of operations and prospects.

42. This Offer Document contains industry information from publicly available resources

The information in the section titled "***Industry Overview***" on page 146 is based on publicly available information. Neither we, nor the Trustee, the Sponsor, the Lead Managers, the Investment Manager nor any other person connected with the Offer has independently verified such third-party and industry-related information. Further, such industry-based data is based on information as of specific dates and may no longer be current or reflect current trends. Further, the accuracy of statistical and other information with respect to the road infrastructure sector and the Technical Reports commissioned by the Sponsor for the Initial Portfolio Assets contained in this Offer Document cannot be guaranteed.

Further, the Technical Reports have not been updated since the dates of their issue and do not take into account any developments subsequent to the dates of their issue.

Statistical and other information in this Offer Document relating to India, the Indian economy or the road infrastructure sector have been derived from various government publications, research reports from reputable institutions and communications with various Indian government agencies that are believed to be reliable. However, such information might not be reliable or accurate. Further, certain data relating to the business of the Project SPVs has been assessed and quantified by the Project SPVs internally, as no other credible third-party sources are available for such data. Such assessment is based on each Project SPV's understanding, experience and internal estimates of its business.

While reasonable care has been taken in the reproduction of the information, no assurance can be made as to the accuracy of such facts and statistics, which may not be consistent with other information compiled within or outside India. Due to possibly inconsistent or ineffective collection methods or discrepancies between published information and market practice, the statistics contained in the Technical Reports may be inaccurate or may not be comparable to statistics produced for other economies and should not be unduly relied upon. Further, there is no assurance that the statistics are stated or compiled on the same basis or with the same degree of accuracy as may be the case with information from elsewhere.

43. 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, among others, all monies received in relation to the project from any source, including senior lenders, lenders of subordinated debt, and NHAI, all funds received by the Project SPVs from its shareholders, all proceeds received pursuant to any insurance claims, and any termination payments received from the NHAI, to be deposited in an escrow account and utilized only in accordance with the order prescribed under the escrow agreement. 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, any amount due and payable to NHAI, debt service payments, and any reserve requirements set forth in the financing agreements and the lenders to the Project SPVs have a first charge on the escrow account. The authorities may also freeze our funds to an extent in the escrow account if we fail to comply with the terms of our obligations, as set out in the Concession Agreements. For details of the escrow arrangements, see section titled "***Summary of Concession Agreements***" on page 177.

With respect to withdrawals on termination, certain escrow arrangements prioritize the payment of all taxes due, followed by the payment of prescribed percentage of debt due excluding subordinate debt, all payments and damages certified by NHAI as due and payable, including any claims with or arising out of the termination, outstanding debt service, outstanding subordinated debt, incurred or accrued O&M expenses, any other payments under the relevant Concession Agreement, after which the balance may be withdrawn by the Project SPVs for their own purposes.

The termination payments received from the NHAI may be utilized towards repayment of outstanding debt to the lenders of the Project SPVs and other priorities set out under the escrow arrangements thereby preventing us from recovering our investments or returns in the relevant Project SPVs adequately or at all.

The loans/advances by the shareholders of the Initial Portfolio Assets will be classified as subordinated debt and equity under the Concession Agreements, unless the same is otherwise approved by the concessioning authority. Accordingly, the ability of the Trust to access such termination payments in relation to the loans/advances by the shareholders will be subordinated to the discharge of all obligations towards the project lenders and/or the lenders of the InvIT Loan and the payment of, among other things, any outstanding concession fees and damages. Any shortfall in the termination payments received from the NHAI may prevent us from recovering our investments or returns in the relevant Project SPVs adequately or at all.

In addition to the escrow arrangements mandated by the Concession Agreements, the existing lenders to our Project SPVs have also imposed certain restrictions on our flexibility to utilize the available funds in the escrow account such as utilization of funds towards creation of reserves and utilization of balance funds post specific approval from lenders. There can be no assurance that future lenders of the Trust or Project SPVs will not impose similar restrictions.

The Trust is currently not a party to, or a third-party beneficiary under, the escrow agreements entered into by the Project SPVs and does not currently have any enforceable rights under such escrow agreements, including any right to instruct the escrow agent to make any payments, which may adversely affect the ability of the Trust to recover amounts to it.

44. We will depend on certain directors and key employees of the Investment Manager, the Project Manager and the Project SPVs, 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, cash flows, results of operations and prospects of the Trust and the Project SPVs.

Our performance will depend, in part, upon the continued service and performance of certain directors, executive officers and key employees of the Investment Manager, the Project Manager and the Project SPVs. The continued operations and growth of our business will be dependent upon the Investment Manager, the Project Manager and the Project SPVs 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 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. Further, the Investment Manager and the Project Manager may not be able to adequately re-deploy and re-train their employees to keep pace with evolving industry standards and changing customer preferences. Any inability by the Investment Manager and/or the Project Manager and the Project SPVs 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, cash flows, results of operations and prospects of the Trust and the Project SPVs.

45. Distributions may be adversely impacted due to cash trapped in the Project SPVs.

Under the Companies Act, 2013, a company can declare dividends only after the mandatory transfer of profits to reserves. Further, certain non-cash expenditures are also charged to the profit and loss account which reduces the profit and loss account balance. Consequently, a company may have surplus cash but no profit in the profit and loss account and thus will not be able to declare dividends, resulting in cash trapped in the company. In the event that cash is trapped in the Project SPVs, the Investment Manager and the Trustee may evaluate various options to extract the cash and make distributions to the Unitholders. There is no assurance that any such options to extract the cash trapped in the Project SPVs would not have adverse tax implications or impact our distributions, business and results of operation adversely.

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

46. The Investment Manager has limited experience and may not be able to implement its capital and risk management strategies.

The Investment Manager's strategies focus on three main areas, including managing the underlying assets of the Trust; managing the Trust's acquisitions and disposals; and managing the Trust's capital structure to maximize distributions. The combined experience of the directors and key managerial personnel of the Investment Manager is above 30 years in the area of development in infrastructure sector. However, none of the Investment Manager, its directors or employees (except the chief executive officer of the Investment Manager) have experience in investment management activities for the Trust. Further, there is no assurance that the Investment Manager will be able to implement these management 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. Even if the Investment Manager is able to successfully grow the operating business of the underlying assets and to acquire roads and other eligible infrastructure projects in India, we cannot assure you that the Investment Manager will achieve any returns on such acquisitions or capital investments.

47. Parties to the Trust are required to maintain the eligibility conditions specified under Regulation 4 of the SEBI InvIT Regulations on an ongoing basis. The Trust may not be able to ensure such ongoing compliance by the Sponsor/ Project Manager, 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 SEBI 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; (c) the Sponsor or its Associate has a sound track record in the development of infrastructure or fund management in the infrastructure sector, (d) 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, which) 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 (f) 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 SEBI 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.

48. The Investment Manager is required to comply with certain ongoing reporting and management obligations in relation to the Trust. We cannot assure you 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 SEBI 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 SEBI InvIT Regulations, (d) submitting reports to the Trustee which (e) ensuring the audit of the Trust's accounts. We cannot assure you 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 SEBI InvIT Regulations and/or the SEBI Act. Any such failure to comply or the imposition of any penalty could have an adverse effect on our business, financial condition, cash flows and results of operations. Under the SEBI InvIT Regulations, the SEBI also has the right to inspect documents, accounts and records relating to the activity of the Trust, Project SPVs or Parties to the Trust 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.

49. The SEBI InvIT Regulations allow for change of sponsor of listed Trusts subject to certain conditions. There can be no assurance that our Sponsors will not exercise their ability the Sponsor(s) of the Trust.

The SEBI InvIT Regulations permits change of sponsor or inducted sponsor or change in control of sponsor or inducted sponsor of listed infrastructure investment trusts subject to compliance with the following conditions:

- approval of 75% of unitholders has been obtained in accordance with the SEBI InvIT Regulations; or if unitholders' approval is not received, then:
- in case of change of sponsor or inducted sponsor, the proposed inducted sponsor shall provide the dissenting unitholders an option to exit by buying their Units in the manner specified by the IM Board;
- in case of change in control of the sponsor or inducted sponsor, the said sponsor or inducted sponsor shall provide the dissenting unit holders an option to exit by buying their units in the manner specified by the IM Board;
- in case of conversion to self-sponsored Investment Manager, the Investment Manager shall provide the dissenting unit holders an option to exit by buying their units in the manner specified by the IM Board.

There can be no assurance that in the future, we will be able to convert into a self-sponsored Investment Manager or if we will be able to change our Sponsor or induct a new sponsor.

Risks Related to Ownership of the Units

50. The price of the Units may decline after the Offer.

The Offer Price determined by the Investment Manager may not be indicative of the price of the Units upon completion of the Offer. If the price of the Units declines significantly, prospective investors may be unable to resell their Units at or above their purchase price, if at all. We cannot assure you 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 infrastructure projects;
- differences between our actual financial and operating results and those expected by investors and analysts;
- the perceived prospects of future 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; 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 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.

51. The sale or possible sale of a substantial number of Units by the Sponsor in the public market following the lapse of its lock-in requirement as prescribed under the SEBI InvIT Regulations could adversely affect the price of the Units.

Under the SEBI InvIT Regulations, the Sponsor and Sponsor Group are collectively required to hold a minimum of 15% of the Units on a post-Offer basis for a minimum period of three years from the date of listing, 5% of the Units on a post-Offer basis from the beginning of the fourth year and till the end of fifth year from the date of listing, 3% of the Units on a post-Offer basis from the beginning of the sixth year and till the end of tenth year from the date of listing, 2% of the Units on a post-Offer basis from the beginning of the eleventh year and till the end of twentieth year from the date of listing, 1% of the Units on a post-Offer basis after the completion of the twentieth year from the date of listing, pursuant to this Offer.

If the Sponsor, following the lapse of the aforesaid lock-in periods directly or indirectly sells or is perceived as intending to sell a substantial number of its Units, or if a secondary offering of the Units is undertaken, the market price for the Units could be adversely affected.

52. Under Indian law, foreign investors are subject to restrictions that limit their ability to transfer or redeem Units, which may adversely impact the trading price of the Units.

Under foreign exchange regulations currently in force in India, transfers of units between non-residents and residents are permitted, subject to certain exceptions, if they comply with the pricing and reporting requirements specified by RBI. If a transfer of units is not compliant with such pricing or reporting requirements and does not fall under any of the exceptions specified by RBI, then RBI's prior approval is required. Additionally, unitholders who may seek to convert Indian rupee proceeds from a sale of units in India into foreign currency and repatriate that foreign currency from India require a no-objection or a tax clearance certificate from the Indian income tax authorities. We cannot assure you that any required approval from RBI or any other Governmental agency can be obtained on any particular terms or in a timely manner, or at all. Our Unitholders will not have the right to redeem or request the redemption of our Units while our Units are listed on the Stock Exchange. In terms of the SEBI InvIT Regulations, an infrastructure investment trust may redeem units only by way of a buyback or at the time of delisting of units and may be subject to additional conditions and restrictions under Indian regulations.

53. The Units have never been traded and the listing of the Units on the Stock Exchange may not result in an active or liquid market for the Units.

There is no market for the Units prior to the Offer and an active market for the Units may not develop or be sustained after the Offer. Moreover, the listing and quotation do not guarantee that a trading market for the Units will develop or, if a market does develop, the liquidity of that market for the Units. The price of the Units may be volatile, and investors may be unable to resell the Units at or above the Offer Price, or at all. Although it is currently intended that the Units will remain listed on the Stock Exchanges, there is no guarantee of the continued listing of the Units. There is no assurance that the Trust will continue to satisfy the listing requirements for Trusts. Further, it may be difficult to assess the Trust's performance against domestic benchmarks.

54. There is no assurance that our Units will remain listed on the Stock Exchanges.

Although it is currently intended that the Units will remain listed on the Stock Exchanges, there is no guarantee of the continued listing of the Units. Among other factors, we may not continue to satisfy the listing requirements of the Stock Exchanges. Accordingly, Unitholders will not be able to sell their Units through trading on the Stock Exchanges if the Units are no longer listed on the Stock Exchanges. While the SEBI InvIT Regulations state that we must provide Unitholders with an exit prior to delisting, the specific mechanism of such delisting and related exit offer has not yet been finalised by the SEBI.

Further, under the SEBI InvIT Regulations, we are required to maintain a minimum Unitholders (other than the Sponsor, its related parties and its Associates) at all times after the listing of the Units pursuant to the Offer and certain minimum public holding requirements. Failure to maintain such minimum number of Unitholders or public holding may result in action being taken against us by the SEBI and the Stock Exchanges, including the compulsory delisting of our Units.

55. Market and economic conditions may affect the market price and demand for the Units.

Movements in domestic and international securities markets, economic conditions, foreign exchange rates and interest rates may affect the market price of and demand for the Units. In particular, an increase in market interest rates may have an adverse impact on the market price of the Units if the annual yield on the price paid for the Units gives investors a lower return as compared to other investments.

56. 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 net distributable cash flows available for distribution and not on whether the Trust makes an accounting profit or loss. The SEBI InvIT Regulations provide that not less than 90% of net distributable cash flows 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. Such distributions are required to be made no later than fifteen days from the date of declaration. In relation to the Trust and the Project SPVs, the Investment Manager has adopted a distribution policy pursuant to which distributions are required to be made to the Unitholders not less than once in six months period in a financial year after Allotment pursuant to the Offer. For further details, see section titled "***Distributions***" on page 217.

The Trust will rely on the receipt of interest, dividends, principal repayments and buy back of shares (net of applicable taxes and expenses) and certain tax benefits thereon from the Project SPVs in order to make distributions to the Unitholders. We cannot assure 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 pay dividends, make interest payments 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 net distributable cash flows 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 adversely affect the distributions made by the Trust.

57. The reporting requirements and other obligations of infrastructure investment trusts post-listing are still evolving. Accordingly, the level of ongoing disclosures made and the protection granted to Unitholders may be more limited than those made to or available to the shareholders of a company that has listed its equity shares upon a recognized stock exchange in India.

The SEBI 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 companies that have listed their equity shares upon a recognized stock exchanges in India, the regulatory framework applicable to infrastructure investment trusts is relatively nascent and thus, still evolving. While the SEBI InvIT Regulations were notified with effect from September 26, 2014, the guidelines and procedures in relation to a public issue of units by an infrastructure investment trust were notified by SEBI by way of circular no. CIR/IMD/DF/55/2016 on May 11, 2016. Further, pursuant to a circular dated November 29, 2016 and master circular dated May 15, 2024, the SEBI has prescribed certain continuous disclosure requirements that will be applicable to the Trust after Listing.

Accordingly, the ongoing disclosures made to Unitholders under the SEBI InvIT Regulations may differ from those made to the shareholders of a company that has listed its equity shares upon a recognized stock exchange in India in accordance with the Securities and Exchange Board of India (Listing Obligations and Disclosure Requirements) Regulations, 2015. Further, the rights of the Unitholders may not be as extensive as the rights of the shareholders of a company that has listed its equity shares upon a recognized stock exchange in India, and accordingly, the protection available to the Unitholders may be more limited than those available to such shareholders.

58. 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 gross negligence, gross misconduct, wilful default and fraud on the part of the Investment Manager.

Pursuant to the Trust Deed, 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 a loss to a Unitholder by way of depletion in the value of the trust fund, except in situations where such depletion is a result of fraud, gross negligence or misconduct part of the Trustee. 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 Fund.

The Investment Management Agreement provides that the Investment Manager is entitled to be indemnified against any claims, losses, costs, damages, liabilities, suits, proceedings and expenses, including legal fees incurred in connection with the Trust, unless arising out of gross negligence, gross misconduct, wilful default and fraud. 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 Trust Deed. The Trust Deed provides for the indemnification of the Trustee for all claims, liabilities, damages and expenses, including legal fees, except losses incurred due to any gross negligence, fraud, misconduct or violation of laws or is in material violation of the Trust Deed.

59. 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 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.

Risks Related to India

60. Changing laws, rules and regulations, including changes in legislation, legal uncertainties and the political situation in India may adversely affect our business, financial condition, cash flows and results of operations.

Our business, financial condition, cash flows and results of operations could be 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. We cannot assure you that the Government of India or the state governments will not implement new regulations and policies which will require the Trust and the Project SPVs to obtain additional approvals and licenses from governmental and other regulatory bodies or impose onerous requirements and conditions on our operations.

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 for underlying road infrastructure projects, any delays or disputes relating to such acquisition for the uncomplete projects could lead to delays and disruptions in the execution of our projects, which would have an adverse effect on our business, financial condition, cash flows and results of operations. For further details, see section titled "***Regulations and Policies in India***" on page 205.

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 any of the assets proposed to be acquired by us in the future over and above 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 adversely affect our financial condition, cash flows and results of operations. Any adverse impact on our financial condition or operations due to the Competition Act may have an adverse impact on our business, financial condition, cash flows, results of operations and prospects and our ability to make distributions to the Unitholders.

61. We are exposed to risks associated with the roads sector in India.

We derive and expect to continue to derive in the foreseeable future, almost all of our revenues and operating profits from the roads sector in India. Changes in macroeconomic conditions generally impact the road industry and could negatively impact our business. Accordingly, our business is highly dependent on the state of development of the Indian economy and the macroeconomic environment prevailing in India. The use of our roads, our expansion plans and future projects depend or will depend on macroeconomic factors that may negatively impact demand the development of road infrastructure projects in India, or the timely commencement of their operations which could in turn have a material adverse effect on our growth prospects, business and cash flows. In addition, access to financing may be more expensive or not available on commercially acceptable terms during economic downturns. We may also face risks in relation to the regulated environment we operate in (the road sector). Any of these factors and other factors beyond our control could have a material adverse effect on our business, prospects, financial condition, results of operations and cash flows.

62. 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 an 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 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 neighbouring countries;
- the occurrence of natural or man-made disasters or epidemics or pandemics such as COVID-19;
- prevailing regional or global economic conditions;
- focus on global warming, reduction of carbon emissions, temperature rising and depletion of groundwater;
- increase in pollution levels in various parts of India;
- rise in India's debt beyond the limit in comparison to its Gross GDP;
- 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 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 an adverse effect on our business, financial condition, cash flows and results of operations and the price of the Units.

Further, the Indian economy and Indian financial market are influenced by economic and market conditions in other countries, particularly by emerging market in Asian countries. Financial turmoil in Asia, Europe, the United States and elsewhere in the world in recent years has affected the Indian economy. Although economic conditions are different in each country, investors' reactions to developments in one country can have an 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 current relation between the United States 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.

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

India's sovereign credit 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 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 an adverse effect on our business and financial performance, ability to obtain financing for capital expenditures and the price of the Units.

64. 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.

65. If inflation rises in India, increased costs may result in a decline in profits.

Inflation rates in India have been volatile in recent years, and such volatility may continue. Increasing inflation in India could cause a rise in the price of transportation, wages, raw materials and other expenses. While the O&M income is linked to inflation, there can be no assurance that O&M income will sufficiently offset our increased O&M costs due to inflation which could have a material adverse effect on our business, prospects, financial condition, results of operations and cash flows. Inflation may also have an impact on interest rates, which can affect our profitability.

66. Significant differences could exist between Ind AS and other accounting principles, such as Indian GAAP and IFRS, which may affect investors' assessments of the Trust's financial condition.

The Special Purpose Combined Financial Statements included in this Offer Document have been prepared in accordance with Indian Accounting Standards as defined in Rule 2(1)(a) of the Companies (Indian Accounting Standards) Rules, 2015 prescribed under Section 133 of the Companies Act, 2013 ("**Ind AS**") (except for Ind AS 33: Earning per share and adjustment/rectification/reclassification wherever necessary), read with the SEBI InvIT Regulations and the Guidance Note on Combined and Carve-Out Financial Statements issued by the Institute of Chartered Accountants of India. The impact of Indian GAAP or IFRS on such financial information included in this Offer Document has not been quantified and the Special Purpose Combined Financial Statements have been prepared without reconciliation to any other body of accounting principles. Each of Indian GAAP and IFRS differs in significant respects from Ind AS. Accordingly, the degree to which the Special Purpose Combined Financial Statements included in this Offer Document will provide meaningful information is dependent on the reader's level of familiarity with the relevant accounting practices. Any reliance by persons not familiar with such accounting practices on the financial disclosures presented in this Offer Document should accordingly be limited.

Risks Related to Tax

67. Tax laws are subject to changes and differing interpretations, which may materially and adversely affect our operations.

The current tax laws and regulations in India provide certain exemptions to interest income earned by business trusts from a special purpose vehicle as a result of which the Trust and subsequently the Unitholders would be subject to relatively lower tax liabilities. These exemptions could be modified or removed at any time or clarified in a manner adverse to Unitholders, which could adversely affect our profitability and the amount available for distribution to Unitholders.

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 by the governmental or tax authorities, may result in tax risks in the jurisdictions in which we operate being significantly higher than expected. For instance, while the Investment Manager intends to take measures to ensure that it is in compliance with all relevant tax laws, there is no assurance that the tax authorities will not take a position that differs from the position taken by us with regard to our tax treatment of various items. Any of the above events may result in a material, adverse effect on our business, financial condition, results of operations and/or prospects and our ability to make distributions to the Unitholders. Tax authorities in India may also introduce additional or new regulations applicable to our business which could adversely affect our business and profitability.

Further, the tax authorities in India may not agree with the positions adopted by the Project SPV or by the trust, and may take a divergent view with respect to allowability of any expense (including interest payment) or in relation to taxability of any income, or on taxability of HAM projects or on the allowability of depreciation/ amortisation during the assessment proceedings, if any. This may adversely affect the profitability of Project SPV and trust, and may affect the ability to make distributions to the Unitholders.

68. Changes in legislation or the rules relating to tax regimes could adversely affect our business, prospects, cash flows and results of operations.

Tax and other levies imposed by the Government and state governments includes: (i) income tax (including withholding tax and tax collection at source); (ii) goods and service tax; (iii) stamp duty; and (iv) other special taxes and surcharges that are introduced on a temporary or permanent basis from time to time. In some cases, these taxes and other levies may be changed from year to year Also, the Government, in certain situations, has the authority to change tax laws retrospectively.

There have been two key reforms in Indian tax laws, namely the introduction of the GST and provisions relating to general anti-avoidance rules ("**GAAR**").

The GST regime came into effect on July 1, 2017, combining taxes and levies by the Government and State Governments into a unified rate structure. There is limited clarity on the availability of input tax credit in few transactions or events, and any unfavorable orders in this regard may have an adverse effect on our financial position and cash flows. Further, any application of existing law or future amendments may affect our overall tax efficiency and may result in significant additional taxes becoming payable.

The GAAR regime came into effect on April 1, 2017. The GAAR regime is a broad set of provisions which grant powers to India tax authorities to invalidate any arrangement for tax purposes in the event, the main purpose of entering into the transaction by the taxpayer is to obtain a tax benefit. Besides the "tax benefit", the transaction should meet any one of the following specified additional tests: (i) creates rights, or obligations, which are not ordinarily created between persons dealing at arm's length; (ii) results, directly or indirectly, in the misuse, or abuse, of the provisions of the Income- Tax Act, 1961 ("**IT Act"**); (iii) lacks commercial substance or is deemed to lack commercial substance as prescribed under the IT Act in whole or in part; and (iv) is entered into, or carried out, by means which are, or in a manner which is, not ordinarily employed for bona fide purposes.

Such transactions are declared as impermissible avoidance arrangements and the consequence in relation to tax arising from such arrangements, including denial of a tax benefit or a benefit under a tax treaty, shall be determined according to the circumstances of the case.

The rules notified with respect to GAAR prescribe that these shall not be applicable to FIIs in accordance with the SEBI (Foreign Institutional Investors) Regulations, 1995 subject to the fulfilment of certain conditions. GAAR may have an adverse tax impact on the Trust, the Sponsor and the Unitholders.

The GOI has announced the union budget for the Fiscal 2021 and the Finance Act, 2021 has been granted assent by the President of India on March 28, 2021.

By way of the Finance Act, 2021, the GoI, among others, amended the SCRA to recognise pooled investment vehicles and recognise the units, debentures, other marketable securities and other instruments issued by Trusts as "securities". The Finance Act, 2021 exempted the payment of tax deducted at source on dividends paid to Trusts.

Further, pursuant to amendments introduced by Finance Act, 2022, the applicability of section 94(7) of the IT Act has been extended to the units of Trusts (with effect from Financial Year 2022-23), which provides in certain situation, loss, if any, arising from the sale and purchase of securities and units, to the extent of dividend or income received or receivable on such securities or unit, shall be ignored for computing income chargeable to tax. The Finance Act, 2022 has also extended the applicability of section 94(8) of the IT Act (commonly known as bonus stripping) to the units of Trusts (with effect from Financial Year 2022-23), which provides certain other situations where loss, if any, arising from the sale and purchase of all or any of the units shall be ignored for computing income chargeable to tax and notwithstanding anything contained in any other provision of the IT Act, the amount of loss so ignored shall be deemed to be the cost of purchase or acquisition of such additional units referred to in clause (ii) above as are held on the date of such sale or transfer.

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 an adverse effect on our business, financial condition, cash flows, 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 Investment Manager has not determined the impact of such existing or proposed legislation on our business.

69. Investors may be subject to Indian taxes arising out of capital gains on the sale of Units and on any dividend or interest or other distribution of any returns from the Units.

Under current Indian tax laws, units of a business trust held for more than 36 months are considered as long-term capital assets. In case of sale of such units through a recognized stock exchange in India and subject to payment of securities transaction tax ("**STT**"), any gain arising in excess of ₹ 0.10 million is subject to long term capital gains tax at a concessional rate of 10% (plus applicable surcharge and cess). However, if the said units are sold in any other manner, the same shall be subject to long term capital gains tax at 20% (plus applicable surcharge and cess).

In case the units are held for less than or up to 36 months, they shall be regarded as short-term capital assets. Any gain arising in case of sale of such units through a recognized stock exchange in India and subject to payment of STT, is subject to short term capital gains tax at concessional rate of 15% (plus applicable surcharge and cess). However, if the said units are sold in any other manner, the same shall be subject to short term capital gains tax at applicable tax rates of the holder (plus applicable surcharge and cess). Under the Finance Act, 2023, gains shall be computed by a unit holder after reducing from its cost of acquisition any amount distributed by us which is not in the nature of dividends or interest or any other income.

The aforesaid taxability in India is subject to tax treaty benefits in the case of a non-resident holder. Further, the applicable taxes on the sale of Units and on any dividend or interest component of any returns from the Unit will also be subject to the category of investor holding or selling the Units.

The Finance Act 2023, provides for tax on the unitholders for such portion of distribution received by them that is not covered under section 10(23FC) or 10(23FCA) of the IT Act and that which is not chargeable to tax under section 115UA(2) of the IT Act. Any distribution not covered under the aforementioned clauses will be taxed in the hands of the unitholders as 'income' under section 56(2)(xii) of the IT Act, provided the amount received (including similar distributions in earlier years to the same unitholder or any other unitholder) is in excess of the amount at which units were issued by the Trust, as reduced by the amount which would have been charged to tax earlier under this provision. The aforementioned amounts received by a unitholder being a specified person covered under section 10(23FE) of the IT Act shall not be subject to taxes upon the fulfilment of certain conditions set out in the IT Act. Further, any such distribution received by a unitholder to the extent not chargeable to tax under section 56(2)(xii) and not covered under sections 10(23FC), 10(23FCA) or 115UA(2) shall be reduced from the cost of units.

The Finance Act, 2020 amended the IT Act to abolish the dividend distribution tax regime and shift the incidence of taxation of dividend (declared or distributed on or after April 1, 2020) to the shareholder. Under the Finance Act, 2020, a distribution made by a business trust, being in nature dividend income received from a special purpose vehicle, will not be subject to tax in the hands of a unitholder, so long as the special purpose vehicle has not opted to pay corporate

tax under the beneficial regime introduced under Section 115BAA of the IT Act. Similarly, a business trust (which includes an infrastructure investment trust) will not be required to withhold tax on any distributions which are in the nature of dividend income received from a special purpose vehicle, so long as such special purpose vehicle has not opted to pay corporate tax under the beneficial regime introduced under Section 115BAA of the IT Act. However, where the special purpose vehicle opts to pay tax under Section 115BAA of the IT Act, dividend income distributed by the business trust would be taxed in the hands of a non-resident unitholder at 20% (plus applicable surcharge and cess) or the applicable treaty rate and at the ordinary rate for a resident unitholder.

Further, the business trust would be required to withhold tax on such distributions made from dividend received from the special purpose vehicle. Thus, the taxability of dividends distributed by the Trust will depend on the taxation regime opted by the Project SPVs. It may also be noted that in terms of Section 194(LBA)(1) of the IT Act, any distributable income in the nature of interest income and dividend income (where the Project SPVs has opted to pay corporate tax under the beneficial regime introduced under Section 115BAA of the IT Act) in the hands of a resident investor is subject to deduction of tax at the rate of 10%. Similarly, in terms of Section 194(LBA)(2) of the IT Act, any distributable income in the nature of interest income and dividend income (where the Project SPV has opted to pay corporate tax under the beneficial regime introduced under Section 115BAA of the IT Act) in the hands of a non-resident is subject to deduction of tax at the rate of 5% (plus applicable surcharge and cess) and 10% (plus applicable surcharge and cess) respectively. The ultimate tax liability in the hands of the Unitholder may depend on various factors/ considerations.

Furthermore, the Trust might not be able to pay or maintain the levels of distributions or ensure that the level of distributions will increase over time, or that future acquisitions will increase the Trust's distributable free cash flow to the Unitholders. Any reduction in, or elimination or taxation of, payments of distributions could materially and adversely affect the market price of the Units.

70. The income of the Trust in relation to which pass through status is not granted under the IT Act may be chargeable to Indian taxes

Under the provisions of the IT Act, the total income of the Trust other than capital gains, interest and dividend income from the Project SPVs would be taxable at the maximum marginal rate ("**MMR**"). MMR is defined under the provisions of the IT Act to mean the rate of income-tax (including surcharge on income-tax, if any) applicable in relation to the highest slab of income.

In accordance with Section 115UA of the IT Act, the MMR applicable to the Trust, a separately assessable resident entity, is 30.0% (plus applicable surcharge and cess). However, the tax authorities may view the Trust as a "pass through" entity and the applicable tax rate will be the MMR applicable to its beneficiaries. If any beneficiary is chargeable to MMR at a rate higher than the rate applicable to other beneficiaries, the income of the Trust attributable to the share of such beneficiary will be taxed at a higher applicable rate. For example, if any Unitholder is a non-resident, the MMR of 40.0% (plus applicable surcharge and cess) would apply.

As there are divergent views, there is a possibility that the matter may be litigated if the tax authorities subscribe to the latter view.

SUMMARY SPECIAL PURPOSE COMBINED FINANCIAL STATEMENTS

Summary Special Purpose Combined Balance Sheet:

(*in ₹ million*)

Particulars	As at 30 September 2024	As at March 31, 2024	As at March 31, 2023	As at March 31, 2022
ASSETS				
Non-current assets				
Financial assets				
Other financial assets	34,170.39	32,532.13	29,119.07	13,644.71
Deferred tax assets (net)	9.36	4.32	0.47	-
Non-current tax assets (net)	333.58	301.34	362.34	465.04
Other non-current assets	962.62	1,092.36	1,994.20	1,152.10
Total non-current assets	**35,475.95**	**33,930.15**	**31,476.08**	**15,261.85**
Current assets				
Financial assets				
Investments	-	-	-	142.09
Trade receivables	684.67	669.69	1,098.10	195.42
Cash and cash equivalents	428.38	975.03	177.29	345.12
Bank balances other than cash and cash equivalents above	1,296.02	332.73	214.21	257.09
Loans	389.10	-	-	-
Other financial assets	9,470.47	9,888.53	8,566.33	7,618.58
Other current assets	1,308.04	1,444.53	1,301.29	1,207.80
Total current assets	**13,576.68**	**13,310.51**	**11,357.22**	**9,766.10**
Total assets	**49,052.63**	**47,240.66**	**42,833.30**	**25,027.95**
EQUITY AND LIABILITIES				
EQUITY				
Equity share capital	3,468.10	3,468.10	3,370.10	3,131.00
Other equity	8,876.23	7,721.97	6,465.16	1,842.49
Total equity	**12,344.33**	**11,190.07**	**9,835.26**	**4,973.49**
LIABILITIES				
Non-current liabilities				
Financial liabilities				
Borrowings	31,418.27	29,967.92	23,687.09	14,773.66
Other financial liabilities	-	-	-	217.63
Deferred tax liabilities (net)	1,462.02	1,596.32	1,710.79	396.26
Total non-current liabilities	**32,880.29**	**31,564.24**	**25,397.88**	**15,387.55**
Current liabilities				
Financial liabilities				
Borrowings	2,134.63	2,071.71	2,879.54	1,544.30
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	1,006.13	1,586.73	3,496.90	2,854.09
Other financial liabilities	420.33	563.84	958.83	129.86
Other current liabilities	69.10	264.07	250.52	138.66
Current tax liabilities (net)	197.82	-	14.37	-
Total current liabilities	**3,828.01**	**4,486.35**	**7,600.16**	**4,666.91**
Total liabilities	**36,708.30**	**36,050.59**	**32,998.04**	**20,054.46**
Total equity and liabilities	**49,052.63**	**47,240.66**	**42,833.30**	**25,027.95**

Summary Special Purpose Combined Profit and Loss:

(in ₹ million)

Particulars	For the six month period ended 30 September 2024	For the financial year ended March 31, 2024	For the financial year ended March 31, 2023	For the financial year ended March 31, 2022
Incomes and gains				
Revenue from operations	7,054.55	14,850.91	20,330.90	19,081.51
Interest income on bank deposits	71.58	102.21	41.44	23.98
Profit on sale of investments	-	-	1.18	8.47
Other income	796.53	481.96	4,815.71	700.23
Total income	**7,922.66**	**15,435.08**	**25,189.23**	**19,814.19**
Expenses and losses				
Operating expenses	4,323.37	9,812.64	16,779.78	17,061.84
Audit fee (statutory auditors of respective project SPVs)	5.13	4.31	3.96	3.40
Insurance expenses	14.95	32.14	40.69	36.36
Employee benefits expense	9.52	15.74	4.76	1.80
Project management fees	363.87	301.09	146.82	53.55
Finance costs	1,556.58	2,853.16	1,519.34	951.82
Other expenses	86.23	667.32	43.05	24.67
Total expenses	**6,359.65**	**13,686.40**	**18,538.40**	**18,133.44**
Profit before tax	**1,563.01**	**1,748.68**	**6,650.83**	**1,680.75**
Tax expense				
Current tax	548.09	578.59	364.88	135.17
Current Tax for earlier years	-	30.74	-	-
Deferred tax (credit) / charge	(139.34)	(118.32)	1,314.06	290.02
Total tax expense	**408.75**	**491.01**	**1,678.94**	**425.19**
Net profit for the period / year (A)	**1,154.26**	**1,257.67**	**4,971.89**	**1,255.56**
Other comprehensive income	-	-	-	-
Total other comprehensive income for the period / year (B)	-	**-**	**-**	**-**
Total comprehensive income for the period / year (A+B)	**1,154.26**	**1,257.67**	**4,971.89**	**1,255.56**

Summary Special Purpose Combined Statement of Cash Flows:

(*in ₹ million*)

	Particular	For the six month period ended 30 September 2024	For the financial year ended March 31, 2024	For the financial year ended March 31, 2023	For the financial year ended March 31, 2022
A.	**Cash flows from operating activities**				
	Profit before tax	**1,563.01**	**1,748.68**	**6,650.83**	**1,680.75**
	Adjustments for:				
	Interest income on loans and advances	(25.92)	(25.16)	-	-
	Interest income on bank deposits	(71.58)	(102.21)	(41.44)	(23.98)
	Interest income on income tax refund	(5.77)	(15.06)	(15.16)	(0.45)
	Gain on modification of financial assets	(764.84)	(441.74)	(4,800.55)	(699.78)
	Loss on modification of financial assets	37.43	615.89	21.06	-
	Non-recoverable GST on annuity from NHAI written off	(8.42)	195.63	64.16	-
	Gain on sale of investments (net)		-	(1.18)	-
	Gain on investments carried at fair value through profit or loss (net)	-	-	-	(8.47)
	Finance cost	1,556.58	2,853.16	1,519.34	951.82
	Operating profit before working capital changes and other adjustments	**2,280.49**	**4,829.19**	**3,397.06**	**1,899.89**
	Working capital changes and other adjustments:				
	Trade receivables	(6.56)	232.78	(966.84)	(184.18)
	Other non-current and current financial assets	(251.36)	(1,838.88)	(7,534.87)	(6,121.80)
	Other non-current and current assets	266.23	758.60	(935.60)	(1,855.84)
	Trade payables	(580.60)	(1,910.17)	642.81	17.31
	Other non-current and current financial liabilities	(2.32)	(420.92)	430.59	(25.84)
	Other non-current and current liabilities	(194.97)	13.55	111.86	36.53
	Cash flow from / (used in) operating activities post working capital changes and other adjustments	**1,510.91**	**1,664.15**	**(4,854.99)**	**(6,233.94)**
	Income tax paid (net)	(376.75)	(547.64)	(232.65)	(432.59)
	Net cash flow from / (used in) operating activities (A)	**1,134.16**	**1,116.51**	**(5,087.64)**	**(6,666.53)**
B.	**Cash flows from investing activities**				
	Redemption of bank deposits	1,634.62	5,395.49	2,363.05	807.07
	Investment in bank deposits	(2,839.33)	(5,915.56)	(2,497.92)	(1,348.93)
	Acquisition of the financial assets (receivables under service concession agreement)	-	(2,668.98)	(3,930.00)	-
	Proceeds from sale of current investments	-	-	143.27	-
	Loan received	150.00	-	-	-
	Loan given	(539.10)	-	-	-
	Interest income on unsecured loans	25.92	25.16	-	-
	Interest income on bank deposits	71.58	102.21	41.44	23.98
	Net cash used in investing activities (B)	**(1,496.31)**	**(3,061.68)**	**(3,880.16)**	**(517.88)**
C.	**Cash flows from financing activities**				
	Repayment of term loans from banks	(5,590.56)	(890.28)	(2,982.03)	(8,157.15)
	Proceeds from term loans from banks	8,405.40	5,066.59	12,511.65	9,044.83
	Proceeds from non-convertible debentures	-	-	-	6,005.00
	Repayment of non-convertible debentures	(216.13)	(408.75)	(389.01)	(148.50)
	Loan taken from related parties	1,008.51	3,246.60	3,218.60	2,582.91
	Loan repaid to related parties	(2,060.42)	(1,522.69)	(2,048.28)	(2,099.14)
	Finance costs paid	(1,731.30)	(2,845.70)	(1,400.84)	(755.49)
	Share issue expenses	-	(0.86)	(1.92)	(7.35)
	Proceeds from issue of share capital	-	98.00	239.10	998.00
	Dividend paid on equity shares	-	-	(347.30)	-
	Net cash (used in) / flow from financing activities (C)	**(184.50)**	**2,742.91**	**8,799.97**	**7,463.11**
D.	**Net (decrease) / increase in cash and cash equivalents (A+B+C)**	**(546.65)**	**797.74**	**(167.83)**	**278.70**
E.	Cash and cash equivalents at the beginning of the period / year	975.03	177.29	345.12	66.42
	Cash and cash equivalents at the end of the period / year (D+E)	**428.38**	**975.03**	**177.29**	**345.12**

SUMMARY FINANCIAL INFORMATION OF THE SPONSOR

Summary Statement of Profit and Loss of the Sponsor:

(*in ₹ million*)

	Particulars	For the year ended March 31, 2024	For the year ended March 31, 2023	For the year ended March 31, 2022
I	**Income**			
	Revenue from operations	80,915.43	79,046.91	66,587.59
	Other income	836.31	629.51	1,051.27
	Total Income (I)	**81,751.74**	**79,676.42**	**67,638.86**
II	**Expenses**			
	Construction expenses and cost of materials	63,140.58	56,462.12	56,243.16
	Change in inventories	(1,454.41)	1,992.33	(2,166.33)
	Employee benefits expenses	1,618.15	1,528.95	1,308.11
	Finance costs	3,401.42	1,577.64	874.68
	Depreciation and amortization expenses	481.56	614.79	472.86
	Other expenses	745.13	722.44	562.33
	Total expenses (II)	**67,932.43**	**62,898.27**	**57,294.81**
III	**Profit before share of profit / (loss) of Associates III (I-II)**	**13,819.31**	16,778.15	10,344.05
IV	**Add: Share of profit from Associates (Net)**	**19.17**	31.22	**-**
V	**Profit Before Tax (III + IV)**	**13,838.48**	**16,809.37**	**10,344.05**
VI	**Tax expenses**			
	(1). Current tax	3,397.70	2,911.70	2,526.33
	Less:- MAT credit entitlement	(51.32)	-	-
	(2). Deferred tax	217.56	1,419.98	103.61
	(3). Earlier year tax adjustments	(10.57)	942.76	2.13
		3,553.37	**5,274.44**	**2,632.07**
VII	**Profit for the year (V-VI)**	**10,285.11**	**11,534.93**	**7,711.98**
VIII	**Other Comprehensive Income**			
	Item that will not be reclassified subsequently to profit or loss			
	Remeasurement gain of the net defined liability	2.71	8.10	11.17
	Tax impact on above	(0.68)	(2.04)	(2.81)
		2.03	**6.06**	**8.36**
IX	**Total comprehensive income (VII + VIII)**	**10,287.14**	**11,540.99**	**7,720.34**
	Total comprehensive income attributable to:			
	- Owners of the holding company	10,287.77	11,541.60	7,720.34
	- Non controlling interest	(0.63)	(0.61)	-
	Of the total comprehensive Income above			
	Profit for the year attributable to:			
	- Owners of the holding company	10,285.74	11,535.54	7,711.98
	- Non controlling Interest	(0.63)	(0.61)	-
	Other comprehensive income for the year attributable to:			
	- Owners of the holding company	2.03	6.06	8.36
	- Non controlling interest	-	-	-
X	**Earnings per share (Face value of ₹ 10/- per equity share)**			
	Basic (in ₹)	700.50	785.87	525.68
	Diluted (in ₹)	700.50	785.87	525.68

Summary Balance Sheet of the Sponsor:

(*in ₹ million*)

Particulars	For the year ended March 31, 2024	For the year ended March 31, 2023	For the year ended March 31, 2022
I. ASSETS			
1. Non-Current Assets			
(a) Property, plant and equipment	2,986.01	2,972.50	3,033.39
(b) Capital work in progress	51.46	16.56	24.66
(c) Goodwill	3.88	3.88	-
(d) Other intangible assets	216.36	255.92	449.78
(e) Investment properties	723.88	729.70	769.63
(f) Right of use assets	24.17	-	-
(g) Financial assets			
(i) Investments	781.51	499.35	218.87
(ii) Trade Receivables	-	-	13,694.14
(iii) Loans	340.11	483.97	506.57
(iv)Other financial assets	52,954.70	30,623.29	1,345.92
(h) Other non-current assets	-	96.57	9.68
	58,082.08	**35,681.74**	**20,052.64**
2.Current Assets			
(a) Inventories	7,123.68	5,669.27	7,661.60
(b)Financial assets			
(i) Investments	244.39	205.35	539.56
(ii) Trade receivables	3,532.98	3,954.00	9,049.71
(iii) Cash and cash equivalents	5,242.11	5,400.00	1,400.26
(iv) Other bank balances	5,929.11	3,291.71	4,065.83
(v) Loans	548.97	133.35	30.63
(vi) Other financial assets	21,427.48	17,739.15	1,587.48
(c) Current tax assets (net)	967.10	610.50	1,847.50
(d) Other current assets	7,600.89	7,157.16	5,213.51
	52,616.71	**44,160.49**	**31,396.08**
TOTAL ASSETS	**1,10,698.79**	**79,842.23**	**51,448.72**
II. EQUITY AND LIABILITES			
1.Equity			
(a) Equity share capital	146.86	146.86	146.86
(b) Other equity	52,475.56	42,187.78	30,515.26
Total	**52,622.42**	**42,334.64**	**30,662.12**
Non controlling interest	45.94	46.57	-
Total Equity	**52,668.36**	**42,381.21**	**30,662.12**
2. Liabilities			
Non-current liabilities			
(a) Financial liabilities			
(i) Borrowings	42,338.45	26,139.17	13,574.97
(ii) Lease liabilities	21.13	-	-
(iii) Other financial liabilities	336.23	201.83	407.12
(b) Provisions	52.30	39.69	34.96
(c.) Deferred tax liabilities (net)	2,028.92	1,810.68	334.30
	44,777.03	**28,191.37**	**14,351.35**
Current Liabilities			
(a) Financial Liabilities			
(i) Borrowings	3,939.75	1,661.56	1,079.31
(ii) Lease Liabilities	3.93	-	-
(iii) Trade Payables			
(A) Total outstanding dues of micro-enterprises and small enterprises	140.78	-	-
(B) Total outstanding dues of creditors other than micro-enterprises and small enterprises	4,584.17	4,406.63	3,393.53
(iv) Other financial liabilities	2,737.74	1,092.81	1,454.06
(b) Provisions	6.03	5.53	4.91
(c) Current tax liabilities (net)	-	157.67	-
(d) Other current liabilities	1,841.00	1,945.45	503.44
	13,253.40	**9,269.65**	**6,435.25**
TOTAL EQUITY & LIABILITIES	**1,10,698.79**	**79,842.23**	**51,448.72**

Summary Cash Flow of the Sponsor:

(*in ₹ million*)

	Particulars	For the year ended March 31, 2024	For the year ended March 31, 2023	For the year ended March 31, 2022
A.	**Cash flow from operating activities**			
	Net profit before share of profit/loss of Associates	13,819.30	16,778.15	10,344.05
	Add/(Less)			
	Depreciation and amortisation expenses	481.56	614.79	472.86
	Bad debts & advances written off	19.30	10.35	-
	Profit on sale of property, plant and equipment	(9.57)	(7.14)	(41.34)
	(Gain)/Loss in investments categorised as FVTPL	(33.60)	28.91	(41.66)
	Finance cost	3,401.42	1,577.64	874.68
	Interest income	(111.33)	(42.33)	(24.19)
	Profit share from joint venture/firms (net of taxes)	(12.44)	(0.97)	-
	Income from mutual funds and shares	(2.67)	(46.70)	(3.26)
	Dividend income	(0.33)	(0.26)	(0.17)
	Gratuity Expenses	-	-	11.78
	Non Controlling Interest	-	47.17	-
	Rental income from investment properties	(1.79)	(1.23)	(5.97)
	Operating Profit before changes in working capital	**17,549.85**	**18,958.38**	**11,586.78**
	Increase/(Decrease) in inventories, Trade Receivables, other financial assets and other assets	(30,413.61)	(24,460.66)	(13,239.01)
	Increase in Trade Payables, Provisions, other financial liabilities and other liabilites	1,851.38	2,059.69	839.02
	Cash generated from/ (used in) operating activities	**(11,012.38)**	**(3,442.59)**	**(813.21)**
	Direct taxes paid	(3,335.80)	(3,854.46)	(2,528.46)
	Net cash inflow from operating activities: (A)	**(14,348.18)**	**(7,297.05)**	**(3,341.67)**
B.	**Cash flow from investing activities**			
	Capital Expenditure for PPE, intangible assets including capital work in progress	(497.92)	(369.30)	(847.74)
	Proceeds from the disposal of PPE	25.99	33.75	177.13
	Goodwill	-	(3.87)	-
	Investment in Subsidiary Companies / Joint Ventures	(269.72)	(279.52)	(5.05)
	Share of Profit from Associates (Net)	19.17	31.23	-
	Loan Given to Subsidiary Companies / Others	(271.76)	(80.12)	(506.57)
	Acquisition of ROU asset (stamp duty paid)	(0.16)	-	-
	Interest income	111.33	42.33	24.19
	Investment in FDR -	-		(541.87)
	Proceeds from/Investments in mutual fund/ shares	(5.43)	305.29	(65.01)
	Income from mutual fund and shares (net)	2.67	46.70	3.26
	Dividend income	0.33	0.26	0.18
	Rental Income from investment properties	1.79	1.23	5.97
	Net cash outflow from investing activities: (B)	**(883.71)**	**(272.02)**	**(1,755.51)**
C.	**Cash flows from financing activities:**			
	Finance Cost	(3,399.72)	(1,577.64)	(782.76)
	Transaction Cost	-	-	(258.13)
	Proceeds from borrowings (net)	18,477.47	13,146.45	6,747.16
	Repayment of lease liabilities	(2.05)	-	-
	Interest payment on lease liabilities	(1.70)	-	-
	Net Cash Outflow from financing activities: (C.)	**15,074.00**	**11,568.81**	**5,706.27**
	Net Increase/(Decrease) in cash and cash equivalents (A)+(B)+(C.)	**(157.89)**	**3,999.74**	**609.09**
	Cash and cash equivalents-opening	**5,400.00**	**1,400.26**	**791.17**
	Cash and cash equivalents-closing	**5,242.11**	**5,400.00**	**1,400.26**
	Cash and cash equivalents includes:			
(a)	Cash in hand	175.94	315.82	127.60
(b)	Cheque in Hand	-	34.73	-
(c)	Balances with banks	5,066.17	5,049.45	1,272.66
		5,242.11	**5,400.00**	**1,400.26**

SUMMARY FINANCIAL INFORMATION OF THE INVESTMENT MANAGER

Summary Statement of Profit & Loss of the Investment Manager:

(*in ₹ million*)

Particulars	For the period ended from August 26, 2023 to March 31, 2024
Income	
Other income	3.89
Total income	**3.89**
Expenses	
Employee benefits expense	18.20
Depreciation expense	0.05
Other expenses	4.67
Total expenses	**22.92**
(Loss) before tax	**(19.03)**
Tax expense	
Deferred tax (credit)	(4.79)
Total tax expense	**(4.79)**
Net (loss) for the year	**(14.24)**
Other comprehensive (loss)	
Total other comprehensive (loss)for the year	**-**
Total comprehensive (loss) for the year	**(14.24)**

Summary of Balance Sheet of the Investment Manager:

(*in ₹ million*)

Particulars	As at March 31, 2024
ASSETS	
Non-current assets	
Property, Plant and Equipment	0.27
Deferred tax assets (net)	4.79
Non-current tax assets (net)	0.39
Total non-current assets	**5.45**
Current assets	
Financial assets	
Cash and cash equivalents	0.01
Bank balances other than cash and cash equivalents above	112.04
Other current assets	0.40
Total current assets	**112.45**
Total assets	**117.90**
EQUITY AND LIABILITIES	
EQUITY	
Equity share capital	130.00
Other equity	(14.37)
Total equity	**115.63**
LIABILITIES	
Current liabilities	
Financial liabilities	
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	0.66
Other current liabilities	1.61
Total current liabilities	**2.27**
Total liabilities	**2.27**
Total equity and liabilities	**117.90**

Summary Statement of Cash flows of the Investment Manager:

(*in ₹ million*)

	Particulars	For the period ended from August 26, 2023 to March 31, 2024
A	**Cash flows from operating activities**	
	(Loss) before tax	**(19.03)**
	Adjustments for:	
	Depreciation	**0.05**
	Interest income	(3.89)
	Operating profit before working capital changes and other adjustments	**(22.87)**
	Working capital changes and other adjustments:	
	Other current assets	(0.40)
	Trade payables	0.66
	Other current liabilities	1.61
	Cash flow from operating activities post working capital changes	**(21.00)**
	Income tax paid (net)	(0.39)
	Net cash generated (used) in operating activities (A)	**(21.39)**
B	**Cash flows from investing activities**	
	Purchase of property, plant and equipment	(0.32)
	Redemption of bank deposits	15.28
	Investments in bank deposits	(126.53)
	Interest received on bank deposits and others	3.10
	Net cash (used in) investing activities (B)	**(108.47)**
C	**Cash flows from financing activities**	
	Share issue expenses	(0.13)
	Proceeds from issue of share capital	130.00
	Net cash generated from financing activities (C)	**129.87**
D	**Net increase / (decrease) in cash and cash equivalents (A+B+C)**	**0.01**
E	Cash and cash equivalents at the beginning of the year	-
	Cash and cash equivalents at the end of the year (D+E)	**0.01**

SUMMARY OF INDUSTRY

Overview of the Indian Economy

Approximately ₹173.82 lakh crore in Fiscal Year 2024, India's GDP (in absolute terms) against the first revised estimates of GDP for the Fiscal Year 2023 of ₹160.71 lakh crore. Real GDP has been estimated to grow by 8.2% in FY 2023-24 as compared to the growth rate of 7.0% in FY 2022-23. Nominal GDP has witnessed a growth rate of 9.6% in FY 2023-24 over the growth rate of 14.2% in FY 2022-23. *(Source: Press Note on provisional estimates of annual GDP for 2023-24 and quarterly estimates of GDP for Q4 of 2023-24, Ministry of Statistics and Programme Implementation, Government of India)*

The global economy is continuing growing at a modest pace, according to the OECD's latest Economic Outlook. The Economic Outlook projects steady global GDP growth of 3.1% in 2024, the same as the 3.1% in 2023, followed by a slight pick-up to 3.2% in 2025. (*Source: Economic outlook: Steady global growth expected for 2024 and 2025, May 2024*)

The table given below sets forth a comparison between India's real GDP growth rate along with its expected real GDP growth rate for 2024 and 2025, as compared to advanced economies, newly emerging economies and the world.

(in percentage)

	Real GDP growth rate (Estimate)	Projected real GDP growth rate (Forecast)		
	2022	**2023**	**2024**	**2025**
India	6.7	7.0	6.0	6.4
Advanced Economies	2.6	1.6	1.4	1.3
Newly Emerging Economies	4.0	4.0	4.0	3.9
World	3.4	3.0	2.9	2.8

Source: 2024 World Economic Outlook, IMF, Marubeni Research Institute

Overview of the Infrastructure Sector in India

The infrastructure sector is a key driver of the Indian economy. The sector is highly responsible for propelling India's overall development and enjoys intense focus from the Government for initiating policies that would ensure the time-bound creation of world-class infrastructure in the country. The infrastructure sector includes power, bridges, dams, roads, and urban infrastructure development. In other words, the infrastructure sector acts as a catalyst for India's economic growth as it drives the growth of the allied sectors like townships, housing, built-up infrastructure, and construction development projects. FDI in construction development (townships, housing, built-up infrastructure and construction development projects) and construction (infrastructure) activity sectors stood at US$ 26.61 billion and US$ 33.91 billion, respectively, between Fiscal Years 2001 to Fiscal 2024. *(Source: Infrastructure Sector in India, May 2024*).

In the Fiscal Year 2020, the Government focused on enhancing expenditure in the infrastructure sector and has planned to invest more than ₹ 111 lakh crore in the infrastructure sector in the next five years as part of the National Infrastructure Pipeline ("**NIP**") announced in December 2019 *(Source: A Strong V-shaped recovery of Economic Activity, January 2021, PIB Delhi).*

In 2019, the Government of India adopted a forward-looking programmatic approach towards infrastructure. The National Infrastructure Pipeline was born with a projected investment of around ₹111 lakh crore for FY20-25 for developing a comprehensive view of infrastructure development in the country. The NIP which had started with 6,835 infrastructure projects has expanded to around 9,000 projects across 35 sub-sectors and covers economic and social infrastructure projects jointly funded by the Central Government, State Governments, and the private sector. *(Source: Union Budget 21-22 provided capital outlay of ₹5.54 lakh crore, an increase of 34.5% over Budget Estimate of FY 2020-21, to boast economy after COVID-19 pandemic, December 2021, PIB Delhi)*

Out of the total capital outlay under the NIP, 40% are under implementation, 30% are at a conceptual stage and 20% are under development stage *(Source: Task Force on National Infrastructure Pipeline presents its Final Report to Finance Minister Smt. Nirmala Sitharaman, April 2020, PIB Delhi)*

Overview of the Road Sector in India

Road Network in India

India has the second largest road network in the world, spanning a total of 66.71 Lakh km *(Source: Year End Review 2023-Ministry of Road Transport and Highways, January 2024, PIB Delhi).*

This road network primarily comprises national highways, expressways, state highways, major district roads, other district roads and village roads. Road network in India can be classified into the following categories:

- *National Highways* constitute the primary system of road transportation in India, which facilitates medium and long-distance inter-city passenger and freight traffic across the country

- *State Highways* constitute the secondary system of road transportation in India, which facilitates the traffic across major centers within the states

- *District Roads* primarily link and provide accessibility within the districts and provide the secondary function of linkage between the highways and rural roads

- *Rural Roads* are a key component of rural development providing accessibility to the villages to meet their social needs as also act as the means to transport agriculture produce from village to nearby markets

Road Network in India by Category (length in km)

Category	FY20[(1)]	FY21[(1)]	FY22[(1)]	FY23[(1)]	FY24[(1)]
National Highways	132,500	136,440	140,955	144,955	146,145
State Highways	156,694	176,818	171,039	167,079	179,535
Other Roads	5,608,477	5,902,539	6,059,813	6,019,757	6,019,723
Total	5,897,671	6,215,797	6,371,847	6,331,791	6,345,403

[(1)] As of November every year.

(Source: Annual Reports, Ministry of Road Transport and Highways, Government of India and Year End Review 2023-Ministry of Road Transport and Highways, January 2024, PIB Delhi)

Approximately 5,248 km of National Highways (NH) was constructed in 2023-2024 (upto November 2023) (Provisional Figures). The length of the National Highways has increased by more than 60% from 91,287 km in 2014 to around 146,145 km in 2023. As of November 2023, the length of the National Highways is ~1,46,145 Km. Pace of construction of NH roads increased from 12.1 km per day in Fiscal Year 2015 to 36.5 km per day in Fiscal Year 2021 and was around 28.6 km per day in Fiscal Year 2022. (*Source: Year End Review 2023-Ministry of Road Transport and Highways, January 2024, PIB Delhi*)

SUMMARY OF BUSINESS

Capital Infra Trust (*erstwhile National Infrastructure Trust*) is an infrastructure investment trust sponsored by Gawar Construction Limited ("**GCL**" or "**Sponsor**"), established on September 25, 2023 with the objective to carry on the activities of, and to make investments as, an infrastructure investment trust, as permissible under the SEBI InvIT Regulations. We were settled by way of the Trust Deed, by GCL (the Sponsor), read along with Amendment to the Trust Deed and registered as an infrastructure investment trust with SEBI on March 7, 2024 (updated *vide* SEBI registration certificate dated October 16, 2024) in accordance with the SEBI InvIT Regulations.

Our Sponsor is an infrastructure development and construction company in India, with over 15 years of experience, primarily engaged in the construction of road and highway projects across 19 states in India for various government/ semi-government bodies and statutory authorities including NHAI, Ministry of Road Transport & Highways (MoRTH), Mumbai Metropolitan Regional Development Authority (MMRDA) and Central Public Works Department (CPWD). Since 2008, our Sponsor has undertaken more than 100 road construction projects. As on the date of this Offer Document, our Sponsor has a portfolio of 26 road projects on a hybrid annuity mode ("**HAM**") with NHAI, of which 11 are completed projects, including the five acquired assets which were erstwhile owned by Sadbhav Infrastructure Project Limited, and 15 under-construction projects.

Our Sponsor has an established track record of efficient project management and execution involving trained and skilled manpower, efficient deployment of equipment and an in-house integrated business model. We believe that these attributes have enabled to complete projects on or ahead of the scheduled period of completion. The in-house materials supply chain management ensures that key construction materials are delivered in a timely manner to the facilities and construction sites thereby enabling our Sponsor to manage its processes effectively and maintain its key raw material inventory to an optimal manner. The project management team working in conjunction with the design and engineering team, ensures operational efficiencies through overall supervision of the development and project execution process. Five out of the seven indigenous HAM projects were completed before scheduled time and have received early completion bonus from NHAI.

Our Sponsor complies with the eligibility requirements under the SEBI InvIT Regulations of requisite track record in development of infrastructure projects.

We primarily intend to acquire, manage and invest in the nine completed and revenue generating Initial Portfolio Assets, aggregating to approximately 682.425 kms, operated and maintained pursuant to concessions granted by the NHAI and are owned and operated by the Project SPVs. These roads are located in the states of Haryana, Rajasthan, Bihar, Uttarakhand, Himachal Pradesh, Madhya Pradesh and Karnataka. Our Initial Portfolio of Assets has a weighted average residual concession life of 11.7 years as of September 30, 2024. For more information about the Initial Portfolio Assets, see "***Business – Details of the Project SPVs and the Initial Portfolio Assets*** " on page 159.

In addition to the Initial Portfolio Assets, the Trust, through the Investment Manager, will also have the right to acquire new projects through a right of first offer with our Sponsor in accordance with the Right of First Offer Agreement ("**ROFO Agreement**"). For more details, see "***Business*** – ***Assets under ROFO****" and "****Formation Transactions in relation to the Trust– Acquisition of future assets by the Trust- ROFO Agreement***" on pages 172 and 112, respectively.

The Formation Transactions

The Trust intends to acquire 100% of the equity shares in each of the Project SPVs from the Sponsor. As consideration for the acquisition of the equity shares of the Project SPVs, the Trust will issue Units, in accordance with the relevant Share Purchase Agreements, to the Sponsor after the Bid/Offer Closing Date and prior to the Allotment in the Offer, i.e., the closing date pursuant to the Share Purchase Agreements. For more information about the Formation Transactions and key terms of the Share Purchase Agreements, see "***Formation Transactions in relation to the Trust***" on page 102.

As of September 30, 2024, the following projects, which are owned, operated and maintained by the Project SPVs, comprise the Initial Portfolio Assets consisting of approximately 682.425 km of constructed and operational roads across seven states in India:

Name of the Initial Portfolio Assets	Rohna Jhajjar Highway Asset	Khajuwala Bap Highway Asset	Narnaul Highway Asset	Rohna Sonepat Highways Asset	Hardiya Hasanpur Highway Asset	Kiratpur Nerchowk Highway Asset	Dewas Ujjain Highway Asset	Bangalore Highways Asset	Nainital Highways Asset
Brief Description	GRJHPL is a special purpose vehicle which was incorporated to undertake redesigning, rehabilitation, upgradation and development of road of Rohna/Hassangarh to Jhajjar section from km 44.80 to km 80.250 (Design Chainage) (Length 35.450 Km) of NH-334B in Haryana by four laning on a HAM basis.	GKBHPL is a special purpose vehicle which was incorporated to undertake upgradation of road from km 0.00 of NH 911 to km 30.812 of NH 911 via Khajuwala-Poogal Section and the road from km 1.430 of NH 911 to km 182.725 of NH 911 via Poogal Dantour Jaggasar Gokul Goddu Ranjeetpura Charanwala Naukh Bap section under Bharatmala Pariyojna for the stretch of 212.107 km in Rajasthan by two laning on a HAM basis.	GNHPL is a special purpose vehicle which was incorporated for the development of road of 4/6 laning of Narnaul Bypass Crossing to Paniyala Mor (NH-148 B) at NH-48 Junction for a stretch of 31.24 km Nizampur Link Road for a stretch of 2.76 km and Narnaul Bypass crossing to Pacheri Kalan=11.30 km of NH-11 in Haryana on a HAM basis.	GRSHPL is a special purpose vehicle which was incorporated for redesigning, rehabilitation and upgradation road from km 0.00 of NH-334B to km 44.80 of NH-334B via Uttar Pradesh /Haryana border to Rohna section for the stretch of 40.500 km in Haryana by four laning on a HAM basis.	HHHPL is a special purpose vehicle which was incorporated for development of the road from km 54.405 of NH 20 to km 101.630 of NH 31 (New NH 20) via Rajauli-Bakhtiyarpur Section for the stretch of 47.225 km in Bihar by four laning on a HAM basis.	GKNHPL is a special purpose vehicle was incorporated for undertaking development of balance work for the road from km 12.750 of NH 21 to km 26.500 of NH 21, km 126.500 to km 158.500 including ACC link road from km 0.00 of NH 21 to km 2.003 of NH 21 via Kiratpur to Nerchowk Section under greenfield alignment (excluding Sunder Nagar Bypass) for the stretch of 47.753 km in Himachal Pradesh by four laning on a HAM basis.	DUHPL is a special purpose vehicle which was incorporated for the development of the road from km 0.00 of NH 148 to km 19.733 of NH 148, the road from km 19.733 of NH 148 to km 26.90 of NH 148 and the road from km 0.00 of NH 148 to km 14.52 via Dewas Ujjain Section and thereof for the stretch of 41.42 km in Madhya Pradesh by four laning on a HAM basis.	GBHPL is a special purpose vehicle which was incorporated for the development of road from km 287.52 of NH 209 to km 461.55 of NH 209 via BRT Tiger Reserve Boundary to Bangalore Section under National Highways Development Project Phase- IV for the stretch of 164.34 km in Karnataka by two/ four laning on a HAM by. way of harmonious substitution of SBHPL (the erstwhile concessionaire) under the SBHPL Concession Agreement.[1]	GNHPL II is a special purpose vehicle which was incorporated for the development of road from km 42.791 of NH 87 (New NH 09, 109) to km 88 of NH 87 (New NH 09, 109) via Rampur Kathgodam Section under NHDP Phase-III for the stretch of 49.78 km in Uttarakhand by four laning on a HAM basis by way of harmonious substitution of SNHL (the erstwhile concessionaire) under the SNHL Concessionaire Agreement.[2]
State	Haryana	Rajasthan	Haryana	Haryana	Bihar	Himachal Pradesh	Madhya Pradesh	Karnataka	Uttarakhand
Design length (in kms)	35.450	212.107	45.300	40.220	47.225	47.753	40.250	164.340	49.78
Awarding Authority	NHAI	NHAI	NHAI	NHAI	NHAI	NHAI	NHAI	NHAI	NHAI
Date of signing of	May 09, 2018 (amendment to Concession	September 28, 2018	February 28, 2019	May 27, 2019	October 28, 2020	November 26, 2020	December 11, 2020	December 08, 2016	June 2, 2016

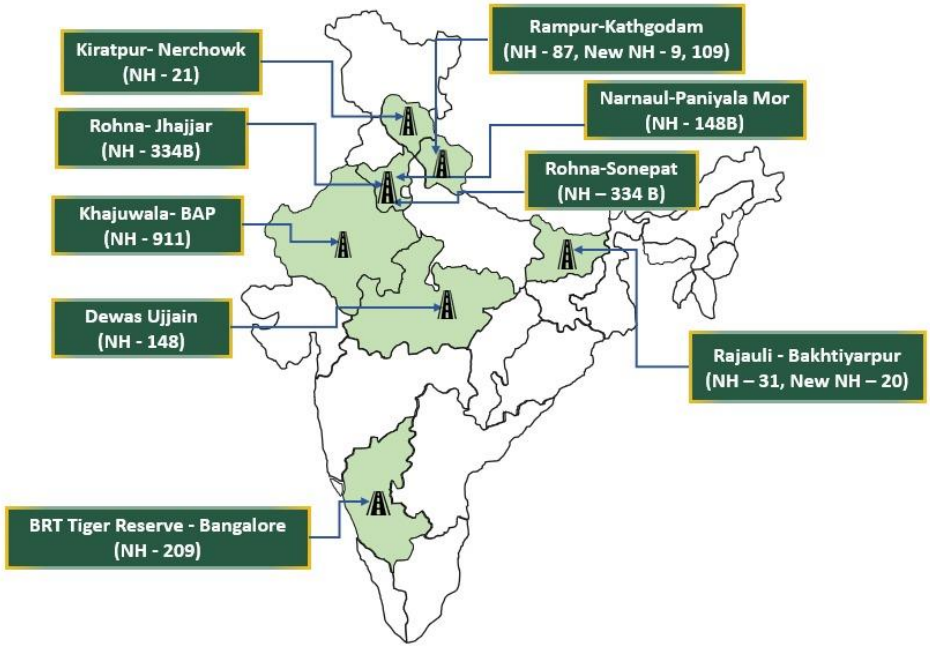
[1] *SBHPL is a wholly owned subsidiary of Sadbhav Infrastructure Projects Limited formed for undertaking development of Bangalore Highway Limited. However, due to persisting issues leading to delay in project completion, the project was endorsed to GBHPL through endorsement agreement on February 13, 2023.*

[2] *SNHL was incorporated by Sadbhav Infrastructure Projects Limited for undertaking development of Nainital Highway Asset. However, due to persisting issues leading to delay in project completion, the project was endorsed to GNHPL II through endorsement agreement on July 14, 2023, read along with settlement agreement dated October 15, 2024.*

Name of the Initial Portfolio Assets	Rohna Jhajjar Highway Asset	Khajuwala Bap Highway Asset	Narnaul Highway Asset	Rohna Sonepat Highways Asset	Hardiya Hasanpur Highway Asset	Kiratpur Nerchowk Highway Asset	Dewas Ujjain Highway Asset	Bangalore Highways Asset	Nainital Highways Asset
Concession Agreement	Agreement on February 13, 2019)								
Date of Signing of Endorsement Agreement	NA	NA	NA	NA	NA	NA	NA	February 13, 2023	July 14, 2023
PCOD	July 10, 2020	January 20, 2021	January 9, 2021	January 29, 2022	April 27, 2023	June 7, 2023	July 5, 2023	December 31, 2020	October 27, 2019
COD	July 31, 2020	October 30, 2021	January 09, 2021	April 5, 2022	To be notified.	September 5, 2023	January 16, 2024	To be notified	To be notified
Operations and maintenance period (in years)	15	15	15	15	15	15	15	15	15
Bid Project Cost *(in ₹ millions)*	7,180	8,950	11,370	10,200	10,650	20,980	7,160	9,442.30	5,601.10
Completion cost (in ₹ million)**	7,571.31	9,657.88	11,779.32	10,998.10	12,090.88	24,431.21	8,233.30	10,495.62	7,684.70
Total annuities receivable until the concession end date (in ₹ million)	4,510.73	5,794.73	7,013.02	6,656.99	7,304.64	14,746.84	4,946.87	5,480.72	3,683.85
Annuities received until the concession end date or as on September 30, 2024 whichever is earlier) (in ₹ million)	804.04	891.08	1,083.82	724.20	311.91	629.69	211.23	668.65	219.97
Cash Inflows* received as on September 30, 2024 (in ₹ millions)	201.28	260.41	311.15	311.32	381.52	740.68	255.46	558.22	203.35

* *Cash Inflows include interest on annuity and O&M payments for April 1, 2024, to September 30, 2024.*

** *Completion Cost may be adjusted due to changes in the weighted price index, consumer price index, and any modifications to the reference date as per NHAI's evaluation under the Concession Agreement.*



All of the Initial Portfolio Assets are HAM projects awarded by NHAI. The Sponsor will be monetizing future annuity payments (including interest payable thereon) and O&M income receivable from the NHAI by transferring the Initial Portfolio Assets to the Trust. Our revenue stream primarily comprises interest income on financial assets receivable from NHAI, as well as revenue from operations, maintenance of roads, construction services, and operating revenues received from NHAI. The revenue from operations of the Initial Portfolio Assets based on the Special Purpose Combined Financial Statements for the six months period ended September 30, 2024, and Financial Years ended March 31, 2024, 2023 and 2022 was ₹ 7,054.55 million, ₹ 14,850.91 million, ₹ 20,330.90 million and ₹ 19,081.51 million respectively. For more information in relation to financial information of the Project SPVs, see **"*Management's Discussion and Analysis of Financial Condition and Results of Operations***" on page 301.

Our Investment Manager is Gawar Investment Manager Private Limited. The Investment Manager was incorporated as a private limited company on August 26, 2023, and will be relying on the experience/ expertise of its board of directors and key managerial personnel who has experience in various sectors including in the road and highways sector and brings expertise in the areas of infrastructure, fintech, finance and accounting, and regulatory compliance, financial management, advisory and/or infrastructure development sector, which cumulatively exceeds 30 years (with experience of each such employee exceeding five years) and complies with the eligibility requirements under the SEBI InvIT Regulations. Accordingly, the Investment Manager is in compliance with the eligibility requirements prescribed under the SEBI InvIT Regulations. For more information about the Investment Manager, see "***Parties to the Trust– The Investment Manager – Gawar Investment Manager Private Limited***" on page 128.

The Trustee, the Investment Manager and the respective Project SPVs have appointed our Sponsor, Gawar Construction Limited, to act as the Project Manager for each Project SPV. Given its expertise and experience in constructing, operating and maintaining road projects in accordance with the terms of concession agreements, the operation and maintenance work in relation of the Project SPVs will be undertaken by GCL.

Axis Trustee Services Limited has been appointed as the sole Trustee of the Trust. The Trustee is registered with SEBI as a debenture trustee under the Securities and Exchange Board of India (Debenture Trustees) Regulations, 1993 and is eligible to act as the trustee to the Trust in accordance with the SEBI InvIT Regulations. For more information about the Trustee, see "***Parties to the Trust– The Trustee – Axis Trustee Services Limited***" on page 114.

Hedge against adverse interest rate movements

The NHAI hybrid annuity projects provide a natural hedge against the risk of adverse interest rate movement. In addition to the annuity payments due under the respective Concession Agreements during the operations period, NHAI is required to pay interest on the reducing balance of the completion cost (equivalent to 60% of the Bid Project Cost) throughout the operation period at the rate of 3% above the Reserve Bank of India Bank Rate.

Accordingly, any increase in the interest payable on loans with floating interest rates by the Trust due to an increase in interest rates gets offset by the increased revenues as a result of increase in interest on reducing balance of completion cost. This

structure of the Concession Agreements effectively mitigates the interest rate risk to the Project SPVs and provides a greater financial predictability and stability to the Trust investors.

Investment Strategy and Risk and Capital Management Strategy

Our principal business strategies are as set out below:

Goal to maintain optimum capital structure to maximise distributions to Unitholders

We intend to focus on achieving an optimal capital structure for our projects and will continue to draw upon the experience, relationship and expertise of our Sponsor in sourcing funds from multiple sources. The Trust's total outstanding consolidated net debt after full utilization of the Offer Proceeds, will be within the regulatory requirement of 49% of the value of the Initial Portfolio Assets upon completion of the Offer (net of cash and cash equivalents) as specified under the SEBI InvIT Regulations.

We also intend to optimise our leverage to retain enough flexibility to provide sustainable and predictable cash flows while also evaluating potential acquisition opportunities in the future. After the completion of the Offer, we believe that we will have sufficient equity capital and ability to add additional debt to support acquisition of additional assets while maintaining an optimum capital structure.

We will seek to employ appropriate financing policies and also diversify our funding sources with an objective of minimising our overall cost of capital. We will seek to optimise our debt and equity mix in such a manner that the aggregate consolidated borrowings and deferred payments of the Trust, net of cash and cash equivalents does not exceed 70% of the value of the Initial Portfolio Assets at any time subject to the approval of the unitholders and in accordance with the SEBI InvIT Regulations.

Further, any additional debt beyond 49% of the value of the Initial Portfolio Assets will be raised only upon compliance with the conditions set out in the SEBI InvIT Regulations. In accordance with the Trust Deed, and subject to the Applicable Law permitting such additional debt, any additional debt will be raised only with consent of 75% of the Unitholders by value of the Trust. If it is in the interests of the Unitholders, the Investment Manager may also pursue growth opportunities that require raising additional capital through the issuance of new Units.

Active asset management

We intend to continue to manage our assets through the services of the Project Manager and the Investment Manager. The Project Manager is responsible for providing the Project SPVs management-related services and routine O&M services pursuant to the provisions of the Project Management Agreement.

The Project Manager will also assist the Trust and the Project SPVs in managing the project operating expenses. The roads sector is a highly competitive sector that is capital intensive and requires significant expenditure.

As part of our operations and maintenance systems and processes, the Investment Manager intends to work with the Project Manager to employ both preventive and corrective measures in order to optimise the long-term performance of each project, to minimize downtime or defects with respect to the Initial Portfolio Assets.

Project Manager's ability to manage the costs associated with the Initial Portfolio Assets is critical to maintain the Project SPVs' profit margins.

The Project Manager will also coordinate with the NHAI and local authorities to make sure that any new requirements of such agencies, to the extent reasonable, and in accordance with concession agreement, if any, are complied with within the scheduled timelines for each project.

Expand the portfolio of road assets

The Investment Manager intends to expand our initial portfolio by identifying and acquiring additional road projects that meet our investment objective in accordance with the provisions of the Trust Deed. For more details, see "***Overview of the Trust***" on page 19.

The Investment Manager will be selective with respect to new projects it acquires in the future and will rely on the relevant policies of the Trust to make investment decisions in road projects.

The Trust has entered into the ROFO Agreement with our Sponsor, pursuant to which the Sponsor has granted a right of first offer to us to acquire certain of its road assets. For details, see "***Business*** – ***Assets under ROFO*****"** and **"*Formation Transactions – Acquisition of future assets by the Trust - ROFO Agreement***" on pages 172 and 112, respectively.

In addition, the Investment Manager believes that certain acquisition opportunities may be available in the industry. The Investment Manager intends to take advantage of these opportunities by sourcing and acquiring assets from such third parties

on a case-by-case basis in accordance with the SEBI InvIT Regulations, the concessions and other road project related agreements and policies.

GENERAL INFORMATION

The Trust has been settled by Gawar Construction Limited, our Sponsor, as an irrevocable trust under the provisions of the Trusts Act in Gurugram, India pursuant to the Trust Deed on September 25, 2023, pursuant to the Trust Deed read along with Amendment to the Trust Deed dated October 10, 2024 in Gurugram, Haryana. The Trust has been registered with the SEBI as an infrastructure investment trust under Regulation 3(1) of the SEBI InvIT Regulations on March 7, 2024, having registration number IN/INVIT/23-24/00029 (updated *vide* SEBI registration certificate dated October 16, 2024, bearing registration number IN/InvIT/23-24/0029) in accordance with the SEBI InvIT Regulations. For further details on the background of the Trust and description of the Project SPVs, refer to the section titled "***Overview of the Trust***", "***Formation Transactions in relation to the Trust***" and "***Business***" on pages 19, 102 and 150, respectively.

Principal place of business, registered office, and correspondence address of the Trust:

Capital Infra Trust (*Erstwhile National Infrastructure Trust*)
Unit No. 1401-1403, 14th Floor
Tower B, SAS Tower, Medicity, Sector-38 Gurugram – 122001
Haryana, India
Tel: 0124 – 4920139
E-mail: compliance@capitalinfratrust.com
SEBI registration number: IN/INVIT/23-24/00029
Date of registration with the SEBI: March 7, 2024
Pursuant to our name change, an updated certificate dated October 16, 2024, bearing registration number IN/InvIT/23- 24/0029) was issued by SEBI in accordance with the SEBI InvIT Regulations.

Contact Person and Compliance Officer

Shubham Jain 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:

Shubham Jain
Unit No. 1401-1403, 14th Floor
Tower B, SAS Tower, Medicity, Sector-38
Gurugram – 122 001
Haryana, India
Tel: 0124 - 4920135
E-mail: compliance@capitalinfratrust.com

Bidders can contact the Compliance Officer or the Registrar to the Offer in case of any pre-Offer or post-Offer related problems such as non-receipt letter of Allotment, non-credit of Allotted Units in the respective beneficiary account and non-receipt of refunds by electronic mode.

Sponsor and Project Manager

Gawar Construction Limited

Registered office:

DSS-378, Sector 16-17
Hisar 125 005
Haryana, India

Contact person of the Sponsor

Gauri Gupta, the Group Chief Financial Officer of the Sponsor and Vineet Goel, the Chief Financial Officer of the Sponsor, is the contact person of the Sponsor. Their contact details are as follows:

Gauri Gupta
SF-01, JMD Galleria
Sector 48, Sohna Road
Gurgaon – 122 001
Haryana, India
Tel: +91 24 - 4854060
E-mail: group.cfo@gawar.in

Vineet Goel

SF-01, JMD Galleria
Sector 48, Sohna Road
Gurgaon – 122 001
Haryana, India
Tel: +91 24 - 4854060
E-mail: cfo@gawar.in

Trustee

Axis Trustee Services Limited
Axis House, Bombay Dyeing Mills Compound
Pandhurang Budhkar Marg
Worli Mumbai 400 025
Maharashtra, India
Tel: +91 22 62300451
E-mail: debenturetrustee@axistrustee.in, compliance@axistrustee.in
Contact Person: Anil Grover
SEBI registration number: IDN000000494

Investment Manager

Gawar Investment Manager Private Limited
Unit No. 1401-1403, 14th Floor
Tower B, SAS Tower, Medicity, Sector-38
Gurugram – 122 001
Haryana, India
Tel: 0124- 4920130
E-mail: compliance@capitalinfratrust.com
Contact person: Shubham Jain

Other parties involved in the Trust and the Offer

Statutory Auditor of the Trust

Walker Chandiok & LLP, Chartered Accountants
21st Floor, DLF Square
Jacaranda Marg, DLF Phase II
Gurugram-122002
Haryana, India
Firm registration number: 001076N/N500013

Valuer

S. Sundararaman
Registered Valuer
5B, "A" Block, 5th Floor, Mena Kampala Arcade
New 18 & 20, Thiagaraya Road, T. Nagar
Chennai – 600 017
Tamil Nadu, India
Tel: 044- 28154192
E-mail: chennaissr1@gmail.com
IBBI Registration Number: IBBI/RV/06/2018/10238

Lead Managers to the Offer

SBI Capital Markets Limited
1501, 15th Floor
A & B Wing, Parinee Crescenzo
G Block, Bandra Kurla Complex
Bandra East, Mumbai 400 051
Maharashtra, India
Tel: +91 22 4196 8300
E-mail: project3g_fy25@sbicaps.com
Website: www.sbicaps.com
Investor Grievance E-mail: investor.relations@sbicaps.com

Contact person: Mandeep Singh
SEBI Registration No: INM000003531

HDFC Bank Limited
Investment Banking Group, Unit No. 701, 702 and 702-A, 7th floor
Tower 2 and 3, One International Centre
Senapati Bapat Marg,
Prabhadevi, Mumbai –400013
Maharashtra, India
Tel: +91 22 3395 8233
E-mail: capitalinfra.ipo@hdfcbank.com
Website: www.hdfcbank.com
Investor Grievance E-mail: investor.redressal@hdfcbank.com
Contact person: Sanjay Chudasama/Bharti Ranga
SEBI Registration No: INM000011252

Inter-se Allocation of Responsibilities

The following table sets forth the inter-se allocation of responsibilities for various activities amongst the Lead Managers for this Offer:

Sr. No.	Activity	Responsibility	Co-ordination
1.	Assist the Investment Manager in selecting the initial portfolio of the InvIT, capital structuring, with the relative components and formalities such as type of instruments, etc.	Lead Managers	SBICAPS
2.	Due diligence of the InvIT's operations/management/ business plans/legal, etc., Sponsor's / Investment Manager's / Project Manager's experience, the proposed formation transactions, the proposed and future assets arrangements, any other related party transactions (including any name licensing or other arrangements), drafting and design of offer documents including memorandum containing salient features of the Issue documents. The Lead Managers shall ensure compliance with stipulated requirements and completion of prescribed formalities with the Stock Exchanges and the SEBI.	Lead Managers	SBICAPS
3.	Appointment of Registrar to the Issue, printers, advertising agency, bankers to the Issue and other intermediaries	Lead Managers	SBICAPS
4.	Drafting and approval of all publicity material including statutory advertisement as mentioned above including corporate advertisement, brochure, etc.	Lead Managers	HDFC
5.	Finalising road show marketing presentation, FAQs	Lead Managers	SBICAPS
6.	Institutional Marketing of the Issue which will cover, inter alia: • Formulating overall institutional marketing strategy; • Finalising the list and division of investors for one-on-one meetings, institutional allocation; and • Finalizing road show schedule and investor meeting schedules	Lead Managers	HDFC
7.	Non-institutional marketing of the Issue	Lead Managers	SBICAPS
8.	Coordination with stock exchanges for book building software and submitting security deposit	Lead Managers	HDFC
9.	Finalizing of pricing and allocation in consultation with the Investment Manager	Lead Managers	SBICAPS
10.	Assisting the Investment Manager in ensuring the completion of the formation transactions and the allotment of Units in consideration thereof	Lead Managers	HDFC
11.	Post bidding activities including management of Escrow Account, coordinate non-institutional and institutional allocation, coordination with Registrar and banks, intimation of allocation and dispatch of refund to Bidders, etc. The post Issue activities of the Issue will involve essential follow up steps, which include finalization of basis of allotment, trading and dealing instruments and dispatch of certificates and demat delivery of Units, with the various agencies connected with the work such as Registrar to the Issue, Banker to the Issue and the bank handling refund business. Coordinating with stock exchange(s) for release of security deposit in the manner specified by the stock exchange(s) and by the Board from time to time	Lead Managers	HDFC

Public Offer Account Bank and Sponsor Bank

Kotak Mahindra Bank Limited
Kotak Infiniti, 6th Floor,
Building No. 21, Infinity Park,
Off Western Express Highway,

General AK Vaidya Marg, Malad (East).
Mumbai – 400 097
Tel: +91 22 6605 6603
E-mail: cmsipo@kotak.com
Website: www.kotak.com
SEBI Registration No: INBI00000927

Escrow Collection Bank, Refund Bank and Sponsor Bank

Axis Bank Limited
Axis House, 6th Floor,
C-2, Wadia International Centre,
Pandurang Budhkar Marg,
Worli, Mumbai – 400 025
Tel: +91 83 6920 9690
E-mail: vishal.lade@axisbank.com
Website: www.axisbank.com
SEBI Registration No: INBI00000017

Syndicate Members

SBICAP Securities Limited
Marathon Futurex, Unit No. 1201 B-Wing 12th Floor,
N M Joshi Marg,
Lower Parel East, Mumbai 400 013,
Maharashtra, India
Tel: +91 22 6931 6204
E-mail: archana.dedhia@sbicapsec.com
Contact Person: Archana Dedhia
Website: www.sbisecurities.in
SEBI Registration No: INZ000200032

HDFC Securities Limited
iThink Techno Campus Building-B, "Alpha", Office 8,
Opp. Crompton Greaves, Near Kanjurmarg Station, Kanjurmarg (East),
Mumbai – 400 042,
Maharashtra India
Tel: +91 22 3075 3400
E-mail: customercare@hdfcsec.com
Contact Person: Dipesh Arjun Kale
Website: www.hdfcsec.com
SEBI Registration No: INZ000186937

Legal Counsel to the Trust, the Investment Manager and the Sponsor as to Indian Law

Trilegal
DLF Cyber Park, Tower C
1st Floor, Phase II
Udyog Vihar, Sector 20
Gurugram – 122008
Haryana, India
Tel: +91 124 625 3200

Legal Counsel to the Lead Managers as to Indian Law

Dentons Link Legal
Aiwan-e-Ghalib Complex
Mata Sundri Lane
New Delhi 110 002, India
Tel: +91 11 4651 1000

Legal Counsel to the Lead Managers as to International Law

Dentons US LLP
100 Crescent Court
Suite 900
Dallas, TX 75201-2347
United States

Technical Consultant

Cube Highways Technologies Private Limited
B-376, Upper Ground Floor
Nirman Vihar, New Delhi 110 092
Delhi, East Delhi 110 092, India
Contact Person: Arpan Ghosh
Tel: +91 84475 50164
E-mail: arpan.ghosh@chtech.in
Website: www.chtech.in

Registrar and Unit Transfer Agent

KFin Technologies Private Limited
Selenium, Tower B
Plot No. 31 and 32, Financial District
Nanakramguda, Serilingampally
Hyderabad, Rangareddi 500 032,
Telangana, India
Tel: +91 40 6716 2222
E-mail: nationalinfra.units@kfintech.com
SEBI registration number: INR000000221
Contact person: M Murali Krishna
Website: www.kfintech.com
Investor Grievance E-mail: einward.ris@kfintech.com

Self-Certified Syndicate Banks

The list of SCSBs notified by SEBI for the ASBA process is available at http://www.sebi.gov.in/sebiweb/other/OtherAction.do?doRecognised=yes, or at such other website as may be prescribed by SEBI from time to time. For a list of the SCSB branches named by the respective SCSBs to receive ASBA Forms from the Designated Intermediary, please refer to the above-mentioned link.

Registered Brokers

The list of the Registered Brokers, including details such as postal address, telephone number and e-mail address, is provided on the websites of the Stock Exchanges at https://www.bseindia.com/ and https://www.nseindia.com, as updated from time to time.

Registrar and Unit Transfer Agents

The list of the RTAs eligible to accept ASBA Forms at the Designated RTA Locations, including details such as address, telephone number and e-mail address, is provided on the websites of the Stock Exchanges at https://www.bseindia.com/Static/PublicIssues/RtaDp.aspx and http://www.nseindia.com/products/content/equities/ipos/asba_procedures.htm, respectively, as updated from time to time.

Collecting Depository Participants

The list of the CDPs eligible to accept ASBA Forms at the Designated CDP Locations, including details such as name and contact details, is provided on the websites of the Stock Exchanges at https://www.bseindia.com/Static/PublicIssues/RtaDp.aspx and http://www.nseindia.com/products/content/equities/ipos/asba_procedures.htm, respectively, as updated from time to time.

INFORMATION CONCERNING THE UNITS

Unitholding of the Trust

Particulars	Number of Units
Units issued and outstanding prior to this Offer	[●]^
Units issued and outstanding after this Offer	[●]*

^ *The first Allotment of Units on [●], being [●] Units, has been undertaken to Sponsor pursuant to the Share Purchase Agreements dated December 26, 2024*

* *To be determined on finalization of the Offer Price and updated in the Final Offer Document prior to filing with SEBI and the Stock Exchanges.*

Unitholders holding more than 5% of the Units

Sr. No.	Name of Unit Holders	Pre-Offer*^		Post-Offer*	
		Number of Units	Percentage of holding (%)	Number of Units	Percentage of holding (%)
1.	Gawar Construction Limited	[●]	[●]	[●]	[●]

^ *The first Allotment of Units on [●] , being [●] Units, has been undertaken to Sponsor pursuant to the Share Purchase Agreements dated December 26, 2024*

* *To be determined on finalization of the Offer Price and updated in the Final Offer Document prior to filing with SEBI and the Stock Exchanges and including adjustments for Units transferred by the Sponsor Selling Unitholder pursuant to the Offer for Sale.*

Unitholding of the Sponsor (also acting as Project Manager), Investment Manager and Trustee

Except as mentioned above, there are no Unitholders of the Trust.

Unitholding of the directors of the Investment Manager

As on the date of this Offer Document, none of the directors of the Investment Manager hold any Units or propose to hold any Units.

Sponsor and Sponsor Group lock-in

In terms of the SEBI InvIT Regulations, the Sponsor and Sponsor Group shall hold at least 15% of Units on a post-Offer basis, aggregating up to [●] Units, which shall be locked-in for a period of three years from the date of listing of the Units, provided that the unitholding of the Sponsor and Sponsor Group, exceeding 15% on a post-Offer basis, aggregating up to [●] Units, shall be locked-in for a period of not less than one year from the date of listing of the Units and subject to the conditions specified in the SEBI InvIT Regulations.

Further, the Sponsor and Sponsor Group shall hold at least (a) 5% of Units on a post-Offer basis, from the beginning of the fourth year and till the end of fifth year from the date of listing; (b) 3% of Units on a post-Offer basis, from the beginning of the sixth year and till the end of tenth year from the date of listing; (c) 2% of Units on a post-Offer basis, from the beginning of the eleventh year and till the end of twentieth year from the date of listing; and (d) 1% of our Units on a post-Offer basis after the completion of the twentieth year, from the date of listing.

Anchor Investor lock-in

Any Units Allotted to Anchor Investors in the Offer shall be locked-in for a period of 30 days from the date of Allotment.

Other lock-in requirements

Any pre-Offer unitholding in the Trust held by any unitholders other than the Sponsor will be locked in for a period of one year in accordance with the SEBI InvIT Regulations.

BASIS FOR OFFER PRICE

The Offer Price will be determined by the Investment Manager, in consultation with the Lead Managers, on the basis of assessment of market demand for the Units offered through the Book Building Process and on the basis of quantitative and qualitative factors as described below.

Bidders are requested to also refer to the sections "***Risk Factors***", "***Business***", and "***Special Purpose Combined Financial Statements***" on pages 21, 150 and 227, respectively, to make an informed investment decision.

The Price Band is ₹ [●] to ₹ [●].

Based on the evaluation of the qualitative and quantitative factors listed below, the enterprise value and equity value at the Floor Price and the Cap Price is as follows:

(in ₹ million, other than number of Units)

Particulars	At Floor Price	At Cap Price	At Offer Price
Equity Value (Post Offer)	[●]	[●]	[●]
Total Units Post Offer	[●]	[●]	[●]

Qualitative Factors

We believe that some of the qualitative factors which form the basis for computing the Offer Price are as follows:

- Sizeable portfolio of stable revenue generating assets with no construction risk and long-term cash flows
- Geographically diversified road asset portfolio and revenue base;
- Attractive industry sector with strong underlying fundamentals and favourable government policies;
- Growth opportunities and rights to expand portfolio of assets through acquisition of Sponsor's portfolio and third party projects;
- Strong support from our Sponsor, Project Manager and the Investment Manager;
- Skilled and experienced management team with industry experience with a focus on corporate governance; and
- Consistent track record of the Project Manager in operating and maintaining projects in the infrastructure sector in India.

For further details, see "***Business***" on page 150.

Quantitative Factors

Some of the information presented below is based on the Combined Financial Statements. For details, see "***Special Purpose Combined Financial Statements***" on page 227.

Some of the quantitative factors which may form the basis for computing the Offer Price are as follows:

1. Valuation provided by the Valuer

The Valuer has used the discounted cash flow method to determine the value of the InvIT Assets. The assumptions on which the value of the InvIT Assets is based have been disclosed in the section "***Valuation Report***" attached as Annexure I to this Offer Document. For further details, see the "***Valuation Report***" on page 406.

2. Enterprise Value / Cash flows from operations ratio in relation to Offer Price:

Particulars	Amount (*in ₹ million*)	EV/Cash flow from operations (*in ₹*)		
		At Floor Price	At Cap Price	At Offer Price
Cash flows from operations for the financial year ended 2024	1,116.51*	[●]	[●]	[●]
Projected cash flows from operations for the financial year ending 2025	6,162.25**	[●]	[●]	[●]
Projected cash flows from operations for the financial year ending 2026	6,799.30**	[●]	[●]	[●]
Projected cash flows from operations for the financial year ending 2027	6,575.85**	[●]	[●]	[●]

* *Cash flow from operations for the financial year ended March 31, 2024, in the above table is derived from the Combined Financial Statements.*

** *Derived from the Projections of Revenue from Operations and Cash Flow from Operating Activities prepared by the Investment Manager. For details of the projections and notes thereto, see "**Projections of Revenue from Operations and Cash Flow from Operating Activities**" on page 379. Also see "**Risk Factors**" on page 21.*

3. Price / Net Asset Value per Unit ratio in relation to Offer Price:

Particulars	Amount (*in ₹ million*)	Price / Net Asset Value per Unit ratio		
		At Floor Price	At Cap Price	At Offer Price
Net Asset Value per Unit as of March 31, 2024 (1)	[●]*	[●]	[●]	[●]
Net Asset Value per Unit as of September 30, 2024(2)	[●]*	[●]	[●]	[●]

(1) Net Asset Value per unit has been calculated based on Net Assets at Fair Value as at March 31, 2024 of ₹ 11,782.41 million.

(2) Net Asset Value per unit has been calculated based on Net Assets at Fair Value as at September 30, 2024 of ₹ 12,488.70 million

* *The number of Units that InvIT will issue is not presently ascertainable. Hence, the disclosures in respect of number of Units and Net Asset Value per Unit have not been provided as on date of this Offer Document.*

4. Earning price per Unit

Year/Period ended	Earning price per Unit (*in ₹*)
March 31, 2024	[●]
September 30, 2024	[●]

**The number of Units that InvIT will issue is not presently ascertainable. Hence, the disclosures in respect of number of Units and Net Asset Value per Unit have not been provided as on date of this Offer Document.*

5. Comparison with Industry Peers

Particulars	NAV per Unit (₹)*	Price**	(Premium / Discount) to NAV%***
Indus Infra Trust *(previously Bharat Highways InvIT)*	113.32	113.26	(0.05)
IRB InvIT Fund	97.68	59.55	(38.04)

* *NAV as of September 30, 2024*

** *Calculated as Unit Price as of December 24, 2024, as quoted on NSE.*

*** *(Premium / Discount) to NAV% = ((Price - NAV per Unit (₹)) / NAV per Unit (₹)) - 1*

USE OF PROCEEDS

The Offer comprises a Fresh Issue by Trust and an Offer for Sale by the Sponsor Selling Unitholder.

Offer for Sale

The Sponsor Selling Unitholder will be entitled to the proceeds of the Offer for Sale and the proceeds received from the Offer for Sale will not form part of the Net Proceeds. The Sponsor Selling Unitholders will be entitled to the proceeds from the Offer for Sale after deducting their proportion of Offer related expenses. The Trust will not receive any proceeds from the Offer for Sale.

Fresh Issue

The proceeds of the Fresh Issue will be up to ₹10,770.00 million. The Offer Proceeds will be utilised towards the following objects:

a) Providing loans to the Project SPVs for repayment/pre-payment of external borrowings, in part or in full, from the financial lenders (including any accrued interest and prepayment penalty); and

b) Providing loans to the Project SPVs for repayment of unsecured loans availed by the Project SPVs from the Sponsor.

Net Proceeds

The details of the proceeds from the Offer are summarised in the following table:

Particulars	Estimated Amount (in ₹ million)
Gross proceeds from Fresh Issue	10,770.00
(Less) Offer expenses*	[●]
Net Proceeds	[●]

***** *To be finalized upon determination of Offer Price*

Requirements of Funds

The Net Proceeds are proposed to be utilized in accordance with the details provided in the following table:

Particulars	Estimated Amount (in ₹ million)
Loans to the Project SPVs for repayment/pre-payment of external borrowings, in part or in full, from the financial lenders (including any accrued interest and prepayment penalty)	[●]
Loans to the Project SPVs for repayment of unsecured loans availed by the Project SPVs from the Sponsor	[●]
Total	[●]

The Investment Manager believes that the pre-payment or scheduled repayment of the loans availed by the Project SPVs will (i) help reduce the outstanding indebtedness of the Trust, on a consolidated basis; and (ii) assist the Trust in maintaining a favourable debt-equity ratio, which will enable the Trust to raise further resources in the future to fund potential business development opportunities and plans to grow and expand its business in the future thereby enabling the Trust to meet its commitment towards distributions to Unitholders.

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 fund requirements may vary due to factors beyond the Investment Manager's control, such as market conditions, competitive environment and interest/ exchange rate fluctuations. Consequently, the fund requirements are subject to revisions in the future at the discretion of the Investment Manager. Further, deployment of the Net Proceeds during Financial Year 2025 and Financial Year 2026 depends on factors such as the actual timing of the completion of the Offer and receipt of Net Proceeds. To the extent the Investment Manager is unable to successfully deploy any portion of the Net Proceeds during the remainder of Financial Year 2025 and Financial Year 2026, the Investment Manager shall deploy the Net Proceeds in subsequent Financial Years in accordance with applicable law. In the event of any shortfall of funds for the activities proposed to be financed out of the Net Proceeds as stated above, the Investment Manager may re-allocate the Net Proceeds to the activities where such shortfall has arisen, subject to compliance with applicable law.

Details of Utilization of the Proceeds

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

1. ***Providing loans to the Project SPVs for repayment/pre-payment of external borrowings, in part or in full, from financial lenders (including any accrued interest and prepayment penalty)***

The Trust proposes to utilise an estimated aggregate amount of ₹ [●] million from the Net Proceeds to provide loans to the Project SPVs *(which will be acquired in its entirety post the Offer)* in accordance with the on- lending agreement entered with the Project SPVs. The Project SPVs will utilize the funds raised through such loans towards pre-payment or repayment, in part or full, of certain borrowings availed from financial lenders. Further, the loans availed by the Project SPVs have been utilized for the purpose for which they were availed. The following table provides details of certain borrowings availed by the Project SPVs out of which any or all of the loans may be pre-paid from Net Proceeds, without any obligation to any financial lender:

S. No.	Name of the SPV	Name of the Financial Lenders	Date of sanction of the loan	Purpose for which the loan was availed	Amount sanctioned (₹ in million)	Rate of interest (%)	Outstanding borrowings as on September 30, 2024*	Amount to be utilized towards the repayment of loan by the SPVs to each of its financial creditors[(1)]
1.	GRJHPL	HDFC Bank Ltd.	December 18, 2020	Construction of Road	2,560.00	Repo Rate + Spread 1.70 i.e. 8.20%	1,884.16	[●]
2.	GKBHPL	Axis Bank	December 23, 2021	Construction of Road	2,355.00	8%	1,828.25	[●]
3.	GNHPL	Axis Bank	December 23, 2021	Construction of Road	3,650.00	8%	3,014.37	[●]
4.	GRSHPL	Bank of Baroda	March 21, 2024	Construction of Road	1,543.90	Overnight MCLR i.e. 8.15%	1,490.19	[●]
5.	GRSHPL	HDFC Bank Ltd	August 28, 2019	Construction of Road	3,990.00	Repo Rate + Spread 1.70 i.e. 8.20%	1,498.83	[●]
6.	HHHPL	HDFC Bank Ltd	July 14, 2022	Construction of Road	4,715.00	Repo Rate + Spread 1.65 i.e. 8.15%	3,099.54	[●]
7.	HHHPL	Indian Bank	September 2, 2024	Construction of Road	2,357.50	Overnight MCLR+0.20% i.e. 8.45%	1,250.00	[●]
8.	GKNHPL	Standard Chartered Bank	April 14, 2021	Construction of Road	6,750.00	1 Year MCLR + Reference Spread i.e 8.50%	2,124.30	[●]
9.	GKNHPL	Indian Bank	June 28, 2024	Construction of Road	4,314.40	1M MCLR+0.10% i.e. 8.55%	4,248.51	[●]
10.	DUHPL	Central Bank of India	October 22, 2021	Construction of Road	402.00	1 m MCLR + Spread i.e. 8.35%	389.93	[●]

S. No.	Name of the SPV	Name of the Financial Lenders	Date of sanction of the loan	Purpose for which the loan was availed	Amount sanctioned (₹ in million)	Rate of interest (%)	Outstanding borrowings as on September 30, 2024*	Amount to be utilized towards the repayment of loan by the SPVs to each of its financial creditors[(1)]
11.	DUHPL	Kotak Bank	April 15, 2021	Construction of Road	950.40	SBI 3M MCLR + Spread 0.05% i.e. 8.55%	905.73	[●]
12.	DUHPL	Punjab and Sindh Bank	October 26, 2022	Construction of Road	1,000.00	Overnight MCLR + Spread 0.25% i.e. 8.35%	905.39	[●]
13.	GBHPL	Axis Bank Limited	February 15, 2023 (as amended on April 18, 2023)	Construction of Road	5,289.10	1 Year MCLR + Nil spread, i.e. 9.30%	2,034.32	[●]
14.	GBHPL	Federal Bank	August 21, 2023	Construction of Road	1,300.00	3m MCLR + Nil Spread	1,049.00	[●]
15.	GBHPL	ICICI Bank	June 03, 2023	Construction of Road	1,500.00	1Y MCLR + Spread 0.10% i.e 9.30%	1,220.65	[●]
16.	GNHPL II	Yes Bank Ltd	July 19, 2023	Construction of Road	2,763.00	9.01% p.a floating linked to 3 m T Bill + Spread	1,943.41	[●]

**Excluding Transaction Cost. Transaction Cost is defined as the advance processing fees paid upfront at the time of sanction of loan, which is amortized over the tenure of loan and is reduced in financial statements as per IND AS.*

[(1)] *The Trust will finalise the details of repayment of loans to lenders upon completion of listing of the Units of the Trust.*

For further details for principal terms of the borrowings (secured term loans) availed by the Project SPVs refer to the section titled "***Financial Indebtedness and deferred payments - Principal terms of the borrowings (secured term loans) availed by the Project SPVs***" on page 322.

2. ***Providing loans to the Project SPVs for repayment of unsecured loans availed by the Project SPVs from the Sponsor***

The Trust proposes to utilise an estimated aggregate amount of ₹ [●] million from the Net Proceeds to provide loans to the Project SPVs in accordance with the On-Lending Agreement to be entered with the Project SPVs to repay unsecured loans availed by the Project SPVs from the Sponsor. The Trust will utilize the funds raised through such loans towards pre-payment or repayment of the borrowings availed from the Sponsor. The following table provides details of borrowings availed by the Project SPVs that will be repaid/ pre-paid from Net Proceeds:

S. No.	Name of the SPV	Name of the Financial Lender	Date of sanction of the loan	Purpose for which the loan was availed	Amount sanctioned (₹ in million)*	Rate of interest (%)	Repayment charges	Pre-payment charges	Amount outstanding as on September 30, 2024	Amount to be utilized towards the repayment of loan by the SPVs to the Sponsor (₹ in million)
1.	GRJHPL	Gawar Construction Limited	July10, 2020	Construction of Road	560.00	12%	The repayment up to commercial operations date may be made from the funds as and when available with the Project SPVs.	Nil	56.00	56.00
2.	GKBHPL	Gawar Construction Limited	January 20, 2021	Construction of Road	170	12%	The repayment up to commercial operations date may be made from the funds as and when available with the Project SPVs.	Nil	-	-
3.	GNHPL	Gawar Construction Limited	July 25, 2019 (as amended on January 09, 2021)	Construction of Road	604.20	12%	The repayment up to commercial operations date may be made from the funds as and when available with the Project SPVs.	Nil	-	-
4.	GRSHPL	Gawar Construction Limited	January 29, 2022	Construction of Road	600.00	12%	The repayment up to commercial operations date may be made from the funds as and when available with the Project SPVs.	Nil	-	-
5.	HHHPL	Gawar Construction Limited	March 05, 2021	Construction of Road	720.00	12%	The repayment up to commercial operations date may be made from	Nil	76.71	76.71

S. No.	Name of the SPV	Name of the Financial Lender	Date of sanction of the loan	Purpose for which the loan was availed	Amount sanctioned (₹ in million)*	Rate of interest (%)	Repayment charges	Pre-payment charges	Amount outstanding as on September 30, 2024	Amount to be utilized towards the repayment of loan by the SPVs to the Sponsor (₹ in million)
							the funds as and when available with the Project SPVs.			
6.	GKNHPL	Gawar Construction Limited	June 07, 2023	Construction of Road	1,610.00	12%	The repayment up to commercial operations date may be made from the funds as and when available with the Project SPVs.	Nil	1,978.64	1,978.64
7.	DUHPL	Gawar Construction Limited	May 04, 2021 (As amended on July 05, 2023)	Construction of Road	470.00	12%	The repayment up to commercial operations date may be made from the funds as and when available with the Project SPVs.	Nil	522.90	522.90
8.	GBHPL	Gawar Construction Limited	March 20, 2023	Construction of Road	1,024.70	12%	The repayment up to commercial operations date may be made from the funds as and when available with the Project SPVs.	Nil	1,268.78	1,268.78
9.	GNHPL II	Gawar Construction Limited	July 14, 2023	Construction of Road	1,000	12%	The repayment up to commercial operations date may be made from the funds as and when available with the Project SPVs.	Nil	968.97	968.97

*****As per the intercompany term sheet to SPV, the loan may be increased/reduced as may be mutually agreed between the parties to meet the project requirement from time to time.*

Indicative terms of the Trust funding

The Investment Manager, acting on behalf of the Trust, proposes to provide unsecured rupee term loans of an estimated amount of ₹ [●] million from the Net Proceeds to the Project SPVs (the "**Trust Loans**"), which shall be utilised by the Project SPVs, in accordance with the indicative terms set out below.

The below mentioned terms of the agreements to be entered between the Trust and the Project SPVs in relation to the Trust Loans, have been approved by the board of directors of the Investment Manager on August 20, 2024 and the Trust will enter into such agreement with each of the Project SPVs post receipt of listing and trading approval from the Stock Exchanges ("**On-Lending Agreement**").

Term	Description
Purpose	The Trust Loan to be provided to the relevant Project SPV will be utilized for repayment/prepayment of senior debt of the Project SPVs (including any loans availed from the Sponsor) and general corporate purposes only.
Interest	[●] % per annum Interest at the rate specified by the Trust, which may be reset at its discretion. Upon such reset, the Trust will intimate the reset interest rate to the Project SPVs and the Project SPVs shall thereafter be liable to pay interest on the facility at the reset interest rate, which shall become the interest rate on and from the date from which interest has been reset.
Tenure and Repayment	The Project SPVs will repay the principal amount of the facility to the Trust on such dates as agreed in the On-Lending Agreement and in such amounts as instructed by the Trust.
Events of default	The occurrence of the certain events, after the expiry of the cure period (if any) shall result in an event of default under the On-lending Agreement, including, among others, (i) the failure of the pay any amount under the On-lending Agreement when the same becomes due and payable, (ii) insolvency of the Project SPV, (iii) breach of representation or warranty or any covenant or undertaking by the Project SPV, (iv) any change in ownership, control, shareholding of the Project SPV without the prior written approval of the Trust (v) any event of default under the Concession Agreement and the Project SPVs failure to cure such event of default, (vi) failure of the Project SPV to obtain or maintain a minimum credit rating of A from a credit rating agency.
Termination	The On-lending Agreement shall remain in force until the earlier of: (a) the Final Settlement Date; and (b) the expiry or termination of the Concession Agreement, ("**Term**").
Governing Law	The On-lending Agreement shall be governed by in accordance with Indian law.

Offer expenses

The total expenses of the Offer are estimated to be approximately ₹[●] million. The Offer expenses consist of fee and commissions payable to the Lead Managers, fee payable to legal counsel, fee payable to Escrow Collection Bank and Registrar to the Offer, printing and stationery expenses, and all other incidental and miscellaneous expenses for listing the Units on the Stock Exchanges. All Offer expenses shall be borne by the Trust in accordance with applicable law and the expenses incurred by the Sponsor or the Investment Manager (on behalf of the Trust) shall be reimbursed by the Trust. The break-up for the Offer expenses is as follows:

(In ₹ million)

Activity	Estimated expenses*	As a % of the total estimated Offer expenses*	As a % of the total Offer Size*
Fee and commission to advisors to this Offer	[●]	[●]	[●]
Fee payable to others	[●]	[●]	[●]
Total estimated Offer expenses	[●]	[●]	[●]

* *To be determined upon finalization of the Offer Price and updated in the Final Offer Document prior to filing with SEBI and the Stock Exchanges.*

In the event the actual Offer expenses differ from the estimated Offer expenses, the Investment Manager will have the flexibility to utilize such a difference, subject to applicable law.

Selling Commissions

Selling commission payable to the SCSBs on the portion for Non-Institutional Bidders which are directly procured and uploaded by the SCSBs, would be as follows:

Portion for Non-Institutional Bidders	0.50% of the Amount Allotted* (plus applicable taxes)

* *Amount Allotted is the product of the number of Units Allotted and the Offer Price. Selling commission payable to the SCSBs will be determined on the basis of the bidding terminal ID as captured in the Bid Book of BSE or NSE. No processing fees shall be payable by to the SCSBs on the applications directly procured by them.*

Processing fees payable to the SCSBs on the portion for Bidders (excluding UPI Bids) which are procured by the members of the Syndicate/sub-Syndicate/Registered Broker/RTAs/ CDPs and submitted to SCSB for blocking, would be as follows:

Portion for Bidders	₹ 10/- per valid Application (plus applicable taxes)

Selling commission payable on the portion for Non-Institutional Bidders which are procured by members of the Syndicate (including their sub-Syndicate Members), RTAs and CDPs or including by using UPI Mechanism or using 3-in-1 type accounts-linked online trading, demat & bank account provided by some of the brokers which are members of Syndicate (including their sub-Syndicate Members) would be as follows:

Portion for Non-Institutional Bidders	0.50% of the Amount Allotted* (plus applicable taxes)

**Amount Allotted is the product of the number of Units Allotted and the Offer Price*.

The selling commission payable to the Syndicate / sub-Syndicate Members will be determined on the basis of the application form number / series, provided that the application is also bid by the respective Syndicate / sub-Syndicate Member. For clarification, if a Syndicate ASBA application on the application form number / series of a Syndicate / sub-Syndicate Member, is bid by an SCSB, the selling commission will be payable to the SCSB and not the Syndicate / Sub-Syndicate Member.

- Uploading Charges payable to Members of the Syndicate (including their sub-Syndicate Members), RTAs and CDPs on the applications made by Bidders using 3-in-1 accounts/ Syndicate ASBA mechanism which are procured by them and submitted to SCSB for blocking would be ₹ 10 plus applicable taxes, per valid application bid by the Syndicate (including their sub-Syndicate embers), RTAs and CDPs.

The selling commission and bidding charges payable to Registered Brokers, the RTAs and CDPs will be determined on the basis of the bidding terminal ID as captured in the bid book of BSE or NSE.

- Selling commission / uploading charges payable to the Registered Brokers on the portion for Non-Institutional Bidders which are directly procured by the Registered Brokers and submitted to SCSBs for processing, would be as follows:

Portion for Non-Institutional Bidders	₹ 10 per valid Application (plus applicable taxes)

- Uploading charges/ processing fees for applications made by individual Non-Institutional Bidders Bidding for a Bid Amount of ₹0.50 million or less using the UPI Mechanism would be as under:

Members of the Syndicate / RTAs / CDPs /Registered Brokers (uploading charges)	₹ 30 per valid application (plus applicable taxes)
Axis Bank Limited (sponsor bank 1)	₹ Nil per valid Application Form (plus applicable taxes) Axis Bank Limited will also be entitled to a one time escrow management fee of ₹ Nil (plus applicable taxes). The Sponsor Bank shall be responsible for making payments to the third parties such as remitter bank, NPCI and such other parties as required in connection with the performance of its duties under the SEBI circulars, the Syndicate Agreement and other applicable laws.
Kotak Mahindra Bank Limited (sponsor bank 2)	₹ Nil per valid Application Form (plus applicable taxes) Kotak Mahindra Bank Limited will also be entitled to a one time escrow management fee of ₹ Nil (plus applicable taxes). The Sponsor Bank shall be responsible for making payments to the third parties such as remitter bank, NPCI and such other parties as required in connection with the performance of its duties under the SEBI circulars, the Syndicate Agreement and other applicable laws.

The total uploading charges / processing fees payable to members of the Syndicate, RTAs, CDPs, Registered Brokers will be subject to a maximum cap of ₹5.00 million (plus applicable taxes). In case the total uploading charges/processing fees payable exceeds ₹5.00 million, then the amount payable to members of the Syndicate, RTAs, CDPs, Registered Brokers would be proportionately distributed based on the number of valid applications such that the total uploading charges / processing fees payable does not exceed ₹5.00 million.

All such commissions and processing fees set out above shall be paid as per the timelines in terms of the Syndicate Agreement and Cash Escrow and Sponsor Bank Agreement.

The processing fee for applications made by UPI Bidders using the UPI mechanism may be released to the remitter banks (SCSBs) only after such banks provide a written confirmation on compliance with SEBI circular no. SEBI/HO/DDHS/DDHS_Div3/P/CIR/2022/086 dated June 24, 2022.

STATEMENT OF POSSIBLE TAX BENEFITS

STATEMENT OF POSSIBLE TAX BENEFITS AVAILABLE TO NATIONAL INFRASTRUCTURE TRUST AND ITS UNITHOLDERS UNDER THE APPLICABLE LAWS IN INDIA

To,

The Board of Directors
Gawar Investment Manager Private Limited
(As the Investment Manager of National Infrastructure Trust)
SAS Tower, Tower B, 14th Floor, Sector 38
Gurugram – 122 001, Haryana.

Dear Sirs,

Sub: Statement of possible tax benefits available to National Infrastructure Trust and its unitholders under the Indian direct tax laws.

We hereby confirm that the enclosed Annexure, prepared by Gawar Investment Manager Private Limited (the "**Investment Manager**") states the possible tax benefits available to National Infrastructure Trust (the "**Trust**") and its unitholders under the Income-tax Act, 1961 ("**the Act")** as amended by the Finance Act, 2024 read with the Income tax Rules, 1962, i.e. applicable for the Financial Year 2024-25 relevant to the assessment year 2025- 26 (referred to as "**the Direct Tax Law")**. Several of these benefits are dependent on the Trust or its unitholders fulfilling the conditions prescribed under the relevant provisions of the Direct Tax Law. Hence, the ability of the Trust and/or its unitholders to derive the tax benefits is dependent upon their fulfilling such conditions, which based on the business imperatives the Trust faces in the future, the Trust or its unitholders may or may not choose to fulfil.

The benefits discussed in the enclosed Annexure are not exhaustive and the preparation of the contents stated in the Annexure is the responsibility of the Investment Manager. We are informed that this statement is only intended to provide general information to the investors and is neither designed nor intended to be a substitute for professional tax advice. In view of the individual nature of the tax consequences and the changing Direct Tax Laws, each investor is advised to consult his or her own tax consultant with respect to the specific tax implications arising out of their participation in the proposed issue of unit through Initial Public issue by the Trust in accordance with the provisions of SEBI (Infrastructure Investment Trusts) Regulations, 2014, as amended and the guidelines and circulars issued thereunder (the "**Offering**"). We are neither suggesting nor advising the investors to invest in the Offering relying on this statement.

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

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

We assume no obligation to update the Annexure on any events subsequent to this date, which may have a material effect on the discussions herein.

The contents of the enclosed Annexure are based on information, explanations and representations obtained from the Trust and the Investment Manager and on the basis of our understanding of the business activities and operations of the Trust.

This statement is prepared solely for the purpose of inclusion in the Draft Offer Document/Offer Document/Final Offer Document in connection with the Offering, and is not to be used, referred to or distributed for any other purpose.

For M/s H K Dua & Co.
Chartered Accountants
Firm Registration No: 000581N

Place of Signature: Delhi
Date: 24/08/2024

Vikram Dheerwas
Designation: Partner
Membership No.: 422199
UDIN: 24422199BKBOBO2914

ANNEXURE TO POSSIBLE TAX BENEFITS AVAILABLE TO NATIONAL INFRASTRUCTURE TRUST AND ITS UNITHOLDERS UNDER THE APPLICABLE LAWS IN INDIA

The information provided below 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 purchase, ownership and disposal of equity shares or units, under the tax laws presently in force in India. It is not exhaustive or comprehensive analysis and is not intended to be a substitute for professional tax advice.

Unitholders should consult their own tax advisors concerning the India tax implications and consequences of purchasing, owning and disposing of units, including tax implication on any distribution by/receipts from National Infrastructure Trust, in their particular situation.

The Income-tax Act, 1961 ("**Act**") has set-out a special regime for taxation of income arising to the Trust and its unitholders under Chapter XII FA of the Act.

We have summarised below relevant income-tax provisions as applicable to the Trust and its unitholders, under the Act. The income tax provisions listed below are applicable to the Trust and its unitholders subject to compliance with the applicable provisions and/or the conditions laid out in the Act and the regulations as prescribed under the Securities and Exchange Board of India (Infrastructure Investment Trusts) Regulations, 2014, made under the Securities and Exchange Board of India Act, 1992 (15 of 1992) ("**InvIT Regulations**").

1. Tax provisions applicable to the Trust

1.1. Definition of business trust under the Act

A 'business trust' is defined under section 2(13A) of the Act to mean a trust registered as an infrastructure investment trust ("**InvIT**") under the SEBI InvIT Regulations or a Real Estate Investment Trusts (REIT) under the SEBI REIT Regulations.

1.2. Taxability of the Trust

1.2.1. Income received from the Special Purpose Vehicle(s) ("SPVs")

a. Interest and Dividend (other than dividend in the nature of buy-back proceeds)

Interest and dividend received or receivable by the Trust from the SPV Group (being domestic Indian companies) shall be exempt from tax in case of receipt from special purpose vehicle as defined under section 10(23FC) of the Act. In this regard, the expression "special purpose vehicle" (SPV) as per explanation to section 10(23FC) means 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 regulations under which such trust is granted registration.

Further, in view of the provisions of section 14A of the Act, any expenditure incurred in relation to earning the above exempt income shall not be tax deductible. In view of the same, expenses which have been incurred by the Trust to earn interest and dividend income (exempt under section 10(23FC) of the Act) shall not be allowed as deduction. In case, the Tax Authorities are not satisfied by the amount of disallowance computed by the Trust under section 14A of the Act, the tax authorities shall compute the amount to be disallowed in accordance with the provisions of section 14A of the Act read with Rule 8D of the Income-tax Rules, 1962 ("**the Rules**").

As per section 57 of the Act, no deduction shall be allowable against the dividend income (which is taxable in the hands of the Trust) other than deduction on account of interest expense incurred wholly and exclusively for the purpose of earning such dividend and such interest expense shall not exceed 20% of the dividend income included in the total income for that year, without deduction under section 57 of the Act.

In addition, section 193 and section 194A(3)(xi) of the Act do not require a SPV to deduct tax at source ("**TDS**") in respect of interest paid or payable to the Trust. Further, second proviso to section 194 of the Act provides that no TDS is required to be deducted by a SPV in respect of dividend paid to the Trust.

b. Income from buy-back of share

Buy-back of shares before 1 October 2024 (Finance Act, 2024 (No. 2)

As per section 115QA of the Act, domestic companies are required to pay additional tax at the rate of 20%$^{++1}$ of

the distributed income on buy-back of shares ("**Buyback Distribution Tax**"). Distributed income means the consideration paid by the domestic company on buy back of shares as reduced by the amount received by the company for the issue of such shares, determined as per Rule 40BB of the Rules.

Further, as per the provisions of section 10(34A) of the Act, any income arising from buy- back of shares on which Buyback Distribution Tax has been paid shall not be taxable in the hands of the shareholders. Accordingly, in case income arises in hands of the Trust from buy-back of shares undertaken by the SPV then such income shall be exempt in the hands of the Trust.

Also, in view of the provisions of section 14A of the Act, any expenditure incurred in relation to earning the above exempt income shall not be tax deductible in the hands of the trust. In view of the same, expenses which have been incurred by the Trust to earn the exempt income shall not be allowed as deduction. In case, the Tax Authorities are not satisfied by the amount of disallowance computed by the Trust under section 14A of the Act, the tax authorities shall compute the amount to be disallowed in accordance with the provisions of section 14A of the Act read with Rule 8D of the Rules.

The above provisions will not be applicable in respect of buy back of shares by domestic companies, that takes place on or after 1 October 2024

Buy back of shares on or after 1 October (Finance (No. 2)Act, 2024 (No. 2)

It must be noted that Buyback Distribution Tax is done away with by Finance (No. 2) Act, 2024. Accordingly, above-mentioned provisions of section 115QA of the Act shall not apply with effect from 1 October 2024. As per the amendments brought in by Finance (No. 2) Act, 2024 proceeds from buy-back shall be taxable as dividend in the hands of Shareholders under newly inserted clause (f) of sub-section (22) under section 2 of the Act, and consequently exemption provided under section 10(34) of the Act has been withdrawn.

Further, Finance (No. 2) Act, 2024 provides that the sales consideration received for the shares bought back shall be considered as Nil, as per proviso to section 46A of the Act, while the cost of acquisition of the shares (price at which the shares were acquired) should be regarded as capital loss in the hands of Shareholder. Where shares of domestic company is held by the Shareholder for 24 months or less, such loss shall be short-term capital loss. Where shares are held for more than 24 months, such loss shall be in the nature of long-term capital loss.

Section 70 read with section 74 of the Act allows short-term capital loss arising during a financial year to be set off against income, if any, from capital gains (short-term or long-term), arising in the same financial year. However, long-term capital loss arising during a financial year is allowed to be set-off only against long-term capital gains. Balance loss, if any, is allowed to be carried forward and set-off against income from capital gains, arising during subsequent eight assessment years, as follows: (i) balance short-term capital loss can be carried forward and set-off against capital gains (short-term or long-term); and (ii) balance long-term capital loss can be carried forward and set-off only against long-term capital gains.

Further, as per Section 71 of the Act, short term/ long term capital loss for the year cannot be set-off against income under any other head other than capital gains for the same year.

Additionally, Finance Act (No. 2), 2024 provides that no deduction under section 57 of the Act shall be allowed to the Shareholder in respect of amount received in lieu of shares bought back and taxed as dividend in the hands of Shareholders.

In absence of any clarity by the CBDT with respect to treatment of such dividend in case of Trust, taxability of such dividend in the hands of Trust should be in a similar manner, as in the case of normal dividend as discussed in Point 'a' above. Trust will incur a capital loss (to the extent of cost of acquisition of shares) in the year of buy back which will be eligible for carry forward and set off against future capital gains in accordance with provisions of section 70 read with section 74 of the Act, as discussed above.

1.2.2. Income other than the income distributed by the SPVs

a. Income by way of dividend/interest/ any other income (such as treasury income)

Dividend/interest income received by the Trust from listed securities, liquid funds, etc. or treasury income etc. shall be subject to tax at maximum marginal rate in force ("**MMR**") as per section 115UA of the Act. MMR is defined under the provisions of the Act to mean the rate of income-tax (including surcharge on income-tax, if any) applicable in relation to the highest slab of income as per the relevant Finance Act as increased by cess.

As per proviso to section 57 of the Act, no deduction shall be allowable against dividend income other than deduction on account of interest expense and such interest expense shall not exceed 20% of the gross dividend income included in the total income for that year, without deduction under section 57 of the Act.

b. Income by way of capital gains

In terms of section 115UA(2) of the Act, the total taxable income of the Trust shall be chargeable to tax at MMR except for income arising on transfer of short-term capital assets and long-term capital assets[2] under section 111A and section 112 of the Act.

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 a business trust, transacted through a recognized stock exchange and subject to STT, should be taxable at a rate of 20%[++]. However, the condition of subject to STT is not applicable if the transaction is undertaken on a recognized stock exchange located in any International Financial Services Centre ("**IFSC**") and where the consideration for such transaction is received or receivable in foreign currency.

Short-term capital gains arising from transfer of short-term capital asset other than the shares and securities covered under section 111A of the Act, will be taxed at MMR.

As per the provisions of section 112 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 12.50%[++].

Section 48 of the Act prescribes the mode of computation of capital gains and provides for deduction of cost of acquisition/ improvement and expenses incurred in connection with the transfer of a capital asset, from the sale consideration to arrive at the amount of capital gains. In respect of long-term capital gains, taxable under section 112 of the Act, section 48 of the Act provides for substitution of cost of acquisition/improvement with indexed cost of acquisition/improvement, which adjusts the cost of acquisition/improvement by a cost inflation index as prescribed from time to time. Such adjustment of cost of acquisition/improvement by a cost inflation index has been removed *vide* the Finance (No. 2) Act, 2024.

Further, as per section 112A, gains exceeding one lakh and twenty five thousand rupees arising on the transfer of long term capital asset, being an equity share in a company or a unit of an equity oriented fund or a unit of a business trust, transacted through a recognized stock exchange and subject to STT, shall be chargeable to tax in the hands of the business trust at the rate of 12.50% (plus applicable surcharge and cess) without applying the benefit under the first proviso to section 48 of the Act. Since specific carve out has not been provided under the provisions of section 115UA of the Act for section 112A of the Act, long term capital gains on account of sale of listed securities which is taxable @ 12.50% under section 112A (subject to certain conditions) of the Act may be taxable at MMR in the hands of business trust.

[1++] *excluding applicable surcharge and cess*

[2] *As per section 2(42A), a short-term capital asset means: (i) for unlisted shares – period of holding is less than or equal to 24 months; (ii) for unlisted bonds/debentures-– always deemed to be short-term capital asset as per amendment in Finance Act, 2024 (No. 2) (iii) Immovable property being land and/or building - period of holding is less than or equal to 24 months; (iv) listed equity shares or units of an equity-oriented fund or units of business trust – period of holding less than or equal to 12 months. As per section 2(29A), a capital asset which is not a short-term capital asset is regarded as a long- term capital asset.*

As per section 50CA of the Act, where the consideration on transfer of unquoted shares of a company, is less than the fair market value of such share determined in such manner as may be prescribed, the value so determined shall for the purpose of section 48 of the Act, be deemed to the full value of consideration.

Section 70 read with section 74 of the Act allows short-term capital loss arising during a financial year to be set off against income, if any, from capital gains (short-term or long- term), arising in the same financial year. However, long-term capital loss arising during a financial year is allowed to be set-off only against long-term capital gains. Balance loss, if any, is allowed to be carried forward and set-off against income from capital gains, arising during subsequent eight assessment years, as follows: (i) balance short-term capital loss can be carried forward and set-off against capital gains (short-term or long-term); and (ii) balance long-term capital loss can be carried forward and set-off only against long-term capital gains.

Further, as per Section 71 of the Act, short term/ long term capital loss for the year cannot be set-off against income under any other head other than capital gains for the same year.

2. Taxability of unitholders

2.1. Income by way of dividend and interest

a. As per the provisions of section 115UA(1) of the Act, the income distributed by the Trust is taxable in the hands of the unitholders in the same manner and in the same proportion as the underlying income received by or accrued to the Trust. Therefore, income taxable in the hands of unit holders shall be taxed in the same manner and nature as it would have been taxed in the hands of Trust.

b. As per the provisions of section 10(23FD), any income referred to in section 115UA(1) of the Act and distributed by the Trust shall not be included in the total income of the unitholders, except for the following income:

   (i) Interest income from SPV [referred to in section 10(23FC)(a)];
   (ii) Dividend Income from SPV [referred to in section 10(23FC)(b)], i.e., if the SPV has opted for concessional tax regime under section 115BAA[3];

   The above income would be taxable in the hands of the unitholders under section 115UA(3) of the Act at the rates applicable to the respective unitholders.

c. As per section 115A(1)(iiac) of the Act read with section 194LBA of the Act, income in the nature of interest referred to in section 10(23FC)(a) shall be taxable at the rate of 5%[++] in the hands of a non-resident. Such interest would be taxable in the hands of resident unitholders at the applicable tax rates.

d. In view of the provisions of section 14A of the Act, any expenditure incurred in relation to earning the above exempt income shall not be tax deductible. In case, the Tax Authorities are not satisfied by the amount of disallowance computed by the unit holders under section 14A of the Act, the tax authorities shall compute the amount to be disallowed in accordance with the provisions of section 14A of the Act read with Rule 8D of the Rules.

e. Deductions from income in the hands of unitholders

   A domestic company is allowed deduction of dividend income received by it from another domestic company or the Trust subject to certain conditions. Therefore, if the unitholder is a domestic company, it should be able to claim the deduction under section 80M where the prescribed conditions mentioned under section 80M have been complied with.

   Further, as per proviso to section 57 of the Act, no deduction shall be allowable against the dividend income other than deduction on account of interest expense and such interest expense shall not exceed 20% of the gross dividend income for that year, without deduction under section 57 of the Act. Further, where dividend income is in the nature of the shares bought back, no expense shall be allowed as deduction against such dividend income.

2.2. Distribution of specified sum

a. The Finance Act, 2023 has amended section 56(2) of the Act to add a new clause (xii) which provides the taxability of any specified sum received by unitholders from the Trust in respect of units held by him at any time during the year.

b. Computation of "specified sum" shall be the result of 'A-B-C' where:
'A' = Cumulative distribution made by trust till date excluding the amount distributed in the nature of dividend, interest or rental income or any amount taxed/taxable in the hands the Trust
'B' = Issue price of such units
'C' = Amount charged to tax under this provision in earlier years

Specified sum shall be deemed to be zero if 'A-B-C' results in negative value.

2.3. Other income (income other than interest or dividend income or income chargeable to tax under section 56(2)(xii) of the Act) received from Trust

Other income (income other than interest or dividend income or income chargeable to tax under section 56(2)(xii) of the Act) such as treasury income earned by Trust and distributed to unitholder shall be exempt in hands of unitholders under section 10(23FD) of the Act as the same shall be taxable in the hands of Trust. Further, there shall be no withholding on distribution of such other income by the Trust to the unitholders.

2.4. Income by way of capital gains

2.4.1. For resident and non-resident unitholders (other than Foreign Portfolio Investors ("**FPIs**") / Foreign Institutional Investors ("**FIIs**")

a. For the purpose of computation of capital gains on sale of units of Trust, consideration received on sale of units of Trust shall be reduced by cost of acquisition of such units and expenditure incurred wholly and exclusively in connection with such sale.

b. As per the amendments made by Finance Act 2023, the amount of distribution to the extent not chargeable to tax u/s 56(2)(xii) of the Act and not covered u/s 10(23FC), 10(23FCA) or 115UA(2) of the Act, shall be reduced from the cost of units, for the purpose of computation of capital gains.

c. Investors are advised to consult their tax advisor for computation of capital gains including cost of acquisition of units as per Indian tax laws in each case.

d. Where the gains arising on the transfer of units of the Trust by the unitholder are included in the business income of an assessee assessable under the head 'Profits and Gains from Business or Profession' and on which STT has been charged, such STT 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 sale of units, as capital gains or business income would depend on the nature of holding in the hands of the unitholder and various other factors.

e. Where the gains on transfer of the units of the Trust are characterized as capital gains, and if such units are long-term capital assets[4] and such transaction is chargeable to STT, income arising on transfer of units of the Trust (over and above INR 0.125 million) will be taxable at a tax rate of 12.50%[++] subject to conditions as per section 112A. However, the condition of transaction being chargeable to STT is not required if the transaction is undertaken on a recognised stock exchange located in IFSC and where the consideration for such transaction is received or receivable in foreign currency. Further, in case of long- term capital gain on transfer of units of the Trust, which are not subject to STT, shall be taxable in the hands of the unitholders at the tax rate of 12.50%[++] under section 112 of the Act.

[3] *Subject to fulfilment / compliance with certain conditions, SPV have an option to choose a concessional tax rate of 22 percent (plus applicable surcharge cess) under section 115BAA of the Act. In case, SPV has exercised the option under section 115BAA of the Act, any dividend distributed by the Trust out of the dividend paid by such SPV shall be taxable in the hands of unitholder at applicable tax rate for resident unitholders and at the rate of 20% (plus applicable surcharge and cess) for non-resident unitholders as per section 115A of the Act. In other cases, the dividend distributed by Trust out of the dividend paid by SPV which has not exercised the option under section 115BAA of the Act, shall be exempt in the hands of unitholders under section 10(23FD) of the Act.*

Where the gains on transfer of the units of the Trust are characterized as capital gains, and if such units are long-term capital assets[4] and such transaction is chargeable to STT, income arising on transfer of units of the Trust (over and above INR 0.125 million) will be taxable at a tax rate of 12.50%[++] subject to conditions as per section 112A. However, the condition of transaction being chargeable to STT is not required if the transaction is undertaken on a recognised stock exchange located in IFSC and where the consideration for such transaction is received or receivable in foreign currency. Further, in case of long- term capital gain on transfer of units of the Trust, which are not subject to STT, shall be taxable in the hands of the unitholders at the tax rate of 12.50%[++] under section 112 of the Act.

f. Short-term capital gains arising on transfer of the units of the Trust will be chargeable to tax at the rate of 20%[++] as per the provisions of section 111A of the Act, provided such transaction is subject to STT. The condition of STT is not required to be followed if the transaction is undertaken on a recognised stock exchange located in IFSC and where the consideration for such transaction is received or receivable in foreign currency.

g. 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. Short-term capital gains on transfer of units of the business trust, not transacted through a recognized stock exchange and not subject to STT shall be taxable at the applicable rate of tax for respective unitholders.

h. In case of a unitholder being a resident individual or HUF, where the total taxable income as reduced by long-term capital gains taxable is below the basic exemption limit, such 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 sub-section (1) of section 112 and proviso to sub-section (2) of section 112A of the Act.

i. In case of determining the period of holding for units allotted pursuant to exchange of shares of special purpose vehicle, as per clause (hc) of explanation 1 to section 2(42A), the period of holding for the units shall include the period for which the shares were held by the promoter in the SPV.

j. In case of unitholder, being a domestic company that are liable to pay MAT under provisions of section 115JB of the Act, the gains arising, if any, on sale of units of the Trust are to be included as part of book profits for the purposes of computing MAT lability. MAT paid by such companies should be available as credit for set off against future tax liability, provided such companies do not opt to be governed by the concessional tax rate under section 115BAA of the Act.

k. In case of unitholders, other than companies, that are liable to Alternate Minimum Tax (AMT) under provisions of Section 115JC of the Act, the gains arising, if any, on sale of units of InvIT are to be included as part of adjusted total income for the purpose of computing AMT liability. AMT paid by such unitholders should be available as credit for set- off against future tax liability, provided they do not opt to be governed by the concessional tax rates u/s 115BAC or 115BAD of the Act.

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 the legislation covering companies in India.

[4] *Capital asset being units of a business trust would be classified as long-term capital asset if the period of holding is more than 12 months immediately preceding the date of its transfer*

2.4.2. For non-resident unitholders who are FPIs/FIIs:

a. As per section 2(14) of the Act, any securities held by an FPI, which were invested in accordance with the regulations made under the Securities and Exchange Board of India Act, 1992 shall be deemed to be capital assets. Hence the income from the transfer of such securities shall be deemed to be treated as capital gains.

b. If units of the Trust are long-term capital assets[5] and such transaction is chargeable to STT, income arising on their transfer (over and above INR 0.125 million) will be taxable at a tax rate of 12.50%$^{++}$ subject to conditions as per section 112A read with section 115AD. Further, in case of long-term capital gain on transfer of units of the Trust, which are not subject to STT, shall be taxable in the hands of the unitholders at the tax rate of 12.50%$^{++}$, as per section 115AD.

c. Short-term capital gains arising on transfer of the units of the Trust will be chargeable to tax at the rate of 20%$^{++}$ as per the provisions of section 111A of the Act read with section 115AD, if such transaction is chargeable to STT. Short-term capital gains on transfer of units of the Trust, not transacted through a recognized stock exchange and not subject to STT shall be taxable at 30%$^{++}$ under section 115AD of the Act.

d. Investors are advised to consult their tax advisor for computation of capital gains including cost of acquisition of units as per Indian tax laws in each case.

e. As per the Explanation 4 to section 115JB, provisions of Minimum Alternate Tax shall not be applicable to any foreign company if:

(i) Such foreign company is a resident of country with which India has a DTAA and such foreign company does not have a permanent establishment in India; or
(ii) Such foreign company is a resident of country with which India does not have a DTAA and such foreign company is not required to seek registration under any law for the time being in force relating to companies.

Accordingly, provisions of MAT shall not apply to FPIs/ FIIs in case the above conditions hold true.

2.4.3. For unitholders who are notified Sovereign Wealth Fund and notified Pension Funds:

a. As per section 10(23FE) of the Act, any income by way of dividend, interest, any sum referred to in section 56(2)(xii), or long-term capital gain arising from investment made in units of the Trust on or after 1 April 2020 and before 31 March 2024 and held for at least three years shall be exempt for notified Sovereign Wealth Fund, wholly owned subsidiary of Abu Dhabi Investment Authority (ADIA) and notified Pension Funds, subject to satisfaction of stipulated conditions.

Investors are advised to consult their tax advisor for computation of capital gains including cost of acquisition of units as per Indian tax laws in each case.

2.4.4. Special tax benefits/ provisions applicable to Alternative Investment Fund (Category I and II)

a. Under section 10(23FBA) of the Act, any income of an investment fund other than the income chargeable under the head "Profits and gains of business or profession" is exempt from income tax.

Further, income of the investment fund chargeable under the head 'Profits and gains of business or profession' is taxable as follows (section 115UB(4) of the Act)

- at the rate or rates as specified in the Finance Act of the relevant year, where such fund is a company or a firm; or
- at maximum marginal rate in any other case

[5] *Capital asset being units of a business trust would be classified as long-term capital asset if the period of holding is more than 36 months immediately preceding the date of its transfer.*

b. The losses incurred by AIF shall be treated in accordance with the provisions of section 115UB(2) and 115UB(2A) of the Act.

2.4.5. 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 authorised 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.

In light with the provisions of section 196 of the Act, no deduction of tax shall be made on any sum payable to a Mutual Fund specified under clause (23D) of section 10. Accordingly, the Trust is not required to withhold tax on any sum payable to Mutual Fund set up under section 10(23D) of the Act.

2.4.6. For Venture Capital Companies/Funds:

For VCF/VCC registered prior to 21 May 2012:

Under Section 10(23FB) of the Act, any income of Venture Capital Company to whom the certificate of registration is granted before 21/05/2012 under SEBI (Venture Capital Funds) Regulations, 1996 or as a subcategory I Alternative Investment Fund as is regulated under SEBI (Alternative Investment Funds Regulations) under the SEBI Act, 1992, would be exempt from income tax, subject to conditions specified therein.

As per Section 115U of the Act, any income derived by a person from his investment in Venture Capital Company/Venture Capital Fund would be taxable in the hands of the person making an investment in the same manner as if it were the income accruing or arising to or received by such person had the investments been made directly in the venture capital undertaking.

For VCF/VCC registered post 21 May 2012:

VCF/VCC registered post 21 May 2012 shall be classified as a Category 1 Alternate Investment Fund which shall be governed by the SEBI (AIF) Regulations 2012 or as referred to in sub-regulation (2) of regulation 18of the International Financial Services Centres Authority (Fund Management) Regulations, 2022 made under the International Financial Services Centres Authority Act, 2019. For such funds benefit of section 10(23FB) and section 115U shall not be applicable and shall be governed by section 115UB read with section 10(23FBA) and 10(23FBB) which states that business income earned by such fund shall be taxable in the hands of the Fund and exempt in the hands of the unit holders, and other income earned viz. capital gains, income from other sources shall be exempt in the hands of the fund and taxable in the hands of unit holder.

2.4.7. Benefits under Double taxation avoidance agreement (DTAA)

As per section 2(30) of the Act, non-resident is defined to mean a person who is not a "resident". A non-resident unit holder should be subject to taxation in India only if:

- it is regarded a tax resident of India; or

- being a non-resident in India, it derives: (a) if any income is received / deemed to be received in India; or (b) if any income has accrued or arisen / deemed to have accrued or arisen in India in terms of the provisions of the Act.

Section 6 of the Act provides that a foreign company should be treated as a tax resident in India if its place of effective management (POEM) is in India in that year. POEM has been defined to mean a place where key managerial and commercial decisions that are necessary for the conduct of the business of an entity as a whole are, in substance made.

Under the provisions of section 90(2) of the Act, a non-resident will be governed by the provisions of the 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. Further, no assurance can be provided that the treaty benefits should be available to the offshore unit holder or the terms of the tax treaty will not be subject to amendment or reinterpretation in the future

However, the non-resident investor will have to furnish a certificate of his being a tax resident in a country outside India and a suitable declaration stating that such non-resident does not have a fixed base/ permanent establishment in India, to obtain the benefit of the applicable DTAA and such other document as may be prescribed as per the provision of section 90(4) of Act. Further, as per Notification No. 3/2022 dated 16th July 2022, Form 10F is required to be furnished electronically for submitting information as required under Rule 21AB, where tax residence certificate does not contain all the prescribed requisite information.

As per the provisions of section 90(2) of the Act, the provisions of the Act would prevail over the provisions of the DTAA to the extent they are more beneficial to the non-resident.

2.4.8. Treatment of loss:

Section 70 read with section 74 of the Act allows short-term capital loss arising during a financial year to be set off against income, if any, from capital gains (short-term or long-term), arising in the same financial year. However, long-term capital loss arising during a financial year is allowed to be set-off only against long-term capital gains. Balance loss, if any, is allowed to be carried forward and set-off against income from capital gains, arising during subsequent eight assessment years, as follows: (i) balance short-term capital loss can be carried forward and set-off against capital gains (short-term or long-term); and (ii) balance long-term capital loss can be carried forward and set-off only against long-term capital gains.

Further, as per Section 71 of the Act, short term/ long term capital loss for the year cannot be set-off against income under any other head other than capital gains for the same year.

2.5. Tax deduction at source by the Trust

a. Section 194LBA – Certain income from units of the Trust: As per section 194LBA of the Act, taxes shall be required to be deducted at source at the time of payment/ credit (whichever is earlier) from following income distributions by the Trust to its unitholders:

Class of unitholders	Nature of income	Applicable tax rates
• Resident unitholders*	Interest income - Section 194LBA(1)	10%
	Unqualified Dividend income - Section 194LBA(1)	10%
	Qualified Dividend income - Section 194LBA(2A)	Not subject to withholding
	Specified sum – Section 56(2)(xii)	Not subject to withholding
• Non-resident unitholders*#^	Interest income – Section 194LBA(2)	5%++
	Unqualified Dividend income^ - Section 194LBA(2)	10%++
	Qualified Dividend income – Section 194LBA(2A)	Not subject to withholding
	Specified sum – Section 56(2)(xii)	Applicable tax rates (inclusive of applicable surcharge and cess)
• Category I & II Alternative Investment Funds • Mutual Funds	Any distribution	Not subject to withholding

**The unitholders (including unitholders eligible for exemption u/s 10(23FE) of the Act) may provide NIL/Lower withholding certificate issues under section 197 of the Act with respect to income as specified u/s 194LBA of the Act.*

^ If the Act provides withholding tax rate for any specific category of non-resident unitholders, then the same needs to be considered.

 # Non-resident unitholders may seek to avail any beneficial provisions under applicable DTAA that India may have entered into with its country of residence. Rate of TDS for FPI/FII may be governed in accordance with section 196D of the Act.

++ Surcharge and Cess, as may be applicable to be added

b. Applicability of other provisions:

No income tax is deductible at source from income in the nature of capital gains arising to a resident unitholder under the provisions of the Act.

However, as per the provisions of Section 195 read with section 90 of the Act, any income on transfer of units of the Trust by non-residents may be subject to withholding of tax at the rate under the domestic tax laws or under the DTAA, whichever is more beneficial to the Assessee (other than FPIs/ FIIs who are subject to provisions of section 196D(2) of the Act).

Further, section 196D of the Act provide that in case of a payee, being FPIs/ FIIs of country with which India has entered into DTAA, tax shall be deducted at the rate of 20% or the DTAA rates (for the incomes referred in section 115AD(1)(ii) other than capital gains and interest income subject to TDS u/s 196LD of the Act), whichever is lower, subject to the FPI/ FII furnishing a Tax Residency Certificate (referred to in Section 90(4) of the Act) and a suitable declaration for not having a fixed base/ permanent establishment in India, to the payer.

Further, as per sub-section (2) of section 196D of the Act, no tax is to be deducted from any income, in the nature of capital gains arising to a FPI or FII from the transfer of units, subject to the FPI/ FII furnishing a Tax Residency Certificate (referred to in Section 90(4) of the Act) and a suitable declaration for not having a fixed base/ permanent establishment in India, to the payer.

Buyer and seller of unlisted shares/securities also need to check the applicability of TDS u/s 194Q of the Act read with provision of Tax Collection at Source (TCS) u/s 206C(1H) of the Act. As per the clarification issued by CBDT, the transaction in shares not taken place through recognized stock exchange/ recognised clearing corporations may also fall under the ambit of section 194Q/206C(1H) of the Act since CBDT has clarified that the said provisions of section 194Q/206C(1H) of the Act are not applicable to transactions in securities and commodities transacted through recognised stock exchanges/ recognised clearing corporations, including those located in International Financial Service Centre.

c. Provisions of section 206AA of the Act

As per section 206AA of the Act, where a tax payer does not possess a Permanent Account Number ("**PAN**"), taxes have to be withheld on payment of income to the tax payer (where chargeable to tax) at higher of the following:

- at the rate specified in the Act; or
- at the rate or rates in force; or
- at the rate of twenty per cent

The Finance Act, 2016 amended the aforementioned provision to provide an exemption to non-residents, subject to compliance of such conditions as may be prescribed by the CBDT. In furtherance of the amended provision, the CBDT issued a notification prescribing the rules (Rule 37BC of the Rules) for relaxation from withholding of tax at higher rates in the absence of PAN in the case of non-resident deductee and laid down the information and alternative documents required to claim such relaxation.

d. Provisions of section 206AB of the Act

Finance Act 2021 has inserted section 206AB which *inter alia* stipulates that where tax is required to be withheld by a person on payment or credit to a *specified person*[6], the tax shall be deducted at the higher of the following rates:

- at twice the rate specified in the relevant provision of the Act; or
- at twice the rate or rates in force; or
- at the rate of five per cent.

[6] *As per the provisions of section 206AB of the Act, 'Specified person' means a person who:*

(i) has not furnished the return of income for the previous year immediately preceding the previous year in which the tax is required to be deducted, for which time-limit of furnishing the return of income u/s 139(1) has expired; and

(ii) the aggregate of tax deducted at source and tax collected at source is INR 50,000 or more in the said previous year

If the provisions of section 206AA is applicable to a specified person, in addition to the provision of section 206AB, the tax shall be deducted at higher of the two rates provided in section 206AB and in section 206AA.

e. Applicability of other provisions:

Section 94(7) of the Act (commonly known as dividend stripping)

Vide Finance Act, 2022, applicability of section 94(7) of the Act (commonly known as dividend stripping) has been extended to the units of Trust as well (that with effect from Financial Year 2022-23) which provides that where:

a) any person buys or acquires any securities or unit within a period of three months prior to the record date[7];
b) such person sells or transfers such securities within three months after such record date or such units within a period of nine months after such record date;
c) the dividend or income on such securities or unit received or receivable by such person is exempt

then, the loss, if any, arising from the sale and purchase of securities and units, to the extent of dividend or income received or receivable on such securities or unit, shall be ignored for computing income chargeable to tax.

Section 94(8) of the Act (commonly known as bonus stripping)

Vide Finance Act, 2022, applicability of section 94(8) of the Act (commonly known as bonus stripping) has been extended to the units of Trust as well (that with effect from Financial Year 2022-23) which provides that where:

a) any person buys or acquires any units within a period of three months prior to the record date[8];
b) such person is allotted additional units without any payment on the basis of holding of such units on such record date;
c) such person sells or transfers all or any of the units within a period of nine months after the record date, while continuing to hold all or any of the additional units referred in clause (ii) above

then, the loss, if any, arising from the sale and purchase of all or any of the units shall be ignored for computing income chargeable to tax and notwithstanding anything contained in any other provision of the Act, the amount of loss so ignored shall be deemed to be the cost of purchase or acquisition of such additional units referred to in clause (ii) above as are held on the date of such sale or transfer.

f. Transaction not regarded as transfer under section 47(xvii) of the Act:

According to section 47(xvii) of the Act, 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 section 49(2AC) of the Act, the cost of units of Trust allotted to the transferor in exchange of shares in SPV shall be deemed to be the cost of acquisition of shares in SPV.

Further, as per clause (hc) of Explanation 1 of section 2(42A), for ascertaining the period of holding of such units, the period of holding of shares in SPV shall also be included.

Any notional gain or loss arising on transfer of shares of SPV to business trust in exchange of units allotted by the trust as referred under section 47(xvii) are to be excluded while calculating book profits for the purpose of MAT under section 115JB. Similarly, any notional gain or loss arising upon change in carrying amount of the units held by Unitholder are to be excluded in calculating book profits for the levy of MAT under section 115JB (clause (iie)/(fc) to explanation 1 to section 115JB).

7 *Record date means a date fixed to entitles the holder of such securities or units to receive dividend, income, or additional securities or unit without consideration, as the case may be.*
8 *Record date means a date fixed to entitles the holder of such securities or units to receive dividend, income, or additional securities or unit without consideration, as the case may be.*

Further, actual gain or loss on disposal of units held by the Unitholder as referred to in section 47 (xvii) are considered for the purpose of normal provisions of the Act and MAT under section 115JB by taking into account the cost of the shares exchanged with units referred to in the said clause or the carrying amount of the shares at the time of exchange where such shares are carried at a value other than the cost through statement of profit and loss, as the case may be (clause (iif)/(k) to explanation 1 to section 115JB).

However, if the Unitholder opts for concessional tax regime under section 115BAA / 115BAB then provisions of MAT under section 115JB shall not be applicable for the Unitholder and it shall forego its entire MAT credit available, if any, at the time of exercising concessional tax-regime.

3. General Tax Rates and provisions

3.1. The characterization of gains/ losses, arising from sale / transfer of units, as capital gains or business income would depend on the nature of holding in the hands of the unit holder and various other factors.

3.2. 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. However, securities transaction tax is not eligible to be deducted as cost on transfer of the units of the Trust in case where the gains arising from such transfer is assessable under the head "Capital Gains".

3.3. The income-tax rates specified in this note are as applicable for the financial year 2024-25(relevant to assessment year 2025-26), and are exclusive of surcharge and cess, if any. Rate of surcharge and cess are provided below:

Surcharge:

Domestic companies (other than companies who have opted for concessional tax regime under section 115BAA and 115BAB of the Act):

a) If the total income does not exceed INR 10 million – Nil
b) If the total income exceeds INR 10 million but does not exceed INR 100 million - 7 %
c) If the total income exceeds INR 100 million - 12 %

Domestic companies (for companies who have opted for concessional tax regime under section 115BAA and 115BAB of the Act):

a) At the rate of 10% on total income.

Foreign companies:

a) If the total income does not exceed INR 10 million - Nil
b) If the total income exceeds INR 10 million but does not exceed INR 100 million – 2%
c) If the total income exceeds INR 100 million – 5%

Firms:

a) If the total income does not exceed INR 10 million - Nil
b) If the total income exceeds INR 10 million – 12%

For individuals, HUF, AOP and BOI (including non-resident) who have not opted for the New Regime:

a) If the total income does not exceed INR 5 million – Nil
b) If the total income exceeds INR 5 million but does not exceed INR 10 million – 10%
c) If the total income exceeds INR 10 million but does not exceed INR 20 million – 15%
d) If the total income (excluding dividend income or income under the provision of section 111A, section 112 and section 112A of the Act) exceeds INR 20 million but does not exceed INR 50 million – 25%
e) If the total income (excluding dividend income or income under the provision of section 111A, section 112 and section 112A of the Act) exceeds INR 50 million – 37%
f) If total income is above 20 million (including dividend income or income under the provision of section 111A, section 112 and section 112A of the Act) but is not covered under (iv) and (v) above – 15%

However, the applicable surcharge does not exceed 15% in case of dividend income or income under the provision of section 111A and section 112A of the Act included in such total income.
Further, vide Finance Act, 2022, the surcharge on long term capital gains under section 112 of the Act arising from transfer of long-term capital assets (including units of Trust) shall also be capped at 15%. Also, in case of an association of persons consisting of only companies as its members, the rate of surcharge on the amount of Income-tax shall not exceed 15%.

The above surcharge is subject to marginal tax benefit as per the Act.

As per the Finance Act, 2023, in case of the Individual/HUF/AOP (other than co-operative)/ BOI/ Artificial Juridical Person ("**AJP**") taxable under the New Regime prescribed under the Act, the surcharge on the amount of income-tax shall not exceed 25% where taxable income exceeds INR 20 million.

As per the Finance Act, 2023, in the case of an AOP being a non-resident, and consisting of only companies as its members, surcharge shall be calculated at the rate of 10%, where the aggregate income exceeds INR 5 million but does not exceed INR 10 million; at the rate of 15%, where the aggregate income exceeds INR 10 million.

Health and education cess:

In all cases, Health and education cess will be levied at the rate of 4% of income-tax and surcharge.

Disclaimer

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

2. Please note that the TDS rates mentioned in the given document may be subject to any concessions introduced/ allowed by the Government under any policy, press release, etc. Also, the same may also be subject to lower/ nil withholding tax certificates which may be furnished by the unit holders.

3. 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. Further, it is pertinent to meet the terms and condition viz. Principal purpose test, beneficial ownership test etc. as enacted in DTAAs entered into by India with various countries based on Multilateral Convention to implement tax treaty related measures to prevent Base Erosion and Profit Shifting ("**MLI**").

4. The tax implications/ benefits stated in this document are subject to General Anti Avoidance Rules (GAAR) provisions under the Act. GAAR may be invoked by the Indian income-tax authorities in case arrangements are found to be impermissible avoidance arrangements. Further, in case GAAR provisions are invoked, the onus to prove that the main purpose of an arrangement was not to obtain any tax benefit is on the taxpayer. Also, any resident or non-resident may approach the Authority for Advance Rulings to determine whether an arrangement can be regarded as an impermissible avoidance arrangement.

5. This statement is intended only to provide general information and is neither designed nor intended to be substituted for professional tax advice. In view of the individual nature of tax consequences, each investor is advised to consult his/her own tax advisor with respect to specific tax consequences of his/her participation in the scheme.

6. No assurance is given that the revenue authorities/courts will concur with the views expressed herein. Our views are based on the provisions of law that exist on this day 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.

7. This statement of possible direct tax benefits enumerated above is as per the Act as amended by the Finance (No. 2) Act, 2024 (as enacted on 16 August 2024) applicable for financial year ending 31 March 2025 relevant to the assessment year 2025-26. The above 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.

8. Please note that the tax rates provided in this statement are excluding applicable surcharge and cess. As per the Finance Act, 2024, rates given in sub-section (1A) of section 115BAC of the Act ("**New Tax Regime**") are the default

rates applicable to all individual/ HUF/ AOP (other than co-operative)/ BOI/ AJP. Accordingly, tax rates and surcharge prevailing as per New Tax Regime will be considered for the purpose of withholding.

9. The information provided above sets out the possible tax benefits available to the unit holders 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 equity shares and 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. Investors are advised to consult their own tax advisor with respect to the tax implications arising on account of any investment in equity shares or units (including tax implications on account of any distributions by/ receipts from the Trust), particularly in view of the fact that certain recently enacted legislation may not have a direct legal precedent or may have a different interpretation impacting the benefits, which an investor can avail.

10. This statement does not discuss any tax consequences in the country outside India of an investment in the units of trust. The unit holders / investors in the country outside India are advised to consult their own professional advisors regarding possible Income tax consequences that apply to them.

11. The statement is prepared on the basis of information available with the Trust and there is no assurance that:

    (i) the Trust or its unitholders will continue to obtain these benefits in future;
    (ii) the conditions prescribed for availing the benefits have been/ would be met with; and
    (iii) the revenue authorities/courts will concur with the view expressed herein.

    The above views are based on the provisions of law that exist on this day and its interpretation, which are subject to change from time to time.

12. The information provided above sets out the possible tax benefits available to the unit holders 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 equity shares and 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. Investors are advised to consult their own tax advisor with respect to the tax implications arising on account of any investment in equity shares or units (including tax implications on account of any distributions by/ receipts from the Trust), particularly in view of the fact that certain recently enacted legislation may not have a direct legal precedent or may have a different interpretation impacting the benefits, which an investor can avail.

FORMATION TRANSACTIONS IN RELATION TO THE TRUST

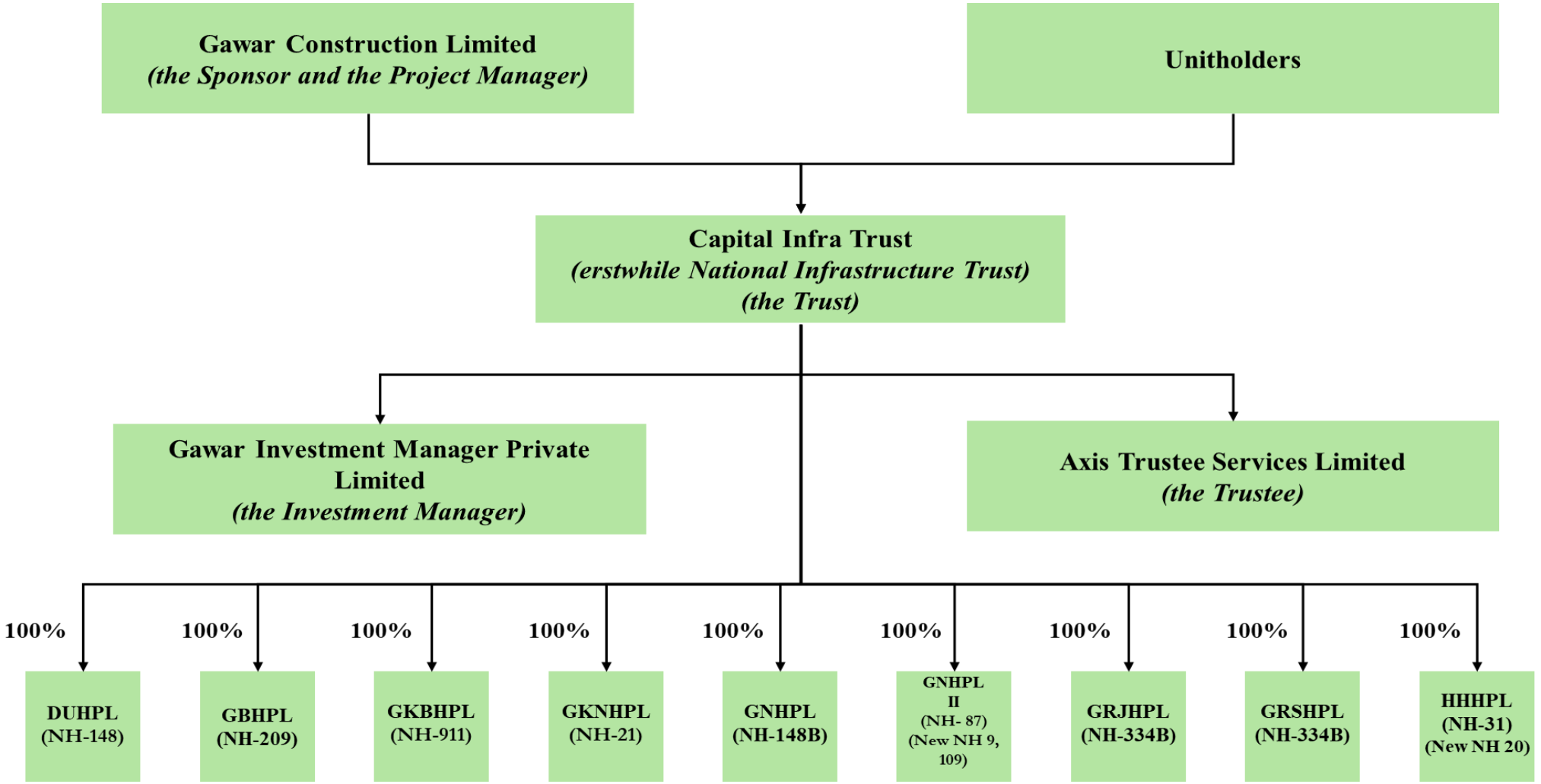
Proposed holding structure of the Project SPVs

Pursuant to the completion of the transactions as contemplated under the respective Share Purchase Agreements, the Trust shall acquire 100% of the equity shares of the Project SPVs.

As on date of this Offer Document, the share capital of each Project SPV is collectively held by the Sponsor. The shareholding of the Sponsor in the Project SPVs is set forth in "***Formation Transactions in Relation to the Trust-Acquisition of the Project SPVs by the Trust***" on page 109. Pursuant to the Share Purchase Agreements dated December 26, 2024, the Trust proposes to acquire the entire shareholding of Sponsors (including joint holding of nominees) in Project SPVs after the Bid/Offer Closing Date but prior to the Allotment, in consideration of which the Trust proposes to allot Units to the Sponsors. The details of the acquisition of the entire shareholding of the Project SPVs by the Trust are set forth in "***Formation Transactions in Relation to the Trust-Acquisition of the Project SPVs by the Trust***" on page 109.

Pursuant to the transfer of the entire shareholding of the Project SPVs and upon the listing of Units on the Stock Exchange, the Investment Manager, on behalf of the Trust, proposes to invest the Offer Proceeds in the Project SPVs, by way of an infusion of debt, in the form of the Trust Loans in accordance with the terms provided in the On-Lending Agreement. The Project SPVs, in turn, intend to utilize the proceeds of the Trust Loans towards repayment/prepayment, in part or full, of certain loans/facilities availed by the Project SPVs from their respective senior lenders/external lenders; and towards prepayment, in part, of the unsecured subordinate debt provided to such Project SPVs by the Sponsor. For additional details in relation to the utilization of the Net Proceeds, see "***Use of Proceeds***" on page 80.

The following diagram illustrates the proposed shareholding structure of the Project SPVs post the transfer of Project SPVs to the Trust, pursuant to the Share Purchase Agreements and prior to the Allotment:



Details of the Project SPVs

The corporate details of the Project SPVs as of the date of this Offer Document are provided below.

1. Dewas Ujjain Highway Private Limited ("**DUHPL**")

Corporate Information

DUHPL was incorporated on November 24, 2020 as a private limited company under the Companies Act, 2013 pursuant to certificate of incorporation issued by the Registrar of Companies, Central Registration Centre. The registered office of DUHPL is located at DSS-378, Sector 16-17, Hissar – 125 001, Haryana, India. Its CIN is U45201HR2020PTC091095.

DUHPL is a special purpose vehicle which was incorporated for the purpose of development and upgradation of the Dewas Ujjain Highway Asset and has entered into the DUHPL Concession Agreement. For further details with respect to the Initial Portfolio Assets, refer to the section titled "***Business-Details of the Project SPVs and the Initial Portfolio Assets***" on page 159.

Capital Structure

The capital structure of DUHPL as on date of this Offer Document is as follows:

Particulars*	Amount (in ₹)
Authorised capital	190,000,000
Issued, subscribed and paid-up capital	190,000,000

* *There shall be no change to capital structure of DUHPL post the Offer.*

Shareholding Pattern

The equity shareholding pattern of DUHPL as on date of this Offer Document is as follows:

Sr. No.	Name of the shareholder	Number of equity shares of ₹10 each	Percentage of the Issued, subscribed and paid-up capital (%)
1.	Gawar Construction Limited	18,999,900	99.99
2.	Ravinder Kumar#	100	Negligible
	Total	**19,000,000**	**100**

Nominee of Gawar Construction Limited

Pursuant to the completion of the transactions as contemplated under the respective Share Purchase Agreement, the Trust and its nominee(s) shall acquire 100% of the issued, subscribed and paid-up capital of DUHPL.

2. Gawar Bangalore Highways Private Limited ("**GBHPL**")

Corporate Information

GBHPL was incorporated on November 28, 2022 as a private limited company under the Companies Act, 2013 pursuant to certificate of incorporation issued by the Registrar of Companies, Central Registration Centre. The registered office of GBHPL is located at DSS-378, Sector 16-17, Hissar – 125 001, Haryana, India. Its CIN is U45201HR2022PTC108014.

GBHPL is a special purpose vehicle which was incorporated for the purpose of development and upgradation of the Bangalore Highways Asset. Pursuant to GBHPL Endorsement Agreement, GBHPL substituted the erstwhile concessionaire SBHPL and subsequently, entered in GBHPL Concession Agreement with NHAI to develop the Bangalore Highways Asset. For further details with respect to the Initial Portfolio Assets, refer to the section titled "***Business-Details of the Project SPVs and the Initial Portfolio Assets***" on page 159.

Capital Structure

The capital structure of GBHPL as on date of this Offer Document is as follows:

Particulars*	Amount (in ₹)
Authorised capital	239,100,000
Issued, subscribed and paid-up capital	239,100,000

* *There shall be no change to capital structure of GBHPL post the Offer.*

Shareholding Pattern

The equity shareholding pattern of GBHPL as on date of this Offer Document is as follows:

Sr. No.	Name of the shareholder	Number of equity Shares of ₹10 each	Percentage of the Issued, subscribed and paid-up capital (%)
1.	Gawar Construction Limited	2,39,09,900	99.99
2.	Ravinder Kumar[#]	100	Negligible
	Total	**2,39,10,000**	**100**

[#] *Nominee of Gawar Construction Limited*

Pursuant to the completion of the transactions as contemplated under the respective Share Purchase Agreement, the Trust and its nominee(s) shall acquire 100% of the issued, subscribed and paid-up capital of GBHPL.

3. Gawar Khajuwala Bap Highway Private Limited ("**GKBHPL**")

Corporate Information

GKBHPL was incorporated on April 18, 2018 as a private limited company under the Companies Act, 2013 pursuant to certificate of incorporation issued by the Registrar of Companies, Central Registration Centre The registered office of GKBHPL is located at DSS-378, Sector 16-17, Hissar – 125 001, Haryana, India. Its CIN is U45309HR2018PTC073651.

GKBHPL is a special purpose vehicle which was incorporated for the purpose of development and upgradation of the Khajuwala Bap Highway Asset and has entered the GKBHPL Concession Agreement. For further details with respect to the Initial Portfolio Assets, refer to the section titled "***Business-Details of the Project SPVs and the Initial Portfolio Assets***" on page 159.

Capital Structure

The capital structure of GKBHPL as on date of this Offer Document is as follows:

Particulars[*]	Amount (in ₹)
Authorised capital	530,000,000
Issued, subscribed and paid-up capital	530,000,000

* *There shall be no change to capital structure of GKBHPL post the Offer.*

Shareholding Pattern

The equity shareholding pattern of GKBHPL as on date of this Offer Document is as follows:

Sr. No.	Name of the shareholder	Number of equity shares of ₹10 each	Percentage of the Issued, subscribed and paid-up capital (%)
1.	Gawar Construction Limited	52,999,900	99.99
2.	Ravinder Kumar[#]	100	Negligible
	Total	**53,000,000**	**100**

 # Nominee of Gawar Construction Limited

Pursuant to the completion of the transactions as contemplated under the respective Share Purchase Agreement, the Trust and its nominee(s) shall acquire 100% of the issued, subscribed and paid-up capital of GKBHPL.

4. Gawar Kiratpur Nerchowk Highway Private Limited ("GKNHPL")

Corporate Information

GKNHPL was incorporated on October 23, 2020 as a private limited company under the Companies Act, 2013 pursuant to certificate of incorporation issued by the Registrar of Companies, Central Registration Centre. The registered office of GKNHPL is located at DSS-378, Sector 16-17, Hissar – 125 001, Haryana, India, India. Its CIN is U45309HR2020PTC090389.

GKNHPL is a special purpose vehicle which was incorporated for the purpose of development and upgradation of the Kiratpur Nerchowk Highway Asset and has entered the GKNHPL Concession Agreement. For further details with respect to the Initial Portfolio Assets, refer to the section titled "***Business-Details of the Project SPVs and the Initial Portfolio Assets***" on page 159.

Capital Structure

The capital structure of GKNHPL as on date of this Offer Document is as follows:

Particulars*	Amount (in ₹)
Authorised capital	570,000,000
Issued, subscribed and paid-up capital	570,000,000

* *There shall be no change to capital structure of GKNHPL post the Offer.*

Shareholding Pattern

The equity shareholding pattern of GKNHPL as on date of this Offer Document is as follows:

Sr. No.	Name of the shareholder	Number of equity shares of ₹10 each	Percentage of the Issued, subscribed and paid-up capital (%)
1.	Gawar Construction Limited	56,999,900	99.99
2.	Ravinder Kumar#	100	Negligible
	Total	**57,000,000**	**100**

 # Nominee of Gawar Construction Limited

Pursuant to the completion of the transactions as contemplated under the respective Share Purchase Agreement, the Trust and its nominee(s) shall acquire 100% of the issued, subscribed and paid-up capital of GKNHPL.

5. Gawar Narnaul Highway Private Limited ("GNHPL")

Corporate Information

GNHPL was incorporated on February 8, 2019 as a private limited company under the Companies Act, 2013 pursuant to certificate of incorporation issued by the Registrar of Companies, Central Registration Centre The registered office of GNHPL is located at DSS-378, Sector 16-17, Hissar – 125 001, Haryana, India. Its CIN is U45500HR2019PTC078394.

GNHPL is a special purpose vehicle which was incorporated for the purpose of development and upgradation of the Narnaul Highway Asset and has entered the GNHPL Concession Agreement. For further details with respect to the Initial Portfolio Assets, refer to the section titled "***Business−Details of the Project SPVs and the Initial Portfolio Assets***" on page 159.

Capital Structure

The capital structure of GNHPL as on date of this Offer Document is as follows:

Particulars*	Amount (in ₹)
Authorised capital	610,000,000
Issued, subscribed and paid-up capital	610,000,000

* *There shall be no change to capital structure of GNHPL post the Offer.*

Shareholding Pattern

The equity shareholding pattern of GNHPL as on date of this Offer Document is as follows:

Sr. No.	Name of the shareholder	Number of equity shares of ₹10 each	Percentage of the Issued, subscribed and paid-up capital (%)
1.	Gawar Construction Limited	60,999,900	99.99
2.	Ravinder Kumar#	100	Negligible
	Total	**61,000,000**	**100**

 # Nominee of Gawar Construction Limited

Pursuant to the completion of the transactions as contemplated under the respective Share Purchase Agreement, the Trust and its nominee(s) shall acquire 100% of the issued, subscribed and paid-up capital of GNHPL.

6. Gawar Nainital Highways Private Limited ("GNHPL II")

Corporate Information

GNHPL II was incorporated on April 9, 2023 as a private limited company under the Companies Act, 2013 pursuant to certificate of incorporation issued by the Registrar of Companies, Central Registration Centre The registered office

of GNHPL II is located at DSS-378, Sector 16-17, Hissar – 125 001, Haryana, India. Its CIN is U42101HR2023PTC110541.

GNHPL II is a special purpose vehicle which was incorporated for the purpose of development of the Nainital Highways Asset. Pursuant to GNHPL II Endorsement Agreement, GNHPL II substituted the erstwhile concessionaire SNHL and subsequently, entered in GNHPL II Concession Agreement with NHAI to develop the Nainital Highways Asset. For further details with respect to the Initial Portfolio Assets, refer to the section titled "***Business−Details of the Project SPVs and the Initial Portfolio Assets***" on page 159.

Capital Structure

The capital structure of GNHPL-II as on date of this Offer Document is as follows:

Particulars*	Amount (in ₹)
Authorised capital	98,000,000
Issued, subscribed and paid-up capital	98,000,000

* *There shall be no change to capital structure of GNHPL-II post the Offer.*

Shareholding Pattern

The equity shareholding pattern of GNHPL-II as on date of this Offer Document is as follows:

Sr. No.	Name of the shareholder	Number of equity shares of ₹ 10 each	Percentage of the Issued, subscribed and paid-up capital (%)
1.	Gawar Construction Limited	97,99,900	99.99
2.	Ravinder Kumar#	100	Negligible
	Total	**98,00,000**	**100**

 # Nominee of Gawar Construction Limited

Pursuant to the completion of the transactions as contemplated under the respective Share Purchase Agreement, the Trust and its nominee(s) shall acquire 100% of the issued, subscribed and paid-up capital of GNHPL-II.

7. Gawar Rohna Jhajjar Highway Private Limited ("GRJHPL")

Corporate Information

GRJHPL was incorporated on April 20, 2018 as a private limited company under the Companies Act, 2013 pursuant to certificate of incorporation issued by the Registrar of Companies, Central Registration Centre The registered office of GRJHPL is located at DSS-378, Sector 16-17, Hissar – 125 001, Haryana, India. Its CIN is U45500HR2018PTC073686.

GRJHPL is a special purpose vehicle which was incorporated for the purpose of development and upgradation of the Rohna Jhajjar Highway Asset and has entered the GRJHPL Concession Agreement. For further details with respect to the Initial Portfolio Assets, refer to the section titled "***Business-Details of the Project SPVs and the Initial Portfolio Assets***" on page 159.

Capital Structure

The capital structure of GRJHPL as on date of this Offer Document is as follows:

Particulars*	Amount (in ₹)
Authorised capital	400,000,000
Issued, subscribed and paid-up capital	390,000,000

* *There shall be no change to capital structure of GRJHPL post the Offer.*

Shareholding Pattern

The equity shareholding pattern of GRJHPL as on date of this Offer Document is as follows:

Sr. No.	Name of the shareholder	Number of equity shares of ₹10 each	Percentage of the Issued, subscribed and paid-up capital (%)
1.	Gawar Construction Limited	38,999,900	99.99
2.	Ravinder Kumar#	100	Negligible
	Total	**39,000,000**	**100**

 # Nominee of Gawar Construction Limited

Pursuant to the completion of the transactions as contemplated under the respective Share Purchase Agreement, the Trust shall acquire 100% of the issued, subscribed and paid-up capital of GRJHPL.

8. Gawar Rohna Sonepat Highways Private Limited ("GRSHPL")

Corporate Information

GRSHPL was incorporated on April 1, 2019 as a private limited company under the Companies Act, 2013 pursuant to certificate of incorporation issued by the Registrar of Companies, Central Registration Centre The registered office of GRSHPL is located at DSS-378, Sector 16-17, Hissar 125 001, Haryana, India. Its CIN is U45209HR2019PTC079472.

GRSHPL is a special purpose vehicle which was incorporated for the purpose of development and upgradation of the Rohna Sonepat Highways Asset and has entered the GRSHPL Concession Agreement. For further details with respect to the Initial Portfolio Assets, refer to the section titled "***Business-Details of the Project SPVs and the Initial Portfolio Assets***" on page 159.

Capital Structure

The capital structure of GRSHPL as on date of this Offer Document is as follows:

Particulars*	Amount (in ₹)
Authorised capital	600,000,000
Issued, subscribed and paid-up capital	600,000,000

* *There shall be no change to capital structure of GRSHPL post the Offer.*

Shareholding Pattern

The equity shareholding pattern of GRSHPL as on date of this Offer Document is as follows:

Sr. No.	Name of the shareholder	Number of equity shares of ₹ 10 each	Percentage of the Issued, subscribed and paid-up capital (%)
1.	Gawar Construction Limited	59,999,900	99.99
2.	Ravinder Kumar #	100	Negligible
	Total	**60,000,000**	**100**

 # Nominee of Gawar Construction Limited

Pursuant to the completion of the transactions as contemplated under the respective Share Purchase Agreement, the Trust shall acquire 100% of the issued, subscribed and paid-up capital of GRSHPL.

9. Hardiya Hasanpur Highway Private Limited ("HHHPL")

Corporate Information

HHHPL was incorporated on September 22, 2020 as a private limited company under the Companies Act, 2013 pursuant to certificate of incorporation issued by the Registrar of Companies, Central Registration Centre. The registered office of HHHPL is located at DSS-378, Sector 16-17, Hissar 125 001, Haryana, India. Its CIN is U45209HR2020PTC089558.

HHHPL is a special purpose vehicle which was incorporated for the purpose of development and upgradation of the Hardiya Hasanpur Highway Asset and has entered the HHHPL Concession Agreement. For further details with respect to the Initial Portfolio Assets, refer to the section titled "***Business-Details of the Project SPVs and the Initial Portfolio Assets***" on page 159.

Capital Structure

The capital structure of HHHPL as on date of this Offer Document is as follows:

Particulars*	Amount (in ₹)
Authorised capital	250,000,000
Issued, subscribed and paid-up capital	241,000,000

* *There shall be no change to capital structure of HHHPL post the Offer.*

Shareholding Pattern

The equity shareholding pattern of HHHPL as on date of this Offer Document is as follows:

Sr. No.	Name of the shareholder	Number of equity shares of ₹ 10 each	Percentage of the Issued, subscribed and paid-up capital (%)
1.	Gawar Construction Limited	24,099,900	99.99
2.	Ravinder Kumar #	100	Negligible
	Total	**24,100,000**	**100**

 # Nominee of Gawar Construction Limited

Pursuant to the completion of the transactions as contemplated under the respective Share Purchase Agreement, the Trust shall acquire 100% of the issued, subscribed and paid-up capital of HHHPL.

Break-up of the Project SPVs in terms of Regulations 18 (5)(a) and 18(5)(b) of the SEBI InvIT Regulations

Acquisition of 100% shareholding of the Project SPVs by the Trust shall be in compliance with Regulation 18(5)(a) and 18(5)(b) of SEBI InvIT Regulations.

Arrangements pertaining to Project SPVs entered into with parties to the Trust prior to the Offer

A. Acquisition of the Project SPVs by the Trust

I. **Share Purchase Agreements**

The Trust (acting through the Trustee) and the Investment Manager have entered into Share Purchase Agreements with the Sponsor and Project SPVs, for transfer of the entire shareholding held by the Sponsor in each of the Project SPVs to the Trust, in exchange for Units. In consideration for the Share Purchase Agreements, the Trust shall issue such Consideration Units *(as defined in the relevant Share Purchase Agreement*) as determined in accordance with the respective Share Purchase Agreement for each of the Project SPVs. The Share Purchase Agreements have been executed and consummation of such transactions as contemplated under each of the Share Purchase Agreements will be undertaken prior to the Allotment of Units.

The key terms of the Share Purchase Agreements are as follows:

Sale and Purchase: The Trustee on behalf of the Trust will acquire 100% of the issued, subscribed and paid-up share capital of the Project SPVs, on a spot delivery basis, free and clear of any encumbrances and together with all rights attaching thereto, such that the Trustee shall, upon transfer of the shares of the Project SPV on the Closing Date, as defined in the Share Purchase Agreement, receive full legal and beneficial ownership of the shares of the Project SPV and all rights thereto.

The aggregate consideration payable by the Trustee to the Sponsor for purchase of the shares of the Project SPV, will be paid by way of a swap arrangement wherein the Sponsor will transfer the shares of the Project SPV in exchange for the issuance of the Units pursuant to the terms and conditions as set forth in the Share Purchase Agreement.

Conditions Precedent: The acquisition of shares of the Project SPVs is subject to completion and satisfaction of certain conditions precedents by:

Sponsor:

(i) evidence of shareholding and ownership of the shares by the Sponsor, including certified true copies of the beneficial ownership statement of the Project SPV issued by the Project SPV's depository, as date of the Share Purchase Agreement and 5 working days (or such other shorter period agreed between the Trustee and the Sponsor) prior to the Closing Date;

(ii) received a no-objection certificate under Section 281 of the Income-tax Act, 1961, in connection with the transfer of shares of the Project SPVs. Each of the Sponsor and the Project SPV shall have performed and complied with all agreements, obligations and conditions set out in the Share Purchase Agreement (and the Transaction Documents) that are required to be performed or complied with by the Sponsor and the Project SPV, as applicable, prior to Closing Date, or has been waived by the Party to whom such compliance was to be made;

(iii) there shall not have occurred any Material Adverse Effect (*as defined in the Share Purchase Agreement*);

(iv) filing of tax returns under Income Tax Act, 1961, tax audit report, transfer pricing report, if applicable for the financial year ended March 31, 2024 shall have been completed;

(v) management certified financial statements pertaining to the period from March 31, 2023 till the month ending immediately prior to the month on which the Closing Date occurs, shall have been delivered; and

(vi) each of concessioning authority and the lenders of the Project SPV shall have approved the transfer of the shares, in the manner envisaged under the terms of the Share Purchase Agreement, and the Sponsor and the Project SPV shall have satisfied all the conditions set out in such approvals.

The conditions precedents in (i) to (vi) above, shall collectively be referred to as "**Closing Seller CPs**".

Sponsor and the Project SPV:

(i) all Transaction Documents shall have been executed in agreed form; and

(ii) amended articles of association of the Project SPV shall have been adopted on the Closing Date in agreed form between the Parties.

The conditions precedents in (i) and (ii) above, shall collectively be referred to as "**Joint Conditions Precedents**".

Trustee (on behalf of the Trust):

(i) requisite corporate approvals necessary for the implementation and completion of the transactions contemplated hereby including under the Transaction Documents;

(ii) the Offer as proposed by the Trust has received the minimum subscription required under the SEBI InvIT Regulations, and there is no failure of the Offer under Applicable Law.

The conditions precedents in (i) and (ii) above shall collectively be referred to as "**Buyer Conditions Precedents**". Closing Seller CPs, Joint Conditions Precedents and Buyer Conditions Precedents are collectively referred to as "**Conditions Precedents**".

Closing: The closing will occur no later than one (1) working day prior to Allotment (or such other shorter period agreed between the Trust and the Sponsor) upon the satisfaction or waiver as the case may be, at the principal place of business or at such other time and place and/or on such other date as the Parties may be mutually agreed in writing. The date on which the closing occurs shall be referred to as the "**Closing Date**".

All transactions contemplated by the Share Purchase Agreement to be completed on or prior to the Closing Date shall be deemed to occur simultaneously and no transaction shall be consummated unless all such transactions are consummated simultaneously.

Sponsor representations and warranties:

Sponsor shall represent and warrant to the Trustee and the Investment Manager that the Seller Warranties (as defined in the Share Purchase Agreement) shall remain true and correct as at Closing Date. Sponsor shall further represent that it is fully entitled and authorized to sell the shares in the manner and upon the terms and conditions contained in the Share Purchase Agreement. Sponsor shall represent and warrant, among others, that:

(i) duly incorporated and validly existing under the laws of India, and has the right, power and authority to enter into, execute, deliver and perform this Agreement and each of the other transaction documents to which it is a party;

(ii) duly and validly authorized by all necessary corporate or other action and approvals on the part of the Sponsor, for undertaking the transactions contemplated under the Share Purchase Agreement and the transaction documents;

(iii) execution, delivery and performance by the Sponsor of the Share Purchase Agreement and the other transaction documents will (i) result in a breach of any contract or agreement; (ii) result in the creation of any Encumbrance upon the share capital, in whole or in part; (iii) violate either of the charter documents or contravene any provision of any Law, order or decree of any court or governmental authority; or (iv) result in a breach of obligations under the Share Purchase Agreement; and

(iv) Sponsor is the legal and beneficial owner of the shares, free of all encumbrances and has the right to exercise all voting and other rights over such shares.

Trustee's representations and warranties:

The Trustee shall represent and warrant, among others, that:

(i) duly incorporated and validly existing under the laws of India, and has the right, power and authority to enter into, execute, deliver and perform this Agreement and each of the other transaction documents to which it is a party;

(ii) duly and validly authorized by all necessary corporate or other action and approvals on the part of the Trustee, for undertaking the transactions contemplated under the Share Purchase Agreement and the transaction documents;

(iii) execution, delivery and performance by the Trustee of the Share Purchase Agreement and the other transaction documents will (i) result in a breach of any contract or agreement; (ii) result in the creation of any Encumbrance upon the share capital, in whole or in part; (iii) violate either of the charter documents or contravene any provision of any Law, order or decree of any court or governmental authority; or (iv) result in a breach of obligations under the Share Purchase Agreement; and

(iv) no liquidation, dissolution or winding up is pending or has been pending or to the knowledge of the Trustee is threatened, with respect to the Trust.

Indemnity:

The Sponsor ("**Indemnifying Party**") will indemnify, defend and hold harmless any of the Trustee and the Investment Manager , its directors, employees, agents, representatives and officers (each, an "**Indemnified Party**") promptly upon demand at any time and from time to time, from and against Losses (*as defined in the Share Purchase Agreement*) which relate to or arise from:

(i) actual or alleged breach of or inaccuracies or misrepresentations in any of the Seller Warranties or breach of any covenant of the Sponsor herein; or

(ii) any pending or threatened claims against the Project SPVs from the period prior to and including the Closing Date.

Further, the Indemnifying Party will indemnify, defend and hold harmless the Indemnified Party from and against any and all losses suffered or incurred by the Indemnified Party arising out of, or in relation to, any difference arising between the amount of claims made by the Project SPV from NHAI under the 'change in laws' provisions under the Concession Agreement, details in respect of which are provided in the Share Purchase Agreement and the amount actually received by the Project SPV from NHAI ("**Differential Amount**") discounted at the cost of equity applicable at the time of listing of the Units.

Provided that, the Indemnified Party shall provide a grace period of 18 months from the date of receipt of the claim amount from NHAI to the Indemnifying Party to recover the Differential Amount, subject to the Indemnifying Party providing a signed opinion from the any of the Big 4 audit firms confirming that the Differential Amount is a valid claim of the Indemnifying Party.

Provided that the Indemnifying Party shall only be liable to indemnify the Indemnified Party under this Clause 9.2, if the amount received from NHAI is lesser than the amount claimed for the 'change in laws' related claims made to the NHAI as provided under the Share Purchase Agreement.

Further, any obligation of the Indemnifying Party to indemnify or make any other payment to the Indemnified Party under the Share Purchase Agreement will be subject to the limitations on liability set out in Share Purchase Agreement, including amongst other things:

(i) no claim (as defined in the Share Purchase Agreement) arising out of or continuing from the prior concession period of the underlying Project(s) will accrue on account of the Project SPV.

(ii) if any claim is based upon a liability which is contingent only, the Indemnifying Party will not be liable to pay unless and until such contingent liability gives rise to an obligation to make a payment.

(iii) the Indemnifying Party will not be liable for any claim if and to the extent it is attributable to, or the amount of such claim is increased as a result of, any (i) change of Law or regulation or directive of a governmental authority, unless the same has been incurred prior to the Closing Date, or (ii) change in the rates of tax in force after the date of the Share Purchase Agreement.

(iv) aggregate liability of the Sponsor will not exceed certain thresholds set out in the Share Purchase Agreement;

(v) the Indemnified Party will not be entitled to recover damages or obtain payment, reimbursement, restitution or indemnity more than once in respect of any one loss, breach or other set of circumstances which gives rise to more than one claim;

(a) the Indemnifying Party will be liable for a claim only if (a) the aggregate amount of the liability of the Indemnifying Party for the sum of all claims made exceeds ₹ 2,500,000 ("**Claim Basket**"), at each time a claim is made; and (b) the amount of the liability of the Indemnifying Party for each claim, forming part of such Claim Basket, is not less than ₹ 1,000,000 ("**De Minimis Loss**"), provided that the Indemnifying Party will in no event be liable for a claim where the liability of the Indemnifying Party for such claim is less than the De Minimis Loss. For the avoidance of doubt, it is clarified that in the event that the claim exceed the Claim Basket, the Indemnifying Party shall be liable to the Indemnified Party for the full amount of the claims and not just the amount exceeding the Claim Basket.

Notwithstanding the above, the Sponsor shall at all times be responsible for the Formation Transactions in accordance with Regulations 12(3)(a) and 12(3)(b) of the SEBI InvIT Regulations.

Termination:

The Share Purchase Agreement shall be effective from the date of execution of the Share Purchase Agreement, and shall continue to be valid and in full force and effect unless terminated:

(i) By mutual consent of the parties in writing, prior to the CP Long Stop Date (*as defined in the Share Purchase Agreement*); or

(ii) At the option of the Trust, with notice to the other parties, when any Material Adverse Effect (*as defined in the Share Purchase Agreement*) takes place.

Acquisition of future assets by the Trust

II. ROFO Agreement

The Trust (acting through the Trustee) and Investment Manager have entered into a right of first offer agreement with the Sponsor to acquire 100% shareholding held by the Sponsor in the ROFO SPVs. The consideration for such acquisition will be as mutually agreed between the parties to the ROFO Agreement and which shall be on arm's length basis as decided by the IM Board and based on the valuation undertaken by the valuer and financial and legal due diligence undertaken by the Investment Manager at the time of such acquisition.

The key terms of the ROFO Agreement are as follows:

Effectiveness:

The ROFO Agreement will become effective and binding on the parties thereto on and from the date on which the Units are listed and commence trading on the stock exchanges ("**Effective Date**").

Scope and Applicability:

The scope of the ROFO Agreement covers the acquisition of ROFO SPVs. Under the terms of the ROFO Agreement, ROFO SPVs are defined to mean special purpose vehicles holding assets ("**ROFO Assets**") which would qualify as Eligible ROFO Assets. Under the ROFO Agreement, Eligible ROFO Asset is defined as a ROFO Asset which is (i) owned and controlled by the Sponsor, which generate compounded internal rate of return on the equity investment in HAM and toll assets as provided in the ROFO Agreement, calculated from the date of investment; (ii) is a road or highway concession by NHAI or any other department of the Central Government; and (ii) the remaining concession life of the such ROFO Asset is at least 5 years. . The Sponsor is not permitted to sell any ROFO Assets to any Third Person without first making a right of first offer to the InvIT, in accordance with the ROFO Agreement.

Valuation

The valuation of the ROFO SPVs will be undertaken by a registered valuer, appointed by the InvIT through the Investment Manager, in accordance with applicable law and the price of the ROFO SPVs will be determined based on the valuation report prepared by the registered valuer.

Acquisition process for the ROFO SPVs:

(i) Subject to, and in accordance with, the ROFO Agreement, the Trust will, at all times, purchase the entire 100% of the legal and beneficial interest of the fully paid up equity shares, debt securities and all other

securities of the ROFO SPVs, held by the Sponsor ("**ROFO Securities**"), except to the extent of any mandatory holding of shares or interest and rights in the ROFO Securities as per any act or regulations or circulars or guidelines of government or any regulatory authority or concession agreement.

(ii) In case the Sponsor determines in accordance with the prior approval of its board of directors, and its shareholders as may be required under the Applicable Law, to sell its legal and beneficial interest in the ROFO Securities, it shall make an irrevocable invitation to offer to the InvIT, through the Trustee or the Investment Manager, for the acquisition of such ROFO Securities (the "**Invitation to Offer**"). The Parties hereby agree that the Sponsor shall not sell any ROFO Securities without first making a right of first offer to the InvIT, in accordance with this Right of First Offer Agreement.

(iii) In the event the Trust is interested in the acquisition of all (and not less than all) of the ROFO Securities set out in the Sponsor ROFO Notice, the InvIT shall communicate such interest in writing within a period of 15 (fifteen) days from the date of receipt by the InvIT of the Sponsor ROFO Notice, which may be accompanied with a due diligence questionnaire that is customary for transactions of such nature (the "**Notice of Interest**"). It is clarified that the Notice of Interest shall not be construed as any irrevocable offer made by the InvIT to acquire the ROFO Securities. Within 120 (one hundred and twenty) days from the date from the Notice of Interest, the InvIT shall (a) provide its binding written acceptance to the Sponsor indicating its acceptance to the Sponsor ROFO Price; or (b) a counter-offer to the Sponsor ROFO Price, including details of the terms of the transaction ("**InvIT Counter-Offer**"). In the event the InvIT Counter-Offer is not acceptable to the Sponsor, the Parties shall have the right to negotiate the InvIT Counter-Offer and mutually agree with on a negotiated price ("**Negotiated ROFO Price**") within a period of 30 (thirty) days from the InvIT Counter-Offer Period or such other extended period as may be mutually agreed by the Parties ("**ROFO Negotiation Period**").

(iv) In case the right of the Sponsor to sell the ROFO Securities to any Third Person is triggered under the terms of the ROFO Agreement, then the Sponsor shall ensure that the sale of the ROFO SPV to any Third Person is at a price more than, the lower of (i) the InvIT Counter ROFO or (ii) the Sponsor ROFO Price.

Termination:

Right of First Offer Agreement shall come into force and effect as set out in the Agreement and shall continue to be valid and in full force and effect for a period of 5 (five) years from the Effective Date and shall automatically renew for an additional period of 5 (five) years, unless terminated in accordance with the ROFO Agreement. The Term may be extended by mutual agreement of the Parties.

Approval from NHAI for the Formation Transactions

The Project SPVs had applied for the approvals from NHAI in connection with undertaking the Formation Transactions and other related actions. As of date of this Offer Document, the Project SPVs have received NHAI approval for undertaking Formation Transactions and related actions. The grant of such approvals is subject to certain conditions. For further details, refer to the section titled "***Regulatory Approvals - Approvals in relation to the Offer***" and "***Risk Factors - Consummation of the Formation Transactions pursuant to which we will acquire the Project SPVs are subject to certain conditions***" on pages 347 and 21, respectively.

PARTIES TO THE TRUST

*The summaries of the key terms of certain material contracts and agreements included herein are not complete and are subject to, and are qualified in their entirety by reference to, the provisions of the respective material contracts and agreements. Copies of the material contracts and agreements described herein are available for inspection at the principal place of business of the Trust. For further details, see "**Material Contracts and Documents for Inspection**" on page 389.*

A. The Sponsor – Gawar Construction Limited

History and Certain Corporate Matters

Gawar Construction Limited was established as a partnership firm '*Gawar Construction Company*' in 1997 and was subsequently converted into a public limited company as '*Gawar Construction Limited*' on March 31, 2008 under the Companies Act, 1956, with the corporate identification number as U70109HR2008PLC037773. The Sponsor's registered office is situated at DSS – 378 Sector 16-17, Hisar 125 005, Haryana, India. For further details, see '***General Information***' on page 72.

Background and past experience of the Sponsor

The Sponsor is an integrated road EPC company with presence in India. It undertakes execution of projects under EPC and HAM in the road construction and civil infrastructure sector. The Sponsor undertakes projects awarded by government companies / departments such as NHAI, Ministry of Road Transport and Highways, Mumbai Metropolitan Region Development Authority, National Highways and Infrastructure Development Corporation Limited, among others.

The Sponsor has over 15 years of experience in execution of road construction projects and has undertaken more than 100 road construction projects since 2008. The Sponsor has developed an established track record of efficient project management and execution through its business model which combines its trained manpower with efficient deployment and utilization of equipment. Through efficient supply chain management, the Sponsor endeavours to ensure that the key construction materials are delivered in a timely manner to the facilities and construction sites, enabling the Sponsor to manage its processes effectively and maintain its key raw material inventory to an optimum. The project management team, working in conjunction with the design and engineering team, ensures operational efficiencies through overall supervision of the manufacturing and project execution process. The Sponsor complies with the eligibility requirements under the SEBI InvIT Regulations of ensuring a sound track record in development of infrastructure.

The Sponsor is in compliance with the eligibility requirements prescribed under the SEBI InvIT Regulations. The net worth of the Sponsor as on March 31, 2024, stood at ₹ 43,358.70 million. The Sponsor shall continue to comply with the minimum net worth requirement set out in Regulation 4(2)(d)(ii) of the SEBI InvIT Regulations.

Other Confirmations

As of the date of this Offer Document, the Sponsor is in compliance with the eligibility criteria provided under Regulation 4 of the SEBI InvIT Regulations and is a "fit and proper person" as prescribed under SEBI Intermediaries Regulations.

Further, neither the Sponsor (which is also the Project Manager) nor any of the promoters or directors of the Sponsor: (i) are debarred from accessing the securities market by SEBI; (ii) are promoters, directors or persons 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; (iii) are wilful defaulters or fraudulent borrowers as per the list published by the Reserve Bank of India; (iv) are fugitive economic offenders; or (v) any disciplinary action is taken by SEBI or other regulatory authorities against the Sponsor.

Sponsor Group

As on date of this Offer Document, the Sponsor Group comprises Gawar Construction Limited, the Sponsor.

Details of the Holding or the Proposed Holding by Sponsor in the Trust

For details please see the section titled "***Information Concerning the Units***" on page 77.

B. The Trustee – Axis Trustee Services Limited

History and Certain Corporate Matters

Axis Trustee Services Limited is the Trustee of the Trust. It is a debenture trustee registered with SEBI under the Securities and Exchange Board of India (Debenture Trustee) Regulations, 1993 having registration number IND000000494 and its certificate of registration is valid until suspended or cancelled by SEBI. The Trustee was incorporated in India under the Companies Act, 1956 with corporate identification number U74999MH2008PLC182264. The Trustee was originally incorporated on May 16,

2008 at Mumbai, Maharashtra. The Trustee's registered office located at Axis House, Bombay Dyeing Mills Compound, Pandurang Budhkar Marg, Worli, Mumbai 400 025, Maharashtra, India and its corporate office at the Ruby, 2nd Floor, SW29, Senapati Bapat Marg, Dadar West, Mumbai 400 028. For further details, see "***General Information***" on page 72.

Background of the Trustee

The Trustee is a wholly-owned subsidiary of Axis Bank Limited engaged in providing corporate and other trusteeship services. The Trustee's services are aimed at catering to the individual needs of the client and enhancing client satisfaction. As Trustee, it ensures compliance with all statutory requirements and believes in the highest ethical standards and best practices in corporate governance. It aims to provide the best services in the industry with its well trained and professionally qualified staff with a sound legal acumen. The Trustee confirms that it has maintained 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 Trust Deed, the SEBI InvIT Regulations and other applicable law.

The Trustee is involved in varied facets of debenture and bond trusteeships, including, advisory functions and management functions. The Trustee also acts as a security trustee and is involved in providing services in relation to security creation, compliance and holding security on behalf of lenders. The Trustee is also authorised to provide services inter alia as: (i) a facility agent for complex structured transactions; (ii) an escrow agent; (iii) a trustee to alternative investment funds and venture capital funds; (iv) custodian of documents as a safe-keeper; and (v) a trustee to real estate investment funds.

Other Confirmations

The Trustee is not an Associate of the Sponsor or the Investment Manager. Further, as of the date of this Offer Document, the Trustee is in compliance with the eligibility criteria provided under Regulation 4 of the SEBI InvIT Regulations and is a "fit and proper person" as prescribed under SEBI Intermediaries Regulations.

Further, neither the Trustee nor the settlor of the Trustee, any of the promoters or directors of the Trustee (i) are debarred from accessing the securities market by SEBI; (ii) are promoters, directors or persons 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; (iii) are wilful defaulters or fraudulent borrowers as per the list published by the Reserve Bank of India; or (iv) are fugitive economic offenders.

Details of the Holding or the Proposed Holding by Trustee in the Trust

Trustee does not propose to hold the Units of the Trust.

Board of Directors of the Trustee

The board of directors of the Trustee is entrusted with the responsibility for the overall management of the Trustee. See below the details in relation of the board of directors of the Trustee:

Sr. No.	Name	DIN
1.	Deepa Rath	09163254
2.	Prashant Ramrao Joshi	08503064
3.	Arun Mehta	08674360
4.	Parmod Kumar Nagpal	10041946

Brief biographies of the Directors of the Trustee

Please see below brief biographies of the Directors of the Trustee:

1. Deepa Rath

Deepa Rath is the managing director and chief executive officer on the board of directors of the Trustee.

2. Prashant Ramrao Joshi

Prashant Ramrao Joshi is an additional director (non-executive) on the board of directors of the Trustee.

3. Arun Mehta

Arun Mehta is an additional director (non-executive independent) on the board of directors of the Trustee.

4. Parmod Kumar Nagpal

Parmod Kumar Nagpal is an additional director (non-executive independent) on the board of directors of the Trustee.

Key Terms of the Trust Deed

The Trustee has entered into the Trust Deed, in terms of the SEBI InvIT Regulations, the key terms of which, are provided below:

1. *Powers of the Trustee*

The Trustee has been provided with various powers under the Trust Deed in accordance with the Trusts Act and the SEBI InvIT Regulations, including but not limited to:

(a) *General powers*: Without prejudice to the scope and generality of the powers and authority conferred upon the Trustee under the Indian Trusts Act, 1882 and subject to any restrictions expressly contained in the Trust Deed and under applicable law, the Trustee shall, in relation to the InvIT, have every and all powers that a Person competent to contract and acting as a legal and beneficial owner of such property has, and such powers shall not be restricted by any principle of construction or rule or requirement other than Applicable Law, but shall operate according to the widest generality of which the foregoing words are capable, notwithstanding that certain powers are more specifically set forth herein.

(b) The Trustee shall have the power to appoint the Investment Manager as the investment manager of the InvIT and shall have the power to delegate all or any of the powers of the Trustee, as set out in the Trust Deed and as permitted under Applicable Law, to the Investment Manager. The Trustee shall have the power to execute the Investment Management Agreement with the Investment Manager, the Project Management Agreement with the Project Manager and any other agreement or arrangement, from time to time, with the Investment Manager or any of its nominees.

(c) The Trustee shall have the power to determine, in accordance with the Investment Management Agreement and Investment Objectives, Distributions to Unitholders and other rights attached to the Units in accordance with the SEBI InvIT Regulations and applicable law.

(d) The Trustee shall oversee voting of Unitholders in accordance with the SEBI InvIT Regulations.

(e) *Power to accept subscription to Units of the InvIT:* The Trustee shall have the power to do the following, which power may be delegated to the Investment Manager in terms of the Investment Management Agreement:

(i) cause the offering of the Units through any Offer Document;

(ii) cause any Offer Document to be provided to the investors;

(iii) issue and allot Units;

(iv) summon and conduct meetings of the Unitholders in accordance with the relevant InvIT documents and the SEBI InvIT Regulations;

(v) subject to, and only in accordance with, the terms of the InvIT documents and the SEBI InvIT Regulations, approve transfer of the Units;

(vi) issue and allot Debt Securities, subject to and in accordance with the InvIT documents and the SEBI InvIT Regulations; and

(vii) all such acts, deeds and actions as may be necessary in relation to the exercise of any of the powers specified under paragraphs (i) to (v) above.

(f) *Power to make decisions regarding investments and disinvestments:* The Trustee shall invest and hold the InvIT Assets in the name of the InvIT for the benefit of the Unitholders in accordance with the provisions of the SEBI InvIT Regulations, the InvIT documents, the Trust Deed and the objectives of the investment. The Trustee shall be empowered to make investment decisions with respect to the underlying assets or projects of the InvIT including any further investments or divestment, subject to SEBI InvIT Regulations, provided such power is delegated to, and exclusively exercised by, the Investment Manager pursuant to the Investment Management Agreement, and in this regard is also empowered to;

(i) make all decisions, concerning the investigation, selection, development, negotiation, structuring, restructuring, investment of Trust Fund, divestments of investments (including any additions or accretions thereto) and the appointment of various advisors and service providers in connection with such investments;

(ii) direct and approve the formulation of investment policies and strategies for the InvIT and to direct and approve the investment of the Trust Fund, in accordance with the Investment Objectives;

(iii) acquire, hold, manage, trade, transfer and dispose of shares, stocks, convertibles, debentures, bonds and other equity or equity-related securities and other debt issued by any Holding Company, SPVs, investment entity, infrastructure projects in India, whether in physical or dematerialised form, including power to hypothecate, pledge or create Encumbrances of any kind on such securities held by the InvIT in such Holding Companies, and/or SPVs, investment entity or infrastructure projects to be used as collateral security for any borrowings by the InvIT or any Holding Company, SPV or investment entity;

(iv) avail commercial loans, including the power to hypothecate, pledge or create Encumbrances of any kind on the InvIT Assets as collateral security for any such loans availed by the InvIT or any Holding Company, SPV or investment entity, in accordance with the SEBI InvIT Regulations and Applicable law;

(v) keep the capital and monies of the InvIT, the Holding Companies and the SPVs or investment entities on deposit with banks or other institutions whatsoever, in accordance with the SEBI InvIT Regulations and other Applicable law;

(vi) keep the Trust Fund in deposits with banks or in such other instruments or form as permitted under the SEBI InvIT Regulations in the name of the InvIT;

(vii) undertake lending to Holdcos, SPVs and any other Persons permitted under applicable law;

(viii) accept Capital Contributions;

(ix) collect and receive profit, interest, repayment of principal of debt or debt like, or equity or equity like, dividend, return of capital of any type by the Holding Companies, or SPVs, or infrastructure projects and income of the InvIT as and when the same may become due and receivable;

(x) invest in securities or in units of mutual funds in accordance with the SEBI InvIT Regulations and applicable law by the InvIT, the Holding Companies and the SPVs;

(xi) invest in money market instruments including government securities, treasury bills, certificates of deposit and commercial paper in accordance with applicable law;

(xii) to give, provide and agree to provide to the Holding Companies and any SPV or investment entity, financial assistance in the form of investment in debt securities or share capital of any class including ordinary, preference, participating, non-participating, voting, non-voting or other class, and in the form of investment in securities convertible into share capital;

(xiii) to invest, acquire, purchase, hold, divest, sale, hypothecate, pledge or otherwise transfer land and building and immovable property of any kind including any rights and interest therein;

(xiv) provide guarantee, security or other collateral facility in connection with any financing, borrowings or otherwise, undertaken by the InvIT, Holdcos, SPVs or other investment entities; and

(xv) to appoint advisors and service providers in connection with the foregoing.

(g) *Power to apportion between income and capital:* Subject to the provisions of the SEBI InvIT Regulations, the Trustee, in consultation with the Investment Manager, shall have the power to make reserves out of the income or capital as the Trustee may deem proper in order to meet the expenses, liabilities (including potential tax liability) or contingent liabilities of the InvIT including to address any event of Force Majeure.

(h) *Power to employ agents:* In addition to acting in its capacity as trustee, the Trustee shall have the power to employ and pay at the expense of the InvIT, any agent in any jurisdiction whether attorneys, solicitors, brokers, banks, trust companies or other agents whether associated or connected in any way with the Trustee or not, without being responsible for the default of any agent if employed in good faith to transact any business, including without limitation, the power to appoint agents to raise funds, or do any act required to be transacted or done in the execution of the trusts hereof including the receipt and payment of moneys and the execution of documents.

(i) *Power to employ Investment Manager:* The Trustee shall, on behalf of the InvIT, within a reasonable time from the date of execution hereof, appoint the Investment Manager as the investment manager to the InvIT, by execution of the Investment Management Agreement, on behalf of the InvIT, to manage the assets and

investments of the InvIT and undertake activities of the InvIT in accordance with the terms and conditions set out in the Trust Deed and the Investment Management Agreement and Applicable law.

(j) *To oversee activities of the Investment Manager*: The Trustee shall oversee the activities of the Investment Manager in the interest of the Unitholders, ensure that the Investment Manager complies with the SEBI InvIT Regulations and Applicable law and shall obtain a compliance certificate from the Investment Manager on a quarterly basis, quarterly reports on the activities of the InvIT or any other reports required in the manner set out under Applicable law.

(k) *Power to employ Project Manager:* The Trustee shall, on behalf of the InvIT, within a reasonable time from the date of execution hereof, appoint the Project Manager as the project manager for the InvIT, by execution of the Project Implementation and Management Agreement, for the operation and management of the InvIT Assets, in accordance with the terms and conditions set out in the Trust Deed, the Project Implementation and Management Agreement and Applicable law. The Project Management Fees shall be paid by the InvIT and/or the SPVs in accordance with the Project Implementation and Management Agreement and Applicable law.

(l) *To oversee activities of the Project Manager:* The Trustee shall oversee activities of the Project Manager in terms of the SEBI InvIT Regulations and Applicable law and the Project Implementation and Management Agreement and shall obtain a compliance certificate from the Project Manager on a quarterly basis or such other time period as prescribed by Applicable law, in the form prescribed by SEBI, if any.

(m) *Power to appoint nominees and Custodians:* The Trustee may, in consultation with the Investment Manager, appoint any Custodian in order to provide Custodian services, and may permit any property comprised in the InvIT to be and remain deposited with a Custodian or with any Person or Persons in India or in any other jurisdiction subject to such deposit being permissible under the Applicable law.

(n) *Power to pay duties and taxes:* In the event of any capital gains tax, income tax, stamp duty or other duties, fees or taxes (and any interest or penalty chargeable thereon) whatsoever becoming payable in any jurisdiction in respect of the InvIT or any part thereof or in respect of documents issued or executed in pursuance of the Trust Deed in any circumstances whatsoever, the Trustee shall have the power and duty to pay all such duties, fees or taxes (and any interest or penalty chargeable thereon) as well as to create any reserves for future potential tax liability out of the InvIT or the income thereof, or to the extent of the amount invested in the Units by the Unitholders, as may be permitted under Applicable law, and the Trustee may pay such duties, fees or taxes (and any such interest or penalty) on behalf of the InvIT. For avoidance of doubt, it is clarified that, pursuant to this Article, no Unitholder will be required to make a contribution as a capital commitment to the InvIT (other than the value for Units already paid).

(o) *Power to expend on behalf of the InvIT:* The Trustee shall, subject to the advice of the Investment Manager, have the power to pay InvIT Expenses out of the funds held by the InvIT in accordance with the InvIT documents and SEBI InvIT Regulations. The Trustee shall also have the power to utilise any tax credits available to the InvIT, prior to making any such payment of taxes or expenses.

(p) *Power to take counsel's opinion:* The Trustee shall, in discharge of its duties, have the power to appoint counsel, take the opinion of legal/tax counsel in any jurisdiction concerning any disputes or differences arising under the Trust Deed or any matter relating to the InvIT or the InvIT Assets and the fees of such counsel shall be paid from the Trust Fund, or from the funds held by the InvIT, the respective Holdcos, the SPVs, investment entity or other assets of the InvIT, in respect of which such opinion is sought.

(q) *Power to appear before relevant authorities:* The Trustee shall, in discharge of its duties, have the power to appear before the relevant authorities, submit information, seek clarifications from any regulatory authority and complete, sign and submit any applications or documents for any approvals, permissions, or actions that may be necessary or desirable on behalf of the InvIT.

(r) *Power to conduct activities with trustees of other trusts:* The Trustee may, in execution of the InvIT hereof or in exercise of any of the powers hereby or by law given to the Trustee sell, rent or buy any properly, or borrow property from or carry out any other transaction with the trustees of any other trust or the executors or administrators of any estate notwithstanding that the Trustee is the same Person as those trustees, executors or administrators or any of them and where the Trustee is the same Person as those trustees, executors or administrators, the transaction shall be binding on all Persons then or thereafter interested hereunder though effected and evidenced only by an entry in the books of accounts of the Trustee, provided such power is delegated to, and exclusively exercised by, the Investment Manager pursuant to the Investment Management Agreement. The Trustee shall ensure that no conflicts of interest shall arise whilst conducting such activities.

(s) *Power to effect compromises:* Subject to Applicable law, the Trustee shall have the power to:

(i) accept any property before the time at which it is transferable or payable;

(ii) pay or allow any claim on any evidence that it thinks sufficient;

(iii) accept any security movable or immovable in lieu of any amounts payable to it;

(iv) alter the dates for payment of any amounts payable to it; and

(v) compromise, compound, abandon or otherwise settle any claim or thing whatsoever relating to the InvIT or the Trust Deed.

(t) *Power to borrow:* The Trustee shall, subject to the advice of the Investment Manager, have the power to borrow funds or incur financial indebtedness through any mode including by way of issuance of debt securities, any subordinated equity, bonds, commercial papers, long-term loans, short term loans, or other fund as permitted under the SEBI InvIT Regulations from any Person or authority (whether Government or otherwise, whether Indian or overseas) for the purpose of the InvIT and/or the InvIT Assets on such terms and conditions and for such periods and subject to approval of the Unitholders in accordance with and as may be required in terms of the SEBI InvIT Regulations and Applicable law in case of a listed InvIT. The Trustee shall, subject to the advice of the Investment Manager, also have the power to create Encumbrances or cause the Holdcos, SPVs and investment entities to create Encumbrances of any kind on the InvIT Assets, held directly or indirectly as collateral security for any such borrowings. Further, the Trustee (acting in capacity of the trustee of the InvIT) shall have the power to create charge, security interest and/or lien over any or all of the assets of the InvIT (both present or future), to secure and/or guarantee the performance or any of the obligations of the Holdcos/SPVs or investment entity, as it may deem fit, subject to compliance with Applicable law.

(u) *Power to lend:* Subject to restrictions contained in the InvIT documents and Applicable laws (including the limits and restrictions prescribed under the SEBI InvIT Regulations), the Trustee may, in consultation with, and upon the recommendation of the Investment Manager, extend loans from the Trust Fund to the Holdcos/SPVs/investment entities (subject to disclosures required to be made in accordance with the SEBI InvIT Regulations) and any other Persons permitted under Applicable law and also subscribe to debt securities or quasi debt securities or any similar kind of securities issued by the Holdcos/SPVs/investment entities or any other Person permitted under the applicable law from the Trust Fund. Provided that investment in debt securities shall not be considered as lending.

(v) *Power to re-invest:* Subject to the conditions laid down in any Offer Document, InvIT documents, and the SEBI InvIT Regulations and applicable law, the Trustee may, subject to any advice of the Investment Manager, retain any proceeds received by the InvIT from any InvIT Assets.

(w) *Power to repay debt:* Subject to Applicable law and the advice of the Investment Manager, the Trustee may cause the InvIT to pay, prepay or repay any and all debt raised from any Person in accordance with the terms therein and to redeem any debt securities or other securities, obligations or instruments in accordance with the terms thereof issued to such Persons in compliance with the SEBI InvIT Regulations and other Applicable law.

(x) *Power to make rules:* The Trustee may, make rules to give effect to, and carry out the Investment Objectives. In particular, and without prejudice to the generality of such powers, the Trustee may provide, not inconsistent with the provisions of the Trust Deed and the SEBI InvIT Regulations, for all or any of the following matters, namely:

(i) manner of maintaining of the records and particulars of the Unitholders;

(ii) norms of investment by the InvIT in accordance with the Investment Objectives of the InvIT and in accordance with the powers and authorities of the Trustee as set out herein;

(iii) matters relating to entrustment/deposit or handing over of any securities or SPVs of the InvIT to any one or more Custodians and the procedure relating to the holding thereof by the Custodian;

(iv) such other administrative, procedural or other matters relating to the administration or management of the affairs of the InvIT and which matters are not by the very nature required to be included or provided for in the Trust Deed or by the management thereof and which matters are not in consistent provisions thereof;

(v) procedure for seeking the vote of the Unitholders either by calling a meeting or through postal ballot or otherwise; and

(vi) procedure for summoning and conducting meetings of Unitholders.

The aforementioned power to make rules may be delegated by the Trustee to the Investment Manager subject to the SEBI InvIT Regulations and in terms of the Investment Management Agreement.

(a) *Power to maintain register:* The Trustee shall cause the Depository to maintain the Depository Register in accordance with the InvIT documents and SEBI InvIT Regulations.

(b) *Power to appoint intermediaries:* The Trustee shall advise the Investment Manager in relation to the appointment of Valuer, Auditors, registrar and transfer agent, merchant bankers, Custodian, Credit Rating Agency and any other intermediary or service provider or agent as may be applicable with respect to the activities pertaining to the InvIT, in a timely manner, in accordance with the SEBI InvIT Regulations and Applicable law. The Investment Manager shall ensure that the activities of, and the services provided by, any of the intermediaries set out above are as per the provisions of the SEBI InvIT Regulations and applicable law.

(c) *Power to review reports:* The Trustee shall review the reports required in terms of SEBI InvIT Regulations and applicable law. as submitted by the Investment Manager. In the event such reports are not submitted in a timely manner, the Trustee, after due follow-up, shall intimate the same to SEBI.

(d) *Power to open and operate bank accounts:* The Trustee shall have the power to open, maintain and close one or more bank accounts, draw cheques or other orders for the payment of money and open, maintain and close demat, brokerage, mutual fund and similar accounts for the purposes of the InvIT, to deposit and withdraw money and fully operate the same.

(e) *Other matters authorised by the Unitholders:* The Trustee shall have the power to take up with SEBI or with the stock exchanged) as applicable, any matter which has been approved in any meeting of Unitholders, if the matter requires such action.

(f) *Other powers:* Without prejudice to any other provisions of the Trust Deed, the Trustee shall also have the following powers and authorities exercisable pursuant to the advice of the Investment Manager:

(i) to institute, conduct, compromise, compound, oppose or abandon any legal proceedings for or on behalf of or in the name of the InvIT or the Trustee, and to defend, compound or otherwise deal with any such proceedings against the InvIT or Trustee (in its capacity as Trustee) or its officers or concerning the affairs of the InvIT, and also to compound and allow time for payment or satisfaction of any equity due and of any claims, damages or demands by or against the InvIT (including for which the InvIT may or may be alleged to be liable in respect of the transaction done by the Trustee under the InvIT) and to refer any differences to arbitration and observe and perform in relation to any decisions thereof;

(ii) to make and give receipts, releases and other discharges for moneys payable to the InvIT and for the claims and demands of the InvIT;

(iii) to vary, alter, postpone, extend or cancel the terms and conditions of agreements, in relation to investments, as entered into with the relevant SPVs/Holdcos/investment entities, as applicable;

(iv) to enter into all such negotiations and contracts, and, execute and do all such acts, deeds and things for or on behalf of or in the name of the InvIT as the Trustee may consider expedient for or in relation to any of the matters or otherwise for the purposes of the InvIT;

(v) to sign, seal, execute, deliver and register according to law all deeds, documents, agreements, and assurances in respect of the InvIT;

(vi) to ascertain, appropriate, declare, carry forward and distribute or reinvest/ the surplus or otherwise deal with any surplus in the Trust Fund in compliance with the SEBI InvIT Regulations, to determine and allocate income, profits and gains and expenses in respect of the InvIT to and amongst the Unitholders and to transfer such sums as the Trustee may, deem fit to one or more reserve funds which may be established by the Trustee;

(vii) to open, maintain and close one or more bank accounts, draw cheques or other orders for the payment of money and open, maintain and close demat, brokerage, mutual fund and similar accounts for the purposes of the InvIT, to deposit and withdraw money and fully operate the same;

(viii) to negotiate, sign, seal, execute and deliver the InvIT Documents, including but not limited to, any issue agreement, share purchase agreement, services agreement, deed of right of first offer, debenture subscription agreement, escrow agreement, underwriting agreement, loan documentation, Offer Document or any other deed, agreement or document in connection with the InvIT or the Units, including any amendments, supplements or modifications thereto;

(ix) take into their custody and/or control all the capital, assets, property of the InvIT and hold the same in trust for the Unitholders in accordance with the Trust Deed, the SEBI InvIT Regulations and Applicable law; and

(x) generally to exercise all such powers as it may be required to exercise under the SEBI InvIT Regulations and Applicable law for the time being in force and do all such matters and things as may promote the InvIT or as may be incidental to or consequential upon the discharge of its functions and the exercise and enforcement of all or any of the powers and rights under the Trust Deed.

(g) *Power for buy-back Units:* Subject to Applicable law, the Trustee may at any time, buy-back the Units from the Unitholders.

(h) *Power to determine remuneration:* The Trustee shall have the power, whether directly (in consultation with or recommendation of the Investment Manager) or through the Investment Manager where the Investment Manager has been so authorised by the Trustee under the Investment Management Agreement, to appoint, determine the remuneration of and enter into, execute, deliver, perform, modify or terminate all documents, agreements and instruments containing customary terms including contractual indemnities with Valuers, Auditors, registrar and transfer agents, merchant bankers, Credit Rating Agencies, search agents, Custodians, property consultants, brokers, legal, financial and tax consultants or any other intermediary or professional service provider or agent as may be required in connection with the activities of the InvIT in a timely manner and as per the provisions of the SEBI InvIT Regulations and other applicable law.

(i) *Power to delegate:* For administrative and operational convenience, the Trustee may, as recommended by the Investment Manager from time to time, delegate to any committee or any other Person, any powers set out above and the duties set out below, or as available to it under the SEBI InvIT Regulations and applicable law, including, inter alia, management of the assets and investments of the InvIT vested in it under the Trust Deed, taking investment decisions, issue, listing and allotment of Units and making distributions in accordance with the SEBI InvIT Regulations, provided, however, the Trustee shall remain responsible and liable for any such Persons' acts of commission or omission as determined finally by a court of competent jurisdiction whose decision is final, binding and non-appealable, except the roles and responsibilities delegated by the Trustee to Investment Manager, Project Manager or any third party expert, or any sub-delegation by the Investment Manager or the Project Manager.

2. *Duties of the Trustee*

(a) The Trustee shall use best endeavours to carry on and conduct its business in a proper and efficient manner in the best interest of the Unitholders.

(b) The Trustee, on behalf of the InvIT, shall appoint an Investment Manager and Project Manager in accordance with the SEBI InvIT Regulations and applicable law.

(c) *Investment Management Agreement:*

The Trustee shall, on behalf of the InvIT, within a reasonable time from the date of execution of the Trust Deed, enter into the Investment Management Agreement with the Investment Manager.

(d) *Ensure that the Investment Manager performs its obligations;*

(i) The Trustee shall ensure that the Investment Manager complies with reporting and disclosure requirements in accordance with the SEBI InvIT Regulations and in case of any delay or discrepancy, require the Investment Manager to rectify such delay or discrepancy on an urgent basis.

(ii) The Trustee shall review and oversee the transactions carried out between the Investment Manager and its Associates and, where the Investment Manager has advised that there may be a conflict of interest, it shall obtain a certificate from a practising chartered accountant or valuer, as applicable, that such transaction is on arm's length basis.

(iii) The Trustee shall review the valuation report submitted by the Investment Manager.

(iv) 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 InvIT.

(v) The Trustee may maintain or cause the Investment Manager or the registrar and transfer agent to maintain a register of the Units of the InvIT.

(vi) The Trustee shall ensure that the Investment Manager convenes meetings of the Unitholders in accordance with the SEBI InvIT Regulations and oversee the voting by Unitholders. The Trustee shall ensure that the Investment Manager convenes meetings of Unitholders not less than once every year and the period between such meetings shall not exceed 15 months or such time as prescribed tinder the SEBI InvIT Regulations. Provided that where there is a change or removal of the Investment Manager, or a Change in Control of the Investment Manager, the trustee shall be responsible for convening and conducting of the meetings of the Unitholders in accordance with the SEBI InvIT Regulations. Further, in respect of issues pertaining to the Trustee including a change in the Trustee, the Trustee shall not be involved in any manner in the conduct of the meeting.

(vii) The Trustee shall cause the Investment Manager to insure the InvIT Assets against any loss or damage from any peril, any assets and property forming part of the InvIT, for any amount, as per the SEBI InvIT Regulations, and to pay the premiums out of the Trust Funds.

(e) *Trust Fund*:

The Trustee shall hold the Trust Fund and all assets comprised thereunder, in trust for the benefit of the Unitholders in accordance with the Trust Deed and the SEBI InvIT Regulations. The Trustee shall ensure that the Capital Contribution is kept in a separate bank account in the name of the InvIT and unless otherwise provided for, only utilised for adjustment against allotment of Units or refund of money to the applicants till the time such Units are listed and the same will then be utilised for the objectives stated in this Offer Document filed by the InvIT (as the case may be).

(f) *Providing information to the Unitholders, SEBI and the stock exchange(s):* The Trustee shall, through the Investment Manager, provide such documents and information to the Unitholders as may be required by the SEBI, Stock Exchanges and governmental authorities, as applicable, with respect to activities carried on by the InvIT. The Trustee shall provide SEBI and the stock exchange(s), where applicable, such information as may be sought by SEBI or by the stock exchange(s) pertaining to the activity of the InvIT. The Trustee shall comply with intimation requirements under the SEBI InvIT Regulations and Applicable law, including in relation to intimating SEBI in case of any discrepancy in the operation of the InvIT with the SEBI InvIT Regulations and any Offer document. The Trustee shall also immediately inform SEBI in case any act which is detrimental to the interest of the Unitholders is noted.

(g) *Interests of the Unitholders:* The Trustee shall, at all times, exercise due diligence in carrying out its duties and protecting the interests of the Unitholders.

(h) *Delegation to Investment Manager and Project Manager:*

(i) 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 under Applicable law. The Trustee shall coordinate with the Investment Manager, as may be necessary, with respect to the operations of the InvIT.

(ii) The Trustee shall delegate all such powers to the Project Manager, as may be required by the Project Manager, to carry out its obligations under the Project Implementation and Management Agreement and under Applicable law.

(i) *Change in, or Change in Control of the Investment Manager:* The Trustee shall obtain prior approval from the Unitholders in accordance with the SEBI InvIT Regulations before any change in, or Change in Control of, the Investment Manager due to removal or otherwise. In this regard, the Trustee shall also obtain prior approval from SEBI prior to any change in Investment Manager or Change in Control of the Investment Manager, in the event that such approval is required in terms of the SEBI InvIT Regulations. In case of change in Investment Manager due to removal or otherwise, the Trustee shall appoint a new investment manager in accordance with the SEBI InvIT Regulations and Applicable law, within the time period prescribed under the SEBI InvIT Regulations. The previous investment manager shall continue to act as such at the discretion of the Trustee until such time as the new investment manager is appointed. The Trustee shall ensure that the new investment manager shall stand substituted as a party in all the documents to which the earlier Investment Manager was a party. The Trustee shall also ensure that the earlier Investment Manager continues to be liable

for all its acts of omissions and commissions for the period during which it served as investment manager, notwithstanding its termination.

(j) *Change in Project Manager:*

In case of change in Project Manager due to removal or otherwise, the Trustee shall appoint a new project manager in accordance with the SEBI InvIT Regulations and Applicable law. The Trustee shall appoint a new project manager within the time period prescribed under the SEBI InvIT Regulations. The Trustee may, either *suo moto* or based on the advice of the Investment Manager appoint an administrator in connection with an infrastructure project for such terms and on such conditions as it deems fit. The previous project manager shall continue to act as the Project Manager till such time as a new project manager is appointed. All costs and expenses in this regard will be borne by the new project manager. The Trustee shall ensure that the new project manager shall stand substituted as a party in all the documents to which the earlier Project Manager was a party. The Trustee shall also ensure that the earlier Project Manager continues to be liable for all its acts of omissions and commissions for the period during which it served as project manager, notwithstanding its termination.

(k) *Books of account:* The Trustee shall cause the books of accounts of the InvIT to be in accordance with the Trust Deed.

(l) *Attainment of objects of the InvIT:* The Trustee shall ensure that all acts, deeds and things are done for the attainment of the objectives of the investment of the InvIT and in compliance with the SEBI InvIT Regulations and Applicable law and to secure the best interests of the Unitholders.

(m) *Reports to be filed by the InvIT:* The Trustee shall file such reports as may be required by SEBI or any other regulatory authority or as required under the SEBI InvIT Regulations and Applicable law with regard to the activities carried on by the InvIT.

(n) *Review of complaint status:* The Trustee shall periodically review the status of the Unitholders' complaints and their redressal undertaken by the Investment Manager, in accordance with the SEBI InvIT Regulations.

(o) *Confidentiality:* The Trustee and its directors, officers, employees and agents shall at all times maintain the greatest amount of confidentiality as regards the activities and assets of the InvIT and such other matter connected with them and the InvIT generally and shall not disclose any confidential information to any other Person, other than the Investment Manager, or the Project Manager, unless such information is required to be disclosed to some regulatory authority, court or any other Person under any order of court or any law in force in India.

(p) *Segregation of assets and liabilities:* The assets and liabilities of the InvIT 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 assets held under the InvIT 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 administered by the Trustee or by the Investment Manager, respectively.

(q) *Valuer:* The Trustee shall ensure that the Investment Manager ensures that a detailed valuation is undertaken of the InvIT Assets by a Valuer at such intervals and in the manner as may be prescribed under the SEBI InvIT Regulations and Applicable law. The Trustee shall ensure that the remuneration of the Valuer is not linked to or based on the value of the asset being valued. The Valuer shall not be an associate of the Sponsor or the Investment Manager or the Trustee and shall be appointed in accordance with the SEBI InvIT Regulations. The Valuer can be removed or replaced with the prior consent of the Unitholders in the manner specified under the SEBI InvIT Regulations.

(r) *Investment by Trustee:* The Trustee of the InvIT shall not invest in Units of the InvIT.

(s) *Compliance with InvIT Regulations:* The Trustee shall fulfil its obligations in terms of the SEBI InvIT Regulations. The Trustee shall ensure that the activities of the InvIT are being operated in accordance with the provisions of the Trust Deed, the SEBI InvIT Regulations, applicable law and the InvIT documents and in case of any discrepancy, it shall inform SEBI immediately in writing.

(t) *Maintenance of records:* The Trustee shall maintain records in accordance with the SEBI InvIT Regulations and applicable law.

(u) *Winding up of the InvIT:* The Trustee shall wind up the InvIT in accordance with the SEBI InvIT Regulations and applicable law. Upon winding up of the InvIT, the Trustee shall surrender the certificate of registration to SEBI.

(v) *Suspension of Trustee's registration:* The Trustee shall promptly, on occurrence, inform the Sponsor of a cancellation, revocation, suspension, non-renewal of its registration to act as a trustee under applicable law or a breach of the terms of such registration that will materially impair its ability to perform its obligations and exercise its powers under the Trust Deed.

(w) *General Duties:* Without limiting the foregoing general duties, the Trustee shall perform all the duties and obligations set out in the SEBI InvIT Regulations, as may be amended, modified or supplemented from time to time.

3. *Rights of the Trustee*

The Trustee shall have the following rights:

(a) *Right to receive fees:* The Trustee shall have the right to receive trusteeship fees from the Trust Fund for services to be rendered in relation to the InvIT in terms of the offer letter dated September 7, 2023 bearing reference number ATSU CO/ 2023- 2024/ 173 issued by the Trustee.

(b) *Right to receive advice:* The Trustee may, in the discharge of its duties, act upon any advice obtained in writing from any bankers, accountants, brokers, lawyers, professionals, consultants, or other experts acting as advisers to the Trustee.

(c) *Restriction on right to inspect:* Subject to applicable law, no Unitholder shall be entitled to inspect or examine the InvIT's premises or properties (including any Holding Company and SPVs) without tine permission of the Trustee, who shall give such permission, if necessary, in consultation with the Investment Manager. Further, no Unitholder shall be entitled to require discovery of any information respecting any detail of the InvIT's activities or any matter which may relate to the conduct of the business of the InvIT and which information may, in the opinion of the Trustee and the Investment Manager adversely affect the interest of other Unitholders.

(d) *Right to reimbursement of expenses, outgoings, taxes etc.:* Without prejudice to any other provisions of the Trust Deed, but save as otherwise provided for in any InvIT document, the Trustee shall be entitled to reimburse itself and shall be entitled to charge the InvIT, and shall be entitled to be indemnified and be kept indemnified from the InvIT and from any distributions made by the InvIT to the Unitholders, with the expenses, outgoings, taxes, levies, and liabilities (including indemnity obligations of the InvIT, if any) as set out in the Trust Deed.

(e) *Right to accept value or price of the investment:* The Trustee may accept as sufficient evidence for the value of any investment or for the cost price or sale price thereof or for any other fact within its competence, a certificate by a Valuer or any other professional Person appointed by the Investment Manager for the purpose.

4. *Liabilities of the Trustee*

The liabilities of the Trustee in terms of the Trust Deed are as follows:

(a) *Assets received by the Trustee:* The Trustee shall only be liable for such monies, stocks, funds and securities as the Trustee shall have actually received and shall not be liable or responsible for any banker, broker, Custodian or other Person in whose hands the same may be deposited or placed, nor for the deficiency or insufficiency in the value of any investments of the InvIT nor otherwise for any involuntary loss provided that the Trustee or such Person shall have acted in good faith, without gross negligence and shall have used their best efforts in connection with such dealings and matters. Any receipt signed by the Trustee for any monies, stocks, funds, shares, securities, investment or property, paid, delivered or transferred to the Trustee under or by virtue of the Trust Deed or in exercise of the duties, functions and powers of the Trustee shall effectively discharge the Trustee or the Person or Persons paying, delivering or transferring the same therefrom or from being bound to see to the application thereof, or being answerable for the loss or misapplication thereof provided that the Trustee and such Persons shall have acted in good faith, without negligence and shall have used their best efforts in connection with such dealing and matters.

(b) *Acts done in good faith:* The Trustee shall not be under any liability on account of anything done or omitted to be done or suffered by the Trustee in good faith in accordance with, or in pursuance of any request or advice of the Investment Manager.

(c) *Suits, proceedings or claims against the InvIT:* The Trustee shall not be under any obligation to institute, acknowledge the service of, appear in, prosecute or defend any action, suit, proceedings or claim in respect of the provisions hereof or in respect of the InvIT Assets or any part thereof or any corporate action which in its opinion, would or might involve it in expense or liability unless the Investment Manager shall so request

in writing and the Trustee in consultation with the Investment Manager is satisfied that the value of the investment is sufficient to provide adequate indemnity against costs, claims, damages, expenses or demands to which it may be put as Trustee as a result thereof. The costs in relation to such action, suit, proceedings or claims (whether undertaken upon request of Investment Manager or otherwise) incurred by the Trustee in connection with or arising out of the InvIT, shall be borne by the InvIT.

(d) *Bona fide action by the Trustee:* The Trustee shall not be liable in respect of any action taken or damage suffered by it on reliance upon any notice, resolution, direction, consent, certificate, affidavit, statement, certificate of stock, plan of reorganization or (without being limited in any way by the foregoing) other paper or document believed to be genuine and to have been passed, sealed or signed by appropriate authorities or entities.

(e) *Acts or things required to be done by the Trustee under law:* The Trustee shall not be liable to the Unitholders for doing or failing to do any act or thing which by reason of any provision of any present or future law or regulation made pursuant thereto, or of any decree, order or judgment of any court, or by reason of any request announcement or similar action (whether of binding legal effect or not) which may be taken or made by any Person or body acting with or purporting to exercise the authority of any government (which legally or otherwise) it shall be directed or requested to do or perform or to forbear from doing or performing. If, for any reason, it becomes impossible or impracticable to carry out any of the provisions of these presents, the Trustee shall not be under any liability therefore or thereby.

(f) *Obligations as per the Indian Trusts Act:* Nothing in the Trust Deed exempts or indemnifies the Trustee against liability for: (i) breach of trust under the Indian Trusts Act, 1882; (ii) fraud, misconduct or gross negligence by the Trustee as conclusively determined by a court of competent jurisdiction; (iii) violation of Applicable laws by the Trustee (to the extent that such violation adversely effects the InvIT and/or the Unitholders): or (iv) failure to show the degree of care and diligence required of them as Trustee under the Indian Trusts Act, 1882, while carrying out the duties described in the Trust Deed as determined by a court of competent jurisdiction, whose decision is final and non-appealable.

(g) *Authenticity of signature:* The Trustee shall not be responsible to any Unitholder for the authenticity of any signature affixed to any document or be, in any way, liable for any forged or unauthorized signature on or for acting upon or giving effect to any such forged or unauthorized signature. The Trustee shall be entitled but not bound to require that the signature of any Unitholder to any document required to be signed by him under or in connection with these presents shall be verified to the Trustee's reasonable satisfaction.

(h) *Trustee may act as trustee of other trusts:* Nothing herein contained shall be construed so as to prevent the Trustee from acting as trustee of other trusts or alternate investment funds or venture capital funds or private equity funds or infrastructure investment trusts or private trusts or customised fiduciary trusts separate and distinct from the InvIT, and retaining for its own use and benefit all remuneration, profits and advantages which it may derive therefrom, as permitted under Applicable law.

(i) *Information regarding the InvIT, etc. :* If the Trustee is required by the SEBI InvIT Regulations or any other Applicable law to provide information regarding (he InvIT or the Sponsor or the Unitholders, the investments made by the InvIT and income therefrom and provisions of these presents and complies with such request in good faith, whether or not it was in fact enforceable, the Trustee shall not be liable to the Unitholders or to any other party as a result of such compliance or in connection with such compliance.

(j) *Depletion in the value of InvIT corpus*: The Trustee shall not incur any liability for any act or omission or (as the case may be) failing to do any act or thing which may result in a loss to a Unitholder (by reason of any depletion in the value of the InvIT assets or otherwise), except in the event that such loss is a direct result of fraud, gross negligence or wilful default on the part of the Trustee or results from a breach by the Trustee of the Trust Deed, as determined finally by a court of competent jurisdiction.

(k) *Trustee to not risk its monies:* If the Trustee engages any external advisors or experts after having obtained the consent from the Investment Manager (in accordance with the Trust Deed), to discharge its obligations under this Deed, or undertakes any work (after having obtained the consent from the Investment Manager, in the interest of the Unitholders) which is not covered within the scope of work of the Trustee under the Trust Deed and such additional work is beyond the obligations of the Trustee under Applicable law, the Trustee shall be entitled to recover such costs, charges and expenses which the Trustee may incur in this regard, from the Trust Fund. Further, it is clarified that, the Trustee will not be required to utilize funds held by the Trustee for any other trust for which, Axis Trustee Services Limited is appointed as a trustee, for discharging its obligations as the Trustee under the Trust Deed.

(l) *Validity of decisions made by the Trustee:* The exercise of all power and discretion by the Trustee shall be valid only if the same are carried out with the approval of a majority of the directors on the board of the

Trustee or in case, any powers have been delegated by the directors on the board of the Trustee to any officer or committee of the Trustee, if the exercise of such powers by such officer or committee is within the parameters of such delegated authority.

(m) *Limitation of liability:* It is hereby clarified that the liability of the Trustee shall be limited to the extent of the fees received by it, in all circumstances whatsoever except (a) in case of any gross negligence or wilful default or misconduct or fraud on the part of the Trustee; or (b) failure to show the degree of care and diligence required under the Indian Trusts Act, 1882 while carrying out the duties of the Trustee described herein, in each case as may be determined finally by a court of competent jurisdiction.

5. *Board of directors of the Investment Manager*

The IM Board shall be constituted subject to the requirements specified under applicable law. Further, each Unitholder holding 10% or more of the total outstanding Units of the InvIT, either individually or collectively, shall have the right, but not the obligation, to appoint any person on the IM Board as the Unitholder's nominee director in accordance with and subject to the conditions provided under the SEBI circular (SEBI/HO/DDHS-PoD-2/P/CIR/2023/153) dated September 11, 2023.

6. *Provisions relating to Unitholders*

(a) Notwithstanding anything to the contrary contained in any of the InvIT documents, the aggregate liability of each Unitholder in the InvIT shall be limited to making the Capital Contribution payable by it in respect of the Units subscribed by it. For the avoidance of doubt, the Unitholders shall not be responsible or liable, directly or indirectly, for acts, omissions or commissions of the Trustee, the Investment Manager, the Sponsor, or any other Person, whether or not such act, omission or commission, has been approved by the Unitholders in accordance with the SEBI InvIT Regulations or not.

(b) Each Unit allotted to the Unitholders shall have one vote for any decisions requiring a vote of Unitholders.

(c) In no event shall a Unitholder have or acquire any rights against the Trustee and the Investment Manager except as expressly conferred on such Unitholder hereby or in the other InvIT documents, nor shall the Trustee or the Investment Manager be bound to make payment to any Unitholder, except out of the funds held by it for that purpose under the provisions of the Trust Deed.

(d) No Unitholder shall enjoy preferential voting or any other rights over another Unitholder subject to subordinate Units being issued to the Sponsor and its Associates, where such subordinate Units shall carry only inferior voting or any other rights compared to other Units, in accordance with the SEBI InvIT Regulations and applicable law.

(e) In no event shall the Trustee or the Investment Manager be bound to make payment to any Unitholder, except out of the funds held by it for that purpose under the provisions of the Trust Deed.

(f) A Unitholder, whose name and account details are entered in the Depository' Register, shall be the only Person entitled to be recognised by the Trustee as having a right, title, interest in or to the Units registered in his name and the Trustee shall recognise such holder as an absolute owner and shall not be bound by any notice to the contrary and shall also not be bound to take notice of or to see to the execution of any trust, express or implied, save as expressly provided or as required by any court of competent jurisdiction to recognise any trust or equity or interest affecting the title of the Units. Provided that the Trustee shall be required to recognize and give effect to the terms of any voting arrangements, power of attorneys and proxies executed by Unitholders in respect of their Units, in respect of which the Trustee has been notified.

(g) The Unitholders (acting in their capacity as unitholders of the InvIT) shall not give any directions to the Trustee or the Investment Manager (whether in a meeting of Unitholders or otherwise), if it would require the Trustee or the Investment Manager to do or omit doing anything which may result in:

(i) the InvIT or the Trustee, in its capacity as the trustee of the InvIT or the Investment Manager, in its capacity as the investment manager of the InvIT or the Project Manager in its capacity as the project manager of the InvIT ceasing to comply with applicable law;

(ii) interference with the exercise of any discretion expressly conferred on the Trustee by the Trust Deed or the Investment Manager or the Project Manager by the Investment Management Agreement or the Project Implementation and Management Agreement respectively, or the determination of any matter which requires the agreement of the Trustee or the Investment Manager, provided that nothing in the Trust Deed shall limit the right of the Unitholder to require the due administration of the InvIT in accordance with the Trust Deed.

(h) The Depository Register shall (save in case of manifest error) be conclusive evidence of the number of Units held by each Depositor and in the event of any discrepancy between the entries of the Depository Register and any statement issued by the Depository, the entries in the Depository Register shall prevail unless the Depositor proves to the satisfaction of the Trustee and the Depository that the Depository Register is incorrect.

(i) The Unitholders shall have the right to call for certain matters to be subject to their consent, in accordance with the SEBI InvIT Regulations and applicable law.

(j) The Unitholders shall be entitled to receive the Distributions made by the InvIT in the proportion of their respective Beneficial Interest. The Beneficial Interest of each Unitholder shall be equal and limited to the proportion of the number of Units held by that Unitholder to the total number of Units issued by the InvIT as on a relevant date.

(k) The Unitholders may, in accordance with the provisions of the InvIT documents and applicable law, transfer any of the Units to an investor where such investor accepts all the rights and obligations of the transferor and the Trustee or the Investment Manager shall give effect to such transfer in accordance with applicable law.

(l) No Person, other than the Sponsor, their related parties and associates ("**Investor**"), shall acquire Units, which when taken together with Units held by the Investor and by persons acting in concert with the Investor, exceeds 25% (twenty five percent) of the value of the outstanding Units unless prior approval of the Unitholders is obtained in accordance with the SEBI InvIT Regulations. In the event such approval is not received, the Investor shall provide an exit option to the dissenting Unitholders in terms of the SEBI InvIT Regulations and in the manner specified by SEBI.

(m) The Trustee shall and shall ensure that the Investment Manager obtains the consent of the Unitholders for the matters prescribed under the SEBI InvIT Regulations in accordance with the provisions of the SEBI InvIT Regulations.

7. *Indemnity*

It is hereby expressly provided that, in addition to the fees, distributions and expense reimbursements herein described, the InvIT Assets shall be utilized to indemnify and hold harmless the Trustee, Sponsor and any of their respective officers, directors, shareholder's, sponsors, partners, members, employees, advisors and agents ("**Indemnified Parties**") from and against any claims, losses, costs, damages, liabilities and expenses, including legal fees ("**Losses**") suffered or incurred by them by reason of their activities on behalf of the InvIT, unless such Losses resulted from fraud, gross negligence, wilful default or wilful misconduct or breach of any obligations or duties under applicable law by the relevant Indemnified Party, as determined finally by a court of competent jurisdiction.

8. *Termination*

(a) The InvIT is subject to dissolution and termination in accordance with and subject to the SEBI InvIT Regulations and applicable law:

(i) if the InvIT fails to make any offer of Units, whether by way of Public Issue or Private Placement, within the time period stipulated in the SEBI InvIT Regulations or any other time period as specified by SEBI, the InvIT shall surrender its certificate to SEBI and cease to operate as an investment infrastructure trust, unless the period is extended by SEBI;

(ii) if it is impossible to continue with the InvIT or if the Trustee, on advice of the Investment Manager, deems it impracticable to continue the InvIT;

(iii) upon the liquidation of InvIT Assets;

(iv) if there are no projects remaining under the InvIT and the InvIT does not invest in any project for six months thereafter;

(v) where SEBI has passed a direction for the winding up of the InvIT or if the InvIT is required to be wound up pursuant to the SEBI InvIT Regulations;

(vi) in the event SEBI refuses to grant a certificate of registration to the InvIT, due to any reason whatsoever;

(vii) delisting of the Units in accordance with the SEBI InvIT Regulations; or

(viii) illegality of the InvIT.

(b) The net assets of the InvIT remaining after settlement of all liabilities as on the date of dissolution, shall be distributed to the Unitholders in accordance with the Trust Deed.

(c) Other than as set out herein and/or in the InvIT documents and/or as may be decided by the Investment Manager, a Unitholder shall not have any right to demand the return of its Capital Contribution. None of the Trustee, Sponsor, Investment Manager, any committee of the InvIT or the Trustee or the Investment Manager or the Project Manager or their affiliates or each of their respective managers, officers, directors, shareholders, sponsors, partners, members, employees, advisors and/or agents shall have any personal liability to the Unitholders for the return of their Capital Contribution. All liabilities of the InvIT to Persons other than the Unitholder shall be paid, or in good faith determination of the Trustee or the Investment Manager, there shall remain in the property of the Trust sufficient resources to pay such liabilities.

(d) Immediately upon the happening of any of the events referred to in (i) above, the Trustee shall:

(i) ensure that no further investments are made out of the Trust Fund;

(ii) redeem all outstanding Units and distribute any remaining non-cash assets in the Trust Fund and the cash proceeds (net of liquidation and Distribution costs) from the sales to the Unitholders;

(iii) within a reasonable period of time, thereafter, take such other actions as may be necessary to ensure that the InvIT is wound up by executing such documents and taking such steps as may be necessary; and

(iv) surrender the certificate of registration of the InvIT to SEBI.

C. The Investment Manager – Gawar Investment Manager Private Limited

History and Certain Corporate Matters

Gawar Investment Manager Private Limited is the investment manager of the Trust. The Investment Manager was incorporated in India as a private limited company on August 26, 2023 under the Companies Act, 2013 with corporate identification number U66190HR2023PTC114480. The Investment Manager's registered office and address for correspondence is Unit No. 1401-1403, 14th Floor, Tower B, SAS Tower, Medicity, Sector-38, Gurugram 122001, Haryana, India. For further details, see "***General Information***" on page 72.

Background and Past Experience of the Investment Manager

The Investment Manager has the infrastructure for acting as the manager, and to manage the assets and investments of the Trust. The Investment Manager is a newly incorporated private limited company and will be relying on the experience/ expertise of its Directors and employees in the financial management, advisory and/or infrastructure development sector, to comply with the eligibility requirements under the SEBI InvIT Regulations. Accordingly, the Investment Manager is in compliance with the eligibility requirements prescribed under the SEBI InvIT Regulations.

The net worth of the Investment Manager as on November 30, 2024, stood at ₹ 107.76 million on a standalone basis. The Investment Manager shall continue to comply with the minimum net worth requirement set out in Regulation 4(2)(e)(i) of the SEBI InvIT Regulations.

As on the date of this Offer Document, the equity shareholding pattern of the Investment Manager is as follows:

S. No.	Name of the shareholder	No. of equity shares held[#]	Percentage (%)
1.	Gawar Construction Limited	14,999,900	99.99
2.	Ravinder Kumar*	100	0.01
Total		**15,000,000**	**100**

* *100 shares held by Ravinder Kumar as nominee shareholder of Gawar Construction Limited.*

 # As on November 08, 2024, the Board has approved further equity infusion of ₹ 10,000,000 divided into 1,000,000 equity shares of ₹ 10 each. The allotment of same has been made on December 26, 2024.

Other Confirmations

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 SEBI InvIT Regulations, the Investment Management Agreement and applicable law. None of the directors of the Investment Manager hold or propose to hold any Units in this Offer.

Further, as of the date of this Offer Document, the Investment Manager is in compliance with the eligibility criteria provided under Regulation 4 of the SEBI InvIT Regulations and is a "fit and proper person" as prescribed under SEBI Intermediaries Regulations.

Further, neither the Investment Manager nor any of the promoters or directors of the Investment Manager: (i) are debarred from accessing the securities market by SEBI; (ii) are promoters, directors or persons 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; (iii) are wilful defaulters or fraudulent borrowers as per the list published by the Reserve Bank of India; or (iv) are fugitive economic offenders.

Details of the Holding or the Proposed Holding by Investment Manager in the Trust

The Investment Manager does not propose to hold any Units of the Trust.

Brief biographies of the Directors of the Investment Manager

Please see below brief biographies of the Directors of the Investment Manager:

1. **Rakesh Kumar**

   Rakesh Kumar is the non-executive Director on the board of the Investment Manager. He is an entrepreneur and the promoter of GCL and is responsible to oversee the financial, marketing, compliance and governance functions of GCL.

2. **Neeraj Sheoran**

   Neeraj Sheoran is the non-executive Director on the board of the Investment Manager. He holds master's degree in mechanical engineering and master's degree in science (finance) from the Imperial College of London. He has previously been associated as an analyst with Barclays Bank PLC and Morgan Stanley and Co. International PLC.

3. **Bant Singh Singla**

   Bant Singh Singla is the non-executive Director on the board of the Investment Manager. He holds a doctorate in philosophy (Faculty of engineering and technology) from Manav Rachna International University, Faridabad. He has been previously deputed in NHAI on behalf of Haryana Public Work Department associated as the chief general manager (tech) of NHAI and the chief engineer (civil) of Haryana, Public Works (B&R) Department, Chandigarh.

4. **Satish Chandra**

   Satish Chandra is the non-executive and independent Director on the board of the Investment Manager. He has retired as an Indian Administrative Services officer of the 1985 batch of Punjab cadre. He has previously held various positions, including as the member (finance and administration), NHAI, Ministry of Road Transport and Highways, as the chairman of Punjab Pollution Control Board, and as the additional chief secretary, Home Affairs and Justice, Government of Punjab.

5. **Vijayalakshmi R. Iyer**

   Vijayalakshmi R. Iyer is the non-executive and independent Director on the board of the Investment Manager. She has previously worked as the chairman and managing director of Bank of India and has also served as member (finance & investment) at Insurance Regulatory and Development Authority of India. Presently, she is as an independent director on board of Aditya Birla Capital, ICICI Securities Limited, Glenmark Pharmaceuticals Limited, Axis Mutual Fund Trustee Limited.

6. **Yudhvir Singh Malik**

   Yudhvir Singh Malik is the Chairman and non-executive and independent Director on the board of the Investment Manager. He is a retired Indian Administrative Services officer of the 1983 batch of Haryana cadre. He has previously held various positions, including as the chairman, NHAI and as the secretary, Ministry of Road Transport and Highways, Government of India. He is currently associated with Unitech Limited as the chairman and managing director.

Brief profiles of the key personnel of the Investment Manager

Set out below are the details of the key personnel of the Investment Manager:

1. **Manish Satnaliwala**

Manish Satnaliwala is the chief executive officer of the Investment Manager. He holds a bachelor's degree in commerce from University of Calcutta, Kolkata. He was admitted a fellow of the Institute of Chartered Accountants of India. He was also admitted as a fellow of the Institute of Company Secretaries of India and was admitted as an associate with Institute of Cost Accountants of India. He has experience in agriculture, automotive, healthcare, IT / BPO, fintech and infrastructure sectors. He was previously associated with Salasar Balaji Overseas Private Limited, BN Group as the group chief executive officer and has previously worked in InvITs, namely OIT Infrastructure Management Limited and Roadstar Investment Managers Limited in various capacities.

2. Amit Kumar

Amit Kumar is the chief financial officer of the Investment Manager. He holds a bachelor's degree in commerce from Panjab University, Chandigarh. He was admitted as a fellow of the Institute of Chartered Accountants of India. He was previously associated with Axis Bank Limited as an assistant vice president and ICICI Bank Limited as a manager. He has experience in banking and finance sector.

3. Shubham Jain

Shubham Jain is the company secretary of the Investment Manager. He is a company secretary and holds bachelor's degree in commerce from Bundelkhand University, Jhansi and bachelor's degree in law from University of Rajasthan, Jaipur. He is an associate member of the Institute of Company Secretaries of India. He has experience in the infrastructure sector and currently oversees the secretarial and compliance functions of the Investment Manager. He was previously associated with Durgapur Freight Terminal Private Limited as the manager (legal and secretarial) and Palogix Infrastructure Private Limited as the company secretary.

Key Terms of the Investment Management Agreement

The Investment Manager has entered into the Investment Management Agreement, in terms of the SEBI InvIT Regulations, the key terms of which, are provided below.

1. ***Powers of the Investment Manager***

The Investment Manager has been provided with various powers under the Investment Management Agreement in accordance with the SEBI InvIT Regulations, including but not limited to:

(a) *Power to manage and administer the InvIT and the InvIT Assets:* The Investment Manager shall take all decisions in relation to the management and administration of the InvIT, the funds of the InvIT and the investments of the InvIT as may be incidental or necessary for the advancement or fulfilment of the objectives of the InvIT in accordance with the InvIT Regulations and other applicable Law.

(b) *Power to make investment and divestment decisions*: The Trustee shall invest and hold the InvIT Assets in the name of the InvIT for the benefit of the Unitholders in accordance with the provisions of the SEBI InvIT Regulations, the InvIT documents, the Trust Deed and Investment Objectives. The Trustee shall be empowered to make the investment decisions as provided below, with respect to the underlying assets or projects of the InvIT, including any further investments or divestments, subject to SEBI InvIT Regulations, applicable Law and in accordance with this Offer Document. Provided such power is delegated to, and exclusively exercised by, the Investment Manager pursuant to the Investment Management Agreement, the Investment Manager is also empowered to:

(i) Subject to the policies, applicable law and terms of any agreement entered into by the Investment Manager, including any right of first offer agreements, acquire, subscribe, hold, manage, trade, transfer and dispose off shares, stocks, convertibles, debentures, bonds or other equity or equity-related securities or other debt or mezzanine securities of all kinds issued by any holding company or any SPV or any infrastructure project, whether in physical or dematerialised form, including power to hypothecate, pledge or create encumbrances of any kind on such securities held by the InvIT in such holding companies or SPVs, or infrastructure projects to be used as collateral security for any borrowings by the InvIT or any holding company or any SPV or any infrastructure project;

(ii) avail commercial loans, including the power to hypothecate, pledge or create encumbrances of any kind on the InvIT Assets as collateral security for any such loans availed by the InvIT, in accordance with the InvIT Regulations, applicable law and the policies;

(iii) keep the capital and monies of the InvIT, the holding companies and the SPVs in deposit with banks or mutual funds or other institutions, whatsoever, in accordance with the InvIT Regulations and other applicable law;

(iv) accept contributions;

(v) collect and receive the profit, interest, repayment of principal of debt or debt like, or equity or equity like, mezzanine securities, dividend, return of capital of any type by the holding companies, or SPVs, or infrastructure projects and income of the InvIT as and when the same may become due and receivable;

(vi) invest in securities or in units of mutual funds in accordance with the InvIT Regulations and other applicable law by the InvIT, the holding companies and the SPVs;

(vii) invest in money market instruments including government securities, treasury bills, certificates of deposit and commercial papers in accordance with applicable law by the InvIT, the holding companies and the SPVs;

(viii) to give, provide and agree to provide to any holding companies, or SPVs, financial assistance in the form of investment in the debt securities or share capital of any class including ordinary, preference, participating, non-participating, voting, non-voting or other class, and in the form of investment in securities convertible into share capital;

(ix) provide guarantee, security, or other collateral facility or comfort in connection with any financing, borrowings or otherwise, undertaken by the InvIT, holding companies or SPVs;

(x) to invest, acquire, purchase, hold, divest, sale, hypothecate, pledge or otherwise transfer movable property or immovable property of any kind including any rights and interest therein of the holding companies and the SPVs; and

(xi) to carry out any other functions, as appropriate and necessary to achieve the investment objectives, subject to compliance with the Trust Deed, the Investment Management Agreement, the Offer documents and applicable law.

(c) *Power to appoint a Project Manager:* The Investment Manager along with the Trustee shall, within a reasonable time from the date of execution hereof, appoint a Project Manager for the InvIT, by execution of the Project Implementation and Management Agreement, for the operation and management of the InvIT Assets, in accordance with the terms and conditions set up in the Trust Deed, the Project Implementation and Management Agreement and applicable law.

(d) *Oversee activities of the Project Manager:* The Investment Manager shall oversee activities of the Project Manager with respect to compliance with the SEBI InvIT Regulations and the Project Implementation and Management Agreement and in terms of the SEBI InvIT Regulations and applicable law. The Investment Manager shall obtain a compliance certificate from the Project Manager in the form as may be specified by SEBI, on a quarterly basis or such other intervals as may be prescribed under applicable law.

(e) *Objects of the InvIT*: The Trustee hereby authorizes the Investment Manager to do all such other acts, deeds and things as may be incidental or necessary for the advancement or fulfilment of the Investment Objectives of the InvIT, as set out in this Offer Document.

(f) *Power to issue and to accept subscription to Units of InvIT or other securities of the InvIT:* The Investment Manager shall have the power to issue and allot Units in accordance with the InvIT Regulations and within such time period as may be prescribed under applicable law. The Investment Manager shall have the power to accept subscriptions to Units of the InvIT and issue and allot Units to Unitholders or such other Persons and undertake all related activities under applicable law. Additionally, the Investment Manager shall have the power to issue and allot debt securities and commercial paper, subject to and in accordance with the InvIT documents and the InvIT Regulations. The Investment Manager shall also have the power to refund subscription money and pay necessary interest thereon, in accordance with applicable law. Further, the Investment Manager shall, subject to and only in accordance with the terms of the InvIT documents and applicable law, have the power to take on record the transfer of the Units and other securities.

The power of the Investment Manager is subject to the condition that, after the initial offer, no Person, other than the Sponsor, its related parties and associates (the "**Investor**") shall acquire or receive Units, which when taken together with Units held by the Investor and by persons acting in concert with the Investor exceeds 25% (twenty five percent) of the value of the outstanding Units unless prior approval of the Unitholders is obtained in accordance with the InvIT Regulations. In the event such approval is not received, the Investor shall provide an exit option to the dissenting Unitholders in terms of the InvIT Regulations and in the manner specified by SEBI.

(g) *Power to maintain register of Unitholders:* The Investment Manager shall cause the depository to maintain a register of Unitholders.

(h) *Power to apportion between income and capital:* The Investment Manager, in consultation with the Trustee, shall have the power to make such reserves out of the income or capital as it may deem proper, and any decisions of the Trustee whether made in writing or implied from its acts, so far as the applicable law may permit, shall be conclusive and binding on the Unitholders and all Persons actually or prospectively interested under the Trust Deed. Any distribution made by the Trustee from such reserves shall be in accordance with the InvIT Regulations and the provisions of the Trust Deed.

(i) *Power to borrow:* The Investment Manager shall have the power to cause the InvIT to have the power to borrow funds or incur indebtedness through any mode including any subordinated equity, or debt commercial papers, long term loans, short term loans, bonds/debentures or other loans whether secured or unsecured, or funds from any Person or authority (whether Government or otherwise, whether Indian or overseas) for the purpose of the InvIT on such terms and conditions and for such periods and subject to approval of the Unitholders in accordance with and as may be required in terms of the SEBI InvIT Regulations, applicable law and the InvIT documents and offer such security, guarantee or comfort as it may deem fit, for the purpose of making such borrowing. The Investment Manager shall also have the power to cause the InvIT to create Encumbrances of any kind on the InvIT Assets as collateral security for any such borrowings to secure and/or guarantee and/or provide comfort in connection with the performance or any of the obligations of the InvIT, Holdcos or SPVs, as it may deem fit, subject to compliance with applicable law.

(j) *Power to exercise rights in respect of the SPVs/Holding Companies:* The Investment Manager shall have the power to exercise all rights of the InvIT in the SPVs/Holding Companies, including voting rights, rights to appoint directors, whether pursuant to securities held by it, or otherwise, in such manner as it deems to be in the best interest of the InvIT, and in accordance with the SEBI InvIT Regulations and applicable law. Additionally, if the InvIT has invested in infrastructure projects through the Holding Company or SPVs, then the Investment Manager, in consultation with the Trustee, shall appoint the majority of the directors of the Holding Company(ies) and/or the SPV(s), in accordance with the applicable law, as well as ensure that in every general meeting including the annual general meeting of any SPV or Holding Company, the voting of the InvIT is exercised, in accordance with the SEBI InvIT Regulations and applicable law.

(k) *Power to appoint external advisors:* The Investment Manager or the Management Team may use the services of external advisors and rely on the information provided in the due diligence process of assessing investment proposals as it deems necessary in its sole discretion.

(l) *Power to employ agents:* The Investment Manager shall have the power to employ and pay at the expense of the InvIT, any agent in any jurisdiction whether attorneys, solicitors, brokers, banks, trust, companies or other agents, consultants or advisors without being responsible for the default of any agent if employed in good faith to transact any business, including without limitation, the power to appoint agents, consultants or advisors to raise funds, or do any act required to be transacted or done in the execution of the responsibilities hereof including the receipt and payment of moneys and the execution of documents.

(m) *Power to appoint nominees and custodians:* The Investment Manager may appoint any custodian in order to provide such custodian services as may be authorised by the Trustee, and may permit any property comprised in the InvIT to be and remain deposited with a custodian or with any Person or Persons in India or in any other jurisdiction subject to such deposit as authorised by the Trustee and permissible under the applicable law.

(n) *Power to appoint intermediaries:* The Investment Manager, in consultation with the Trustee, shall appoint and have the power to appoint, determine the remuneration and enter into, execute, deliver and terminate all documents and agreements, any contracts, agreements, including share purchase agreement, deed of right of first offer and refusal, escrow agreements, debt documentation, underwriting agreements and other InvIT documents, any investment pooling agreement, agreement relating to strategic investments, co-investment agreements and other any and all documents and instruments containing customary terms including contractual indemnity with Valuers, Auditors, registrar and transfer agent, merchant banker, credit rating agency, or any other intermediary or service provider or agent including any amendments or supplements thereto as may be applicable with respect to the activities pertaining to the InvIT in a timely manner as per the provisions of the SEBI InvIT Regulations and applicable law. The Investment Manager shall appoint an Auditor for a period of not more than five consecutive years or such period as provided in the SEBI InvIT Regulations. The Investment Manager shall have the power to determine the remuneration of the Auditors in consultation with the Trustee. Provided that in the event the Investment Manager is required to take any approval of the Unitholders for approval of remuneration of the Auditors or appointment of the Auditors, the same shall be obtained in accordance with the requirements as set out in the SEBI InvIT Regulations. The

Investment Manager shall also have the power to determine the remuneration of the Valuer. The remuneration of the Valuer shall not be linked to or based on the value of the InvIT Assets being valued.

(o) *Power to pay duties and taxes:* In the event of any capital gains tax, income tax, stamp duty or other duties, fee or taxes such as direct or indirect tax (and any interest or penalty chargeable thereon) whatsoever becoming payable in any jurisdiction in respect of the InvIT or any part thereof or in respect of documents issued or executed in pursuance of the Investment Management Agreement, the Trust Deed and InvIT documents in any circumstances whatsoever, the Investment Manager shall have the power and duty to pay all such duties, fee or taxes (and any interest or penalty chargeable thereon) as well as to create any reserves for future potential tax liability (and any such interest or penalty) out of the InvIT's income, or to the extent of the amount invested in the Units by the Unitholders, as may be permitted under applicable law, and the Investment Manager may pay such duties, fee or taxes (and any such interest or penalty) on behalf of the InvIT. For avoidance of doubt, it is clarified that pursuant to the Investment Management Agreement no Unitholder will be required to make a contribution as a capital commitment to the InvIT (other than the value for Unites already paid). The Investment Manager shall exercise due care and prudence in payment of duties and taxes of the InvIT and shall endeavour to ensure that there are no material outstanding dues in that behalf, except for any claim or demand made by any tax department or authority subsequently, or any amounts disputed in good faith.

(p) *Power to expend on behalf of the InvIT and seek reimbursement:* The Investment Manager shall have the power to pay InvIT Expenses out of the funds of the InvIT, or from any or all of the InvIT Assets on behalf of the InvIT, SPVs and any Holding Companies, in such proportion as may be determined from time to time, and the Investment Manager shall be entitled to reimbursement of any such expenditure duly incurred, subject to the Investment Management Agreement.

(q) *Power to take counsel's opinion:* The Investment Manager, in discharge of its duties, shall have the power to take the opinion of legal / tax counsel in any jurisdiction concerning any disputes or difference arising under the Investment Management Agreement or any matter relating to the InvIT and the fee of such counsel shall be paid out of the funds held in the InvIT.

(r) *Power to effect compromises:* Subject to applicable law, the Investment Manager shall have the power, on behalf of the InvIT, to:

(i) accept any property before the time at which it is transferable or payable;

(ii) pay or allow any equity or claim on any evidence that it thinks sufficient;

(iii) accept any security movable or immovable in lieu of any amounts payable to it;

(iv) alter the dates for payment of any amounts payable to it; and

(v) subject to such approval (if any) as may be required from the Unitholders, compromise, compound, abandon, submit to arbitration or otherwise settle any equity account, claim or thing whatsoever relating to the InvIT or the Investment Management Agreement.

(s) *Power to re-invest:* Subject to the conditions laid down in any InvIT Documents, the Policies, the InvIT Regulations and applicable law, the Investment Manager may retain any proceeds received by the InvIT from any Holding Company or SPV or infrastructure projects, including through the sale of or any Holding Company or SPV or infrastructure projects.

(t) *Power to make rules:* The Investment Manager may make rules to give effect to, and carry out the Investment Objectives, subject to applicable law. In particular, and without prejudice to the generality of such power, the Investment Manager may provide for all or any of the following matters, namely:

(i) manner of maintaining of the records and particulars of Unitholders;

(ii) norms of investment by the InvIT in accordance with the Investment Objectives of the InvIT and in accordance with the powers and authorities of the Trustee as set out in the Trust Deed;

(iii) matters relating to entrustment, deposit or handing over of any securities or shares of the Holding Companies or SPVs of the InvIT to any one or more custodians and the procedure relating to the holding thereof by the custodian;

(iv) such other administrative, procedural or other matters relating to the administration or management of the affairs of the InvIT and which matters are not, by their very nature, required to be included or

provided for in the Trust Deed or by the management thereof and which matters are not inconsistent with the Investment Objectives, the Trust Deed and the applicable law;

(v) procedure for seeking the vote of the Unitholders either by calling a meeting or through postal ballot or otherwise; and

(vi) procedure for summoning and conducting of meetings of Unitholders.

(u) *Power to restrict right to inspect:* Subject to applicable law, no Unitholder shall be entitled to inspect or examine the InvIT's premises or properties (including any Holding Companies, SPVs and infrastructure projects) without the prior permission of the Trustee, who shall give such permission, if necessary, in consultation with the Investment Manager. Further, no Unitholder shall be entitled to require discovery of any information in respect of any detail of the InvIT's activities or any matter which may be related to the conduct of the business of the InvIT and which information may, in the opinion of the Trustee and the Investment Manager, adversely affect the interest of other Unitholders.

(v) *Power to buyback Units:* The Investment Manager (acting on behalf of the InvIT) may buyback the Units from the Unitholders at the end of the term of the InvIT or any other time or in any other manner in accordance with applicable law, if so directed by the Trustee.

(w) *Power to repay debt:* Subject to applicable law, the Policies and the advice provided by the Investment Manager to the Trustee, the Investment Manager (through the Trustee) may cause the InvIT to pay, prepay or repay any and all debt raised from any Person in accordance with the terms therein and to redeem any debt securities or other securities, obligations or instruments in accordance with the terms thereof issued to such Persons in compliance with the InvIT Regulations and other applicable law.

(x) *Power to review reports:* The Investment Manager shall review the reports required in terms of SEBI InvIT Regulations and applicable law. In the event such reports are not submitted in a timely manner, the Investment Manager, after due follow-up, shall intimate the same to SEBI.

(y) *Power to open, operate and close the bank accounts:* The Investment Manager shall have the power to open one or more bank accounts for the purposes of the InvIT, to deposit and withdraw money and fully operate and close the same.

(z) *Other matters authorised by the Unitholders:* The Investment Manager shall have the power to take up with SEBI or with the designated stock exchange as applicable, any matter which has been approved in any meeting of Unitholders, if the matter requires such action.

(aa) *Extension of Loans:* The Investment Manager shall provide the Trustee with advice and recommendations regarding the extension of loans from the InvIT to the Holding Company or the SPVs and also subscription to debt securities or quasi-debt securities or any similar kind of securities issued by the Holding Company or SPVs to the InvIT or extension of loans from the InvIT in compliance with applicable law.

(bb) *Other powers:* The Investment Manager shall also have the following powers and authorities:

(i) to institute, conduct, compromise, compound, or abandon any legal proceedings for or on behalf of or in the name of the InvIT, and to defend, compound or otherwise deal with any such proceedings against the InvIT or the Investment Manager or the officers of the Investment Manager or concerning the affairs of the InvIT, and also to compound and allow time for payment or satisfaction of any equity due and of any claims or demands by or against the InvIT and to refer any differences to arbitration and observe and perform any awards thereof;

(ii) to make and give receipts, releases and other discharges for moneys payable to the InvIT and for the claims and demands of the InvIT;

(iii) to enter into all such negotiations and contracts, and, execute or terminate and do all such acts, deeds and things for or on behalf of or in the name of the InvIT as it may consider expedient for or in relation to any of the matters or otherwise for the purposes of the InvIT;

(iv) to ascertain, appropriate, declare and distribute or reinvest the surplus generally or under the InvIT, to determine and allocate income, profits and gains in respect of the InvIT to and amongst the Unitholders, to carry forward, reinvest or otherwise deal with any surplus and to transfer such sums, as it may deem fit, to one or more reserve funds which may be established by it;

(v) to open one or more bank accounts and demat accounts for the purposes of the InvIT, to deposit and withdraw money, and fully operate and manage any such account fully;

(vi) to sign, seal, execute, deliver and register according to applicable law all deeds, documents, and assurances in respect of the InvIT;

(vii) to ascertain, assess and calculate the Net Distributable Cash Flows of the InvIT in accordance with the Trust Deed, the policy adopted by the InvIT, the SEBI InvIT Regulations and applicable law;

(viii) pay out of the income of the InvIT, after deducting all expenses, the income and other distributions in accordance with the Trust Deed, SEBI InvIT Regulations and applicable law;

(ix) take into their custody or control all the capital, assets, property of the InvIT and hold the same in trust for the Unitholders in accordance with the Trust Deed, applicable law and the SEBI InvIT Regulations;

(x) generally to exercise all such powers as it may be required to exercise under the InvIT Regulations and applicable law for the time being in force and do all such matters and things as may promote the Investment Objectives of the InvIT or as may be incidental to or consequential upon the discharge of its functions and the exercise and enforcement of all or any of the powers and rights under the Investment Management Agreement, applicable law and the SEBI InvIT Regulations;

(xi) in accordance with applicable law, together with the Trustee, initiate, prosecute or defend any action or other proceedings in any court of law or through arbitration or in any other manner for recovery of debts or sums of money, right, title or interest, property, claim, matter or thing whatsoever now or hereafter to become due or payable or in any way and belonging to the InvIT by any means or on any account whatsoever in respect of and pertaining to the investments made by it and the same actions or proceedings or suits to discontinue or settle, as it shall in its best judgment or discretion deem fit;

(xii) to issue statement of accounts or Unit certificates (if requested) to the Unitholders on behalf of the Trustee in accordance with applicable law. To submit Units for dematerialisation and to make all applications and execute all documents with the Depositories and Depository participants as may be necessary in this regard;

(xiii) to set up such systems and procedures, and submit such reports, as may be required by the Trustee as necessary for effective monitoring of the functioning of the InvIT.

2. *Duties of the Investment Manager*

The Investment Manager shall perform its duties as required under the Investment Management Agreement in accordance with the SEBI InvIT Regulations, including but not limited to:

(a) *Interest of the Unitholders*: The Investment Manager shall conduct all affairs of the InvIT in the interest of all the Unitholders. Further, it shall at all times maintain high standards of integrity and fairness in all its dealings and in the conduct of its business.

(b) *Duty to co-ordinate with Trustee*: The Investment Manager shall coordinate with the Trustee, as may be necessary, with respect to the operations of the InvIT.

(c) *Duty to undertake valuation:* The Investment Manager shall appoint an eligible Valuer and ensure that the valuation of the InvIT Assets is done by the Valuer(s) in accordance with the InvIT Regulations and at the frequency as required under the InvIT Regulations. The Investment Manager shall submit the Valuation Reports to the Trustee and the designated stock exchange as required under the InvIT Regulations and within the timelines prescribed in the InvIT Regulations.

(d) *Insurance:* The Investment Manager shall arrange for adequate insurance coverage for the InvIT Assets in accordance with the InvIT Regulations. The Investment Manager shall ensure that InvIT Assets held by the SPVs are adequately insured. Further, the Investment Manager shall ensure that its directors and key managerial personnel are insured under the directors and officer's liability insurance policy.

(e) *Accounts, audit and reporting:* The Investment Manager shall maintain proper books of accounts, documents and records with respect to the InvIT, in the manner set out in the Deed, to give a true, fair and accurate account of the investments, expenses, earnings, profits etc. of the InvIT. The financial year of the InvIT shall begin from the date of the Deed and shall end on the immediately succeeding 31st of March and on the 31st of March in each succeeding year, unless otherwise determined. The Investment Manager shall ensure that audit of the accounts of the InvIT by the Auditors is undertaken in accordance with the InvIT Regulations

and other applicable law and such report is submitted to the stock exchange(s) within the time stipulated by the stock exchange(s), if any, and in accordance with the SEBI InvIT Regulations.

(f) *Distributions*: The Investment Manager shall declare distributions to Unitholders in accordance with the SEBI InvIT Regulations, the Trust Deed and in accordance with the policy adopted by the InvIT. Subject to applicable law, such percentage of the net distributable cash flows of the holding Companies or SPVs shall be distributed to the InvIT in terms of the SEBI InvIT Regulations, the Trust Deed and in accordance with the policy adopted by the InvIT. Such declared distributions shall be made within the time period prescribed by the SEBI InvIT Regulations, the Trust Deed and in accordance with the policy adopted by the InvIT.

(g) *Meeting of Unitholders*: The Investment Manager shall convene meetings of the Unitholders in accordance with the SEBI InvIT Regulations and oversee the voting by Unitholders and declaration of such results of such meetings, provided that where there is (i) a change or removal of the Investment Manager, or a change in control of the Investment Manager, and the Trustee will be responsible for convening and conducting of the meeting of the Unitholders; and (ii) any issue pertaining to the Trustee, such as change in the Trustee, the Trustee shall not be involved in any manner in the conduct of the meetings of the Unitholders. The Investment Manager shall convene meetings of Unitholders not less than once every year, within 120 (one hundred twenty days) from the end of financial year, wherein the period between such meetings shall not exceed 15 (fifteen months) and the Investment Manager shall maintain records pertaining to the meetings in accordance with the SEBI InvIT Regulations. The Investment Manager acknowledges that matters brought to vote at a meeting of the Unitholders shall require approval of such percentage of Unitholders, present and voting, in accordance with the SEBI InvIT Regulations.

(h) *Change in control:* The Investment Manager shall intimate the Trustee prior to any Change in Control of the Investment Manager to enable the Trustee to seek prior approval from the Unitholders as required in accordance with the InvIT Regulations, and prior approval from SEBI, if required under applicable law, and shall ensure that no such change is given effect to until such prior approval has been obtained, or the Investment Management Agreement is terminated and a new investment manager has been appointed in accordance with the terms hereof, or in compliance with any other requirement under the SEBI InvIT Regulations and applicable law.

(i) *Monitoring*: The Investment Manager will monitor the InvIT, including monitoring current and projected financial position of the InvIT and the funds of the InvIT including the Project SPVs. The Investment Manager shall place before its board of directors (and/or any committee(s) constituted by the board of directors), a report on the activity and performance of the InvIT, in accordance with and in the manner and at the frequency prescribed in the SEBI InvIT Regulations. The Investment Manager shall designate an employee from the as the compliance officer for monitoring of compliance with the SEBI InvIT Regulations and any circulars or guidelines issued thereunder and intimating SEBI. Trustee, Unitholders, and the designated stock exchange in case of any non-compliance.

(j) *Maintenance of records*: The Investment Manager shall maintain records pertaining to the activity of the InvIT in terms of the SEBI InvIT Regulations.

(k) *Adoption of Policies*: The Investment Manager shall adopt, as applicable, and shall ensure that, the InvIT, the Project Manager, the holding companies and the SPVs adopt, policies, as required under applicable law.

(l) *Duty in relation to Investment Objectives:* The Investment Manager shall manage the InvIT in accordance with the SEBI InvIT Regulations and the objectives of the InvIT, and shall ensure that the investments made by the InvIT are in accordance with the applicable investment conditions stipulated in the SEBI InvIT Regulations, in accordance with the objectives of the InvIT.

(m) *Transactions entered into by the Project Manager:* The Investment Manager shall review 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, shall obtain confirmation from a practising chartered accountant or a Valuer, as applicable, that such transaction is on an arm's length basis.

(n) *Complaint Status*: The Investment Manager shall ensure adequate and timely redressal of all Unitholders' grievances pertaining to the activities of the InvIT.

(o) *Submissions to Trustee*: The Investment Manager shall submit to the Trustee:

(i) quarterly reports on the activities of the InvIT, including receipts for all funds received by it and for all payments made, status of compliance with the SEBI InvIT Regulations, specifically, to the extent applicable, Regulations 18, 19 and 20 therein, performance report, status of development of under-construction projects, within the time periods specified under the SEBI InvIT Regulations;

(ii) valuation reports as required under the SEBI InvIT Regulations within the time period specified under the SEBI InvIT Regulations;

(iii) proposal or decision to acquire or sell or develop or bid for any asset or project or expand existing completed assets or projects along with rationale for the same;

(iv) details of any action which requires approval from the Unitholders as may be stipulated under the SEBI InvIT Regulations;

(v) details of transactions it enters into with its Associates;

(vi) 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 InvIT, within the time period specified under applicable law;

(vii) such information, document and records as pertaining to the activities of the InvIT as may be required under the SEBI InvIT Regulations and as may be reasonably necessary for the Trustee with respect to its responsibilities under the Trust Deed, the SEBI InvIT Regulations and applicable law; and

(viii) such other information, document and records as pertaining to its activities, obligations, duties and responsibilities under the Investment Management Agreement, the SEBI InvIT Regulations and applicable law, as may be reasonably necessary for, and sought by, the Trustee.

In the event the Investment Manager fails to submit to the Trustee the foregoing information in a timely manner, the Trustee shall intimate SEBI of such failure.

(p) *Submissions to Unitholders*: The Investment Manager shall submit to the Unitholders such information, document and records as pertaining to the activities of the InvIT or having bearing on the operation or performance of the InvIT as may be required under the SEBI InvIT Regulations.

(q) *Offer, Issue and Listing of Units*: The Investment Manager shall be responsible for all activities pertaining to the offer, issue and listing of the Units of the InvIT, as applicable, in accordance with applicable law, including:

(i) filing of Offer Document with SEBI;

(ii) filing the Offer Document with the stock exchange(s), in the event the InvIT is listed or proposes to be listed, within the prescribed time period;

(iii) dealing with all matters up to the allotment of Units to the Unitholders;

(iv) obtaining in-principle approval and final listing and trading approvals from the designated stock exchange, in the event the InvIT is listed or proposes to be listed; and

(v) dealing with all matters relating to the issue and listing of the Units as specified under the InvIT Regulations and any guidelines as may be issued by SEBI in this regard, as applicable. In the event the InvIT is listed, the InvIT shall also comply with the minimum public holding for the Units and minimum number of Unitholders as prescribed under the InvIT Regulations.

The Investment Manager shall also ensure that all relevant provisions of the SEBI InvIT Regulations and applicable law have been complied with and all statements and disclosures made in any Offer Document are material, true, correct, not misleading and are adequate disclosures in order to enable the investors to make an informed decision and are in accordance with the SEBI InvIT Regulations and applicable law, and such Offer Document should not contain any untrue statement of a material fact or omit to state a material fact necessary in order to make the statements therein, in the light of the circumstances under which they were made, not misleading.

(r) *Delisting of units and winding up of the InvIT:* In the event the InvIT is listed and in case of occurrence of any event specified in Regulations 17(1)(a) to 17(1)(g) of the SEBI InvIT Regulations, the Investment Manager shall apply for delisting of units of the InvIT to SEBI and the designated stock exchange in accordance with the InvIT Regulations and applicable law.

(s) *Submission of annual report:* The Investment Manager shall within the time period prescribed under the InvIT Regulations, submit an annual report of the InvIT to all the Unitholders electronically or provide physical copies, to Trustee and to the designated stock exchange.

(t) *Continuous disclosures to the stock exchange(s):* The Investment Manager shall, in accordance with the requirements of the SEBI InvIT Regulations and other applicable law, including any requirements prescribed by SEBI or the stock exchange(s) from time to time, disclose half-yearly reports within the time period prescribed under the SEBI InvIT Regulations to the stock exchange(s) and provide any information having bearing on the operation or performance of the InvIT, as well as price sensitive information and all other disclosures and information that is required in terms of the SEBI InvIT Regulations and applicable law within the time period prescribed under the SEBI InvIT Regulations.

(u) *Other Duties:* Without prejudice to any other provision of the Investment Management Agreement, the Investment Manager will also have the following duties and obligations:

(i) ensure that computation and declaration of Net Asset Value of the InvIT is based on the valuation done by the Valuer in accordance with the SEBI InvIT Regulations and applicable law and is disclosed to the stock exchanges in accordance with the SEBI InvIT Regulations and applicable law, if applicable;

(ii) maintain regular interaction with the Trustee regarding performance of the InvIT and providing the Trustee with any information in relation to the operations of the InvIT as maybe required under applicable law;

(iii) conducting its affairs and the affairs of the InvIT in such a manner that no Unitholder will have any personal liability (except to the extent of their Unitholding, where such Unit is partly paid) with respect to any liability or obligation of the InvIT;

(iv) keeping the Unitholders of the InvIT informed and updated on investment activities of the InvIT in accordance with the terms of the InvIT documents;

(v) collecting all dividends, fee, property and other payments due and receivable by the InvIT and declaring distribution to the Unitholders in the manner set out in the Trust Deed and in terms of the SEBI InvIT Regulations and applicable law;

(vi) to ensure that no commission or rebate or any other remuneration, arising out of transactions pertaining to the InvIT is collected by it or its Associates, other than as specified in this Offer Document or any other document as may be specified by SEBI for the purpose of the issue of the Units of the InvIT;

(vii) to ensure that the SPVs, have proper legal titles, to the extent applicable, and that all the material contracts entered into on behalf of the InvIT or the SPVs are legal, valid, binding and enforceable by and on behalf of the InvIT and the SPVs;

(viii) to ensure that the activities of the intermediaries or agents or service providers appointed by it are in accordance with the SEBI InvIT Regulations or any guidelines or circulars issued thereunder;

(ix) to ensure that any possible conflict of interest involving its role as Investment Manager is reported to the Trustee;

(x) to ensure that disclosures or reporting to Unitholders, SEBI, the Trustee and the designated stock exchange(s) are in accordance with the SEBI InvIT Regulations and applicable law;

(xi) provide SEBI, the designated stock exchange and Trustee, where applicable, such information as may be sought by SEBI or by the designated stock exchange or Trustee pertaining to the activity of the InvIT and promptly rectify any discrepancy in the operation of the InvIT with the InvIT Documents, the SEBI InvIT Regulations and any Offer Document;

(xii) to inform the Trustee in writing about any change in the representations and warranties provided by it as per the terms of the Investment Management Agreement;

(xiii) taking any other actions reasonably 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

(xiv) ensure that the capital contribution and other InvIT Assets shall be utilized solely for the purposes of making investments, as stated in the Trust Deed and Offer Document, meeting the objectives of the InvIT and for the purposes of any expenses incidental to the objectives of the InvIT, in accordance with the SEBI InvIT Regulations and applicable law.

(v) The Investment Manager shall provide to the Trustee such assistance as may be required by the Trustee in fulfilling its obligation towards the InvIT under applicable law or as may be required by any regulatory authority with respect to the InvIT.

3. *Liabilities of the Investment Manager*

The liabilities of the Investment Manager in terms of the Investment Management Agreement are as follows:

(a) *Bona fide action by the Investment Manager:* The Investment Manager shall not be liable in respect of any action taken or damage suffered by it on reliance upon any notice, resolution, direction, consent, certificate, affidavit, statement, certificate of stock, plan of reorganization or, without being limited in any way by the foregoing, other paper or document believed to be genuine and to have been passed, sealed or signed by appropriate authorities or entities.

(b) *Acts or things required to be done by the Investment Manager under law:* The Investment Manager shall not be liable to the Unitholders for doing or failing to do any act or thing which by reason of any provision of any present or future law or regulation made pursuant thereto, or of any decree, order or judgment of any court, or by reason of any request, announcement or similar action, whether of binding legal effect or not, which may be taken or made by any Person or body acting with or purporting to exercise the authority of any government (legally or otherwise) it shall be directed or requested to do or perform or to forbear from doing or performing. If for any reason it becomes impossible or impracticable to carry out any of the provisions of the Investment Management Agreement, the Investment Manager shall not be under any liability. However, it shall duly inform the Trustee and the Unitholders of the same.

(c) *Information regarding the InvIT, etc*.: If the Investment Manager is required or reasonably believes that it is required, by the SEBI InvIT Regulations or any other applicable law to provide information regarding the InvIT or the Unitholders, the InvIT investments and income therefrom and provisions of these presents and complies with such request in good faith, whether or not it was in fact enforceable, the Investment Manager shall not be liable to the Unitholder or any of them or to any other party as a result of such compliance or in connection with such compliance.

(d) *Depletion in the value of the InvIT corpus*: The Investment Manager shall not incur any liability for any act or omission which may result in a loss to a Unitholder by reason of any depletion in the value of the InvIT Assets or otherwise, except in the event that such loss is a result of fraud or gross negligence or wilful default on the part of the Investment Manager, as determined by a court of competent jurisdiction.

(e) *Distribution*: If the distributions, after being declared, are not made within the period prescribed in the SEBI InvIT Regulations, the Investment Manager shall be liable to pay interest to the Unitholders at the rate as may be prescribed in the SEBI InvIT Regulations until the distribution is made, and such interest shall not be recovered in the form of fee or any other form payable to the Investment Manager by the InvIT.

(f) The Investment Manager shall not be liable to any Unitholder for the authenticity of any signature or of any seal affixed to any endorsement or other document affecting the title to or the transmission of Units or interests in the InvIT or of any investments of the InvIT or be in any way liable for any forged or unauthorized signature or seal affixed to such endorsement, transfer or other document, or for acting upon or giving effect to any such forged or unauthorized signature or seal. The Investment Manager shall be bound to require that the signature of any Unitholder to any document required to be signed by such Unitholder, under or in connection with these presents shall be verified to its reasonable satisfaction.

(g) The Investment Manager shall continue to be liable for all of its acts of omission and commission with respect to the activities of the InvIT, notwithstanding surrender of registration of the InvIT to SEBI.

4. *Board of directors of the Investment Manager*

The IM Board shall be constituted subject to the requirements as specified under applicable law. Further, eligible unitholders, as defined under the SEBI InvIT Regulations, holding the prescribed outstanding Units of the InvIT ("**Eligible Unitholder(s)**"), shall have the right, but not the obligation, to nominate a non-independent director on the IM Board as the Unitholder nominee director ("**Unitholder Nominee Director**") in accordance with the SEBI InvIT Regulations, subject to the conditions provided under the SEBI circular (SEBI/HO/DDHS-PoD-2/P/CIR/2023/153) dated September 11, 2023 or any amendments or re-enactments thereof.

5. *Indemnity*

(a) In addition to the fee, distributions and expense reimbursements herein described, the Trust shall, from the InvIT Assets, indemnify the Investment Manager, Trustee and its respective affiliates, officers, directors,

shareholders, partners, members, employees, advisors and agents ("**Indemnified Parties**") from and against any claims, losses, costs, damages, liabilities, suits, proceedings, taxes and expenses, including legal fee ("Losses") suffered or incurred by the Indemnified Parties by reason of their activities on behalf of the InvIT, unless such Losses have resulted from fraud, gross negligence, wilful default or wilful misconduct or breach of any obligations or duties under applicable law by the relevant Indemnified Party as finally determined by a court of competent jurisdiction.

(b) The Trustee, its directors, employees and officers ("**Trustee Party**") shall be indemnified by the Investment Manager against any Losses in connection with the breach of any of the terms of the Investment Management Agreement by the Investment Manager, or failure in furnishing information required by SEBI or any regulatory authority with respect to the InvIT, or furnishing incorrect information by the Investment Manager under the InvIT Regulations or related to InvIT including in any Offer Document, if arising out of gross negligence, wilful default or misconduct or fraud on part of the Investment Manager, in carrying out its obligations under the Investment Management Agreement, Trust Deed, the other InvIT documents, any information memorandum, offer document and applicable law, as determined by a court of competent jurisdiction.

(c) The Trustee acknowledges and agrees that the aggregate maximum liability of the Investment Manager in each financial year with regard to the indemnity clause, shall be limited to the aggregate fee paid to the Investment Manager in a financial year, in accordance with the terms of the Investment Management Agreement, provided that such aggregate maximum liability shall not be applicable in the event such liability of the Investment Manager to indemnify the Trustee Party for losses or damages suffered arises out of any gross negligence, wilful default or misconduct or fraud of the Investment Manager, as determined by a final non-appealable order of a court of competent jurisdiction.

6. *Termination*

(a) Subject to the other provisions of the Investment Management Agreement, including this clause, the Investment Management Agreement shall continue during the term of the InvIT and shall terminate upon dissolution of the InvIT.

(b) The Investment Management Agreement shall be effective from the date of execution and shall terminate in accordance with the terms of the Investment Management Agreement.

(c) The appointment of the Investment Manager may be terminated by the Trustee or the Unitholders in accordance with the procedure specified under the SEBI InvIT Regulations.

(d) The Investment Management Agreement (along with the appointment of the Investment Manager), may be terminated:

(i) by the Investment Manager, by delivery of a written notice of 30 (thirty) Business Days to the Trustee at any time, subject to appointment of new Investment Manager in accordance with the SEBI InvIT Regulations; or

(ii) by the Trustee by delivery of a written notice to the Investment Manager at any time, upon breach of any of the terms, covenants, conditions or provisions of the Investment Management Agreement by the Investment Manager and a failure of the Investment Manager to cure the said breach within a period that is earlier of: (a) the period stipulated under applicable law, or (b) 60 (sixty) Business Days or such other period as may be mutually agreed to cure such breach; or upon the bankruptcy of the Investment Manager; or

(iii) by any Party by delivery of a written notice to the other Party upon the bankruptcy of such other Party, or if winding up or liquidation proceedings are commenced against such other Party, and such proceedings persist for a period of more than three months.

(e) After prior approval from the Unitholders and SEBI in accordance with the SEBI InvIT Regulations, for the change in the Investment Manager due to removal or otherwise, the Trustee shall appoint a new investment manager and execute a new investment management agreement within three months from the termination of the previous investment management agreement in accordance with applicable law, and the terms of such appointment and agreement shall not be on more favourable terms and conditions to any party. The Trustee shall also ensure that the new investment manager stands substituted as a party in all documents to which the Investment Manager was a party, in relation to the InvIT in its capacity as the Investment Manager. The Investment Manager shall remain in office until the appointment of a new investment manager. The Investment Manager shall continue to be liable for all of its acts, omissions and commissions during its tenure as Investment Manager, notwithstanding the termination.

(f) Subject to this clause, all decisions in respect of the Investment Manager and the Investment Management Agreement, including change, removal or replacement of the Investment Manager and appointment of a new investment manager, shall be strictly taken in accordance with the Investment Management Agreement and shall require approval and consent of the Unitholders in accordance with the SEBI InvIT Regulations and the Trust Deed. For appointment of a new investment manager for any reason whatsoever, the Trustee shall follow the following mechanism at all times:

Within 3 (three) months from the date of termination of the Investment Management Agreement, the new investment manager, who, throughout the term of its appointment: (i) meets the eligibility criteria for an investment manager set out in the InvIT Regulations; and (ii) acts in accordance with and amends its constitutional documents and agreements to ensure compliance with the InvIT Documents.

(g) Upon removal or replacement of the Investment Manager in accordance with the InvIT Regulations, the Investment Manager shall, within a period of 30 (thirty) Business Days, transfer custody of the InvIT to the Trustee and give the Trustee all books of accounts, correspondence, documents and records relating to the InvIT which the Investment Manager has in its possession. In the event of removal or resignation of the Investment Manager, the Investment Manager shall be entitled to receive Management Fee only up to the date of effectiveness of such removal or resignation.

(h) Notwithstanding anything contained hereinabove, (i) in the event that the offer of Units does not occur within the time period stipulated in the SEBI InvIT Regulations or such other date as may be mutually agreed to between the Investment Manager and the Trustee, or (ii) in the event of cancellation of registration of the InvIT by SEBI, or (iii) winding up of the InvIT, then the Investment Management Agreement shall automatically terminate without any liability on any Party.

D. The Project Manager – Gawar Construction Limited

History and Certain Corporate Matters

Gawar Construction Limited is the project manager in respect of the Trust. For details, see "**– *The Sponsor – Gawar Construction Limited – History and Certain Corporate Matters***" on page 114.

Background and past experience of the Project Manager

The Sponsor (in its capacity as the Project Manager), directly through the appointment of appropriate agents, shall undertake operations and management of the InvIT Assets, including making arrangements for the maintenance of such assets. The Project Manager has been appointed as per the terms of the Project Management Agreement.

For details, see "**– *The Sponsor – Gawar Construction Limited – Background and past experience of the Sponsor***" on page 114.

Other Confirmations

As of the date of this Offer Document, the Project Manager is in compliance with the eligibility criteria provided under Regulation 4 of the SEBI InvIT Regulations and is a "fit and proper person" as prescribed under SEBI Intermediaries Regulations.

Further, neither the Project Manager nor any of the promoters or directors of the Project Manager: (i) are debarred from accessing the securities market by SEBI; (ii) are promoters, directors or persons 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; (iii) are wilful defaulters or fraudulent borrowers as per the list published by the Reserve Bank of India; or (iv) are fugitive economic offenders.

Key terms of the Project Management Agreement

The Project Manager has entered into the Project Management Agreement in terms of the SEBI InvIT Regulations, the key terms of which, are provided below:

1. *Scope of Services*

The scope of services of the Project Manager are as follows:

(a) The Project Manager shall, either directly or through the appointment and supervision of appropriate agents, which may be persons directly employed or engaged by the Initial SPVs, undertake the operation, maintenance and management of InvIT Assets in accordance with the scope of services as set out in Project Management Agreement.

(b) The Investment Manager may, from time to time, request the Project Manager to provide services other than those specifically referred to in the Project Management Agreement in relation to the Initial SPVs or InvIT Assets. The Project Manager shall provide such additional services on such terms and conditions and fees as may be mutually agreed between the Investment Manager and Project Manager in writing. Any additional services so agreed upon by the Investment Manager and Project Manager shall be deemed to be part of the services and the provisions of the Project Management Agreement shall apply *mutatis mutandis* to the provision of any specifically requested services.

2. *Functions, Duties and Responsibilities of the Project Manager*

The functions, duties and responsibilities of the Project Manager in terms of the Project Management Agreement and the SEBI InvIT Regulations are as follows:

(a) The Project Manager shall, either directly or through Agents, oversee the progress of development, approval status and other aspects of the InvIT Assets that may be under development or is to be established until its completion in accordance with any agreement that may be entered into in this regard, including the relevant concession agreements and discharge all obligations in respect of achieving timely completion of the InvIT Assets, wherever applicable, including the supervision of agents appointed for such purpose.

(b) The Project Manager shall, either directly or through Agents, discharge all obligations in respect of the maintenance, operation and management of the InvIT Assets which have achieved the commercial operations date in terms of the respective concession agreements including the relevant provisions on operations and maintenance and the schedules therein, the Project Management Agreement and the SEBI InvIT Regulations and ensure compliance with the relevant provisions of the concession agreements in this regard. Further, the Project Manager shall liaise with the NHAI for the release of the annuity payments (in case of concession agreements under the hybrid annuity mode) in accordance with the provisions of the relevant concession agreements.

(c) The Project Manager either directly or through the appointment and supervision of Agents, shall ensure that the construction works forming part of the InvIT Assets which are incomplete and identified in the provisional certificate or completion certificate issued by the relevant independent engineer appointed by the NHAI for such InvIT Assets ("**Balance Works**"), are completed in accordance with the provisions of the relevant concession agreements. Further, in cases where the Balance Works are incomplete and/ or delayed due to reasons attributable to the NHAI, the Project Manager shall ensure the completion of such Balance Works either directly or through the appointment and supervision of Agents upon resolution of the issues by the NHAI and other regulatory authorities, as applicable. The costs for the Balance Works in each of the InvIT Assets are as provided in Schedule 3 and any incremental costs thereon shall be borne by the Project Manager. The Initial SPVs shall release the amounts to be utilised towards the costs for the Balance Works to the Project Manager upon the Project Management Agreement becoming effective and such amounts are to be exclusively used for the Balance Works by the Project Manager. Further, the Initial SPVs shall extend complete co-operation to enable the Project Manager to complete the Balance Works and to fulfil any related obligations.

(d) The Project Manager shall submit a monthly status report from an independent engineer confirming the completion of any major maintenance services mentioned in the Project Management Agreement ("**Major Maintenance Works**") within 30 days of completion.

(e) The Project Manager shall ensure that, for the purpose of provision of the services, all procurement of goods (including raw materials) and award of contracts, either directly or through Agents, is undertaken in accordance with procedures established and within the budget determined by the Project Manager in consultation with the Investment Manager.

(f) The Project Manager acknowledges that the Trustee and the Investment Manager will oversee the activities undertaken by the Project Manager in accordance with the InvIT Regulations and the InvIT documents and accordingly, the Project Manager shall extend complete co-ordination to enable the Trustee and the Investment Manager to perform such obligations in accordance with the SEBI InvIT Regulations and the InvIT documents. The Project Manager shall provide compliance certificate(s), as may be specified, to the Investment Manager and the Trustee in accordance with the SEBI InvIT Regulations, in the form prescribed by SEBI, if any.

(g) The Project Manager shall at all times ensure that the transactions or arrangements entered into by the Project Manager with a related party are on an arm's-length basis and shall provide the Investment Manager with details of transactions carried out between itself and its associates and disclose any conflict of interest in such cases to the Investment Manager, in accordance with the SEBI InvIT Regulations.

(h) The Project Manager shall provide to the Trustee and the Investment Manager or to such other person as the Trustee and/or the Investment Manager may direct, all information that may be necessary for each of them to maintain the records of the InvIT and as may be required for making submissions to SEBI or any other governmental authority, including with respect to relevant approvals, consents and other documents required in relation to the InvIT Assets and the reporting requirements under the InvIT Regulations, in a proper and timely manner, and in the format prescribed (if any), as required by the Trustee and/ or the Investment Manager. Further, the Project Manager shall provide reasonable assistance to the Initial SPVs to apply for, obtain and maintain all necessary approvals (and renewals of the same) that each of the Initial SPVs is required to obtain from or file relevant applications for approvals with any governmental authority in connection with InvIT Assets or as may be required under any third party agreement entered into by the Initial SPVs.

(i) The Project Manager shall have full authority to receive directions and instructions from each of the Initial SPVs and to take actions in relation to and ensure compliance with such directions and instructions and report back to each Initial SPV, the Trustee and the Investment Manager, with respect to the Services as agreed under the Project Management Agreement.

(j) If any defects are found in the maintenance, materials and workmanship of the Services provided under the Project Management Agreement by the Project Manager and/or by the Team Members, the Project Manager shall promptly, in consultation and agreement with the other Parties regarding appropriate remedying of the defects, repair, replace or otherwise make good such defects as well as any damage caused by such defect at the cost of the Project Manager. It is clarified that the remedying of the defects, repair or replacement shall be undertaken by the Project Manager either directly or through the appointment and supervision of Agents in accordance with the relevant concession agreements.

(k) The duties of Project Manager shall also include the following:

(i) exercising diligence and vigilance in carrying out its duties and protecting the commercial interests of the InvIT Assets;

(ii) keeping the Investment Manager informed on all matters which have a material bearing on the operations of the InvIT Assets;

(iii) liaising with the Governmental Authorities in respect of its obligations under the Project Management Agreement;

(iv) taking appropriate measures to mitigate the risks which may be encountered by the InvIT in respect of the InvIT Assets;

(v) keeping proper records for actions taken in respect of the InvIT Assets; and

(vi) complying with the instructions of the Investment Manager and the Trustee and the provisions of the InvIT Regulations.

(l) Notwithstanding anything to the contrary contained in the Project Management Agreement, nothing contained in the Project Management Agreement shall be construed to limit or restrict the performance of any duties or obligations of the Project Manager, Investment Manager or the Trustee contained in the SEBI InvIT Regulations and other applicable law.

(m) During the term of the Project Management Agreement, in the event the representations provided by the Project Manager, become untrue or incorrect or incomplete in any respect, the Project Manager shall, within a reasonable time upon becoming aware of such representation to be untrue or incorrect or incomplete, inform the Trustee and Investment Manager of such event.

3. *Compensation*

(a) In consideration of the Services to be rendered by the Project Manager to each Initial SPV, either directly or through the appointment and supervision of Agents, in accordance with and subject to the terms of this Agreement and Applicable Law, each Initial SPV agrees to pay the fixed fees as set out in the Project Management Agreement ("**Fee**") from its funds, on an arm's length basis.

(b) The Project Manager shall raise invoices on monthly basis for the Services provided to each Initial SPV during each month in Indian Rupees. All the invoices raised by the Project Manager will be at an arm's length price in accordance with fee provided under the Schedule. Each such monthly invoice shall be raised within thirty (30) days from the close of every month and payable within thirty (30) days upon receipt thereof. The Project Manager shall raise invoice for any Major Maintenance Works in accordance with the rates provided under

the Project Management Agreement. The project manager will submit completion certificate from an independent engineer certifying the completion of major maintenance work within 30 days of completion.

(c) The Project Manager may charge a delay interest at the rate of 18% per annum in case of failure of any Initial SPV to make the payment within the time mentioned above and such interest shall be payable for the entire period of delay. All payments to the Project Manager shall be made in cash to the bank account specified in the Project Management Agreement or otherwise provided in writing by the Project Manager to the Initial SPVs.

(d) The payments of Fee shall be subject to applicable Tax deduction, as may be required as per Applicable Law. The Fee is exclusive of GST which shall be to the account of the respective Initial SPV.

(e) The Parties hereto agree that in the event of termination of this Agreement under Clause 10, the Project Manager shall be compensated in accordance with this Clause 8 only for the Services rendered until the date of termination.

(f) If the Project Manager fails to perform any of its obligations under the Project Management Agreement, including carrying out the Services (except in cases where the Investment Manager is in default of payment, and such default is not cured within thirty days from the issuance of a default notice by the Project Manager), the Investment Manager, may issue a written notice to the Project Manager, which shall (i) specify the nature of the failure, and (ii) request the Project Manager to remedy such failure within the time period specified for curing such breaches under the relevant Concession Agreement or such other period as may be mutually agreed upon between the Investment Manager and the Project Manager for curing such breach. However, if the Project Manager fails to remedy the breach within the cure period ("**Unremedied Breach**") (as defined under the relevant Concession Agreements) or any extended period provided by NHAI under relevant Concession Agreements, the Investment Manager shall have the right to adjust or withhold or deduct any reduced amount received from NHAI by way of annuity and/or O&M payments from Fee payable to the Project Manager if the same is not received in any of the subsequent annuities and/or O&M payment as a result of the Unremedied Breach.

(g) For any such failure or default by the Project Manager ("**Defaulting Party**"), the other Party ("**Aggrieved Party**") will be entitled to recover damages, including on account of any penalty levied or an appropriation or encashment of the Performance Security (as defined in the relevant concession agreement) by the NHAI, from the Defaulting Party and such damages shall be based on actual loss or actual damage incurred by the Aggrieved Party (except in cases where the Investment Manager is in default of payment, and such default is not cured within thirty days from the issuance of a default notice by the Project Manager).

4. *Indemnities*

The Investment Manager, the Initial SPVs and their respective directors, employees, officers and the InvIT ("**Indemnified Parties**") shall be indemnified by the Project Manager against any actions, claims, suits, proceedings, losses, costs, damages, liabilities and expenses, including legal fee from and incurred or suffered by the Indemnified Parties in connection with the breach of any of the terms of the Project Management Agreement by the Project Manager or arising out of gross negligence, wilful defaults, wilful misconduct or fraud on part of the Project Manager, in carrying out its obligations under the Project Management Agreement

Notwithstanding anything to the contrary contained therein and/or in any other agreement or writing, the trustee, the SPV and the investment manager acknowledge and agree that the aggregate maximum liability of the project manager in any financial year pursuant to any provision of the Project Management Agreement shall cumulatively not exceed ₹ 100 million, provided further that such aggregate maximum liability shall not be applicable in the event such liability of the project manager arises out of any gross negligence, wilful default or fraud of the Project Manager.

Provided that cap on liability under the terms of the Project Management Agreement shall not apply to Unremedied Breach *(as defined under the Project Management Agreement)*.

5. *Force Majeure*

(a) The Project Manager shall not be held liable for any failure to perform its obligations hereunder, or for any delay in the performance thereof, due to causes beyond its control, including, but not limited to, acts of God, public enemy, expropriation or acts of government or any changes in the Applicable Law or regulation including changes in market rules, currency restrictions, devaluations or fluctuations, market conditions affecting the execution or settlement of transactions or the value of assets and breakdown, natural disaster, epidemic, pandemic, lockdowns, riots, civil commotion or unrest, strikes or lockouts, fire, floods, war, explosions or earthquakes, acts of terrorism, systems failure, power outages or communication failures or malfunction of any telecommunication and information technology systems.

(b) Provided that the Project Manager shall as soon as reasonably practicable notify the other Parties thereafter, provide detailed information concerning such event and documents evidencing such event, explaining the reasons for its inability to execute, or for its delay in the execution of, all or part of its obligations under this Agreement. The Project Manager shall take all reasonable steps within its power to recommence performance of the Project Management Agreement on the ceasing of such event.

(c) Notwithstanding anything contained in this Clause, the Parties hereby agree that the Project Manager shall be entitled to receive the Fee as provided under clause of the Project Management Agreement.

6. *Termination*

(a) The term and validity of the Project Management Agreement will be co-terminus with the validity of the Concession Agreement of the respective Project SPVs ("**Validity Period**"). During the Validity Period, the Fee shall be revised in the manner specified in the Project Management Agreement.

(b) The Project Management Agreement cannot be terminated during the a period of five years from the date of this Agreement ("**Initial Validity Period**") , except by the Investment Manager after consultation with the Trustee by delivery of a written notice to the Project Manager, upon breach of any of the terms, covenants, conditions or provisions of the Project Management Agreement by the Project Manager, which is not cured in accordance with the Project Management Agreement. After the expiry of the Initial Validity Period, the Investment Manager or the Project Manager can terminate the Project Management Agreement with or without cause, by giving prior written notice of 180 days to the other party.

(c) The Project Management requires for appointment of a new project manager within six months from the termination of the Project Management Agreement in manner prescribed under the Project Management Agreement. In the event of a proposed change in project manager, the Project Manager has been granted a right of first refusal ("**ROFR**") to match the same price and same terms and conditions of the most favourable offer out of three independent offers procured by the Investment Manager. Provided that the Investment Manager shall not have any obligation of providing a ROFR Notice to the Project Manager, if the Project Manager is removed pursuant to the termination of the Project Management Agreement if the Project Manager fails to fulfil any of its obligations under the Project Management Agreement, including services as agreed under the Project Management Agreement within the cure period (except a force majeure event under clause 6), or upon material breach of the terms, covenants, conditions, or provisions of the Project Management Agreement.

7. *Miscellaneous*

Notwithstanding anything to the contrary contained in the terms of the Project Management Agreement, NHAI shall have the right to step into the Project Management Agreement as a substitute of the Project Manager in the event of termination or suspension in accordance with the relevant concession agreement.

INDUSTRY OVERVIEW

The information contained in this section is derived from various government and other industry sources. Neither we nor any other person connected with the Offer has independently verified the third party and industry related 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 Indian Economy

Approximately ₹173.82 lakh crore in Fiscal Year 2024, India's GDP (in absolute terms) against the first revised estimates of GDP for the Fiscal Year 2023 of ₹160.71 lakh crore. Real GDP has been estimated to grow by 8.2% in FY 2023-24 as compared to the growth rate of 7.0% in FY 2022-23. Nominal GDP has witnessed a growth rate of 9.6% in FY 2023-24 over the growth rate of 14.2% in FY 2022-23. *(Source: Press Note on provisional estimates of annual GDP for 2023-24 and quarterly estimates of GDP for Q4 of 2023-24, Ministry of Statistics and Programme Implementation, Government of India)*

The global economy is continuing growing at a modest pace, according to the OECD's latest Economic Outlook. The Economic Outlook projects steady global GDP growth of 3.1% in 2024, the same as the 3.1% in 2023, followed by a slight pick-up to 3.2% in 2025. (*Source: Economic outlook: Steady global growth expected for 2024 and 2025, May 2024*)

The table given below sets forth a comparison between India's real GDP growth rate along with its expected real GDP growth rate for 2024 and 2025, as compared to advanced economies, newly emerging economies and the world.

(in percentage)

	Real GDP growth rate (Estimate)	Projected real GDP growth rate (Forecast)		
	2022	**2023**	**2024**	**2025**
India	6.7	7.0	6.0	6.4
Advanced Economies	2.6	1.6	1.4	1.3
Newly Emerging Economies	4.0	4.0	4.0	3.9
World	3.4	3.0	2.9	2.8

Source: 2024 World Economic Outlook, IMF, Marubeni Research Institute

Overview of the Infrastructure Sector in India

The infrastructure sector is a key driver of the Indian economy. The sector is highly responsible for propelling India's overall development and enjoys intense focus from the Government for initiating policies that would ensure the time-bound creation of world-class infrastructure in the country. The infrastructure sector includes power, bridges, dams, roads, and urban infrastructure development. In other words, the infrastructure sector acts as a catalyst for India's economic growth as it drives the growth of the allied sectors like townships, housing, built-up infrastructure, and construction development projects. FDI in construction development (townships, housing, built-up infrastructure and construction development projects) and construction (infrastructure) activity sectors stood at US$ 26.61 billion and US$ 33.91 billion, respectively, between Fiscal Year 2001 to Fiscal Year 2024. *(Source: Infrastructure Sector in India, May 2024*).

In the Fiscal Year 2020, the Government focused on enhancing expenditure in the infrastructure sector and has planned to invest more than ₹ 111 lakh crore in the infrastructure sector in the next five years as part of the National Infrastructure Pipeline ("**NIP**") announced in December 2019 *(Source: A Strong V-shaped recovery of Economic Activity, January 2021, PIB Delhi).*

In 2019, the Government of India adopted a forward-looking programmatic approach towards infrastructure. The National Infrastructure Pipeline was born with a projected investment of around ₹111 lakh crore for FY20-25 for developing a comprehensive view of infrastructure development in the country. The NIP which had started with 6,835 infrastructure projects has expanded to around 9,000 projects across 35 sub-sectors and covers economic and social infrastructure projects jointly funded by the Central Government, State Governments, and the private sector. *(Source: Union Budget 21-22 provided capital outlay of ₹5.54 lakh crore, an increase of 34.5% over Budget Estimate of FY 2020-21, to boast economy after COVID-19 pandemic, December 2021, PIB Delhi)*

Out of the total capital outlay under the NIP, 40% are under implementation, 30% are at a conceptual stage and 20% are under development stage *(Source: Task Force on National Infrastructure Pipeline presents its Final Report to Finance Minister Smt. Nirmala Sitharaman, April 2020, PIB Delhi)*

Overview of the Road Sector in India

Road Network in India

India has the second largest road network in the world, spanning a total of 66.71 Lakh km *(Source: Year End Review 2023-Ministry of Road Transport and Highways, January 2024, PIB Delhi).*

This road network primarily comprises national highways, expressways, state highways, major district roads, other district roads and village roads. Road network in India can be classified into the following categories:

- *National Highways* constitute the primary system of road transportation in India, which facilitates medium and long-distance inter-city passenger and freight traffic across the country
- *State Highways* constitute the secondary system of road transportation in India, which facilitates the traffic across major centers within the states
- *District Roads* primarily link and provide accessibility within the districts and provide the secondary function of linkage between the highways and rural roads
- *Rural Roads* are a key component of rural development providing accessibility to the villages to meet their social needs as also act as the means to transport agriculture produce from village to nearby markets

Road Network in India by Category (length in km)

Category	FY20[(1)]	FY21[(1)]	FY22[(1)]	FY23[(1)]	FY24[(1)]
National Highways	132,500	136,440	140,955	144,955	146,145
State Highways	156,694	176,818	171,039	167,079	179,535
Other Roads	5,608,477	5,902,539	6,059,813	6,019,757	6,019,723
Total	5,897,671	6,215,797	6,371,847	6,331,791	6,345,403

[(1)] As of November every year.
(Source: Annual Reports, Ministry of Road Transport and Highways, Government of India and Year End Review 2023-Ministry of Road Transport and Highways, January 2024, PIB Delhi)

Approximately 5,248 km of National Highways (NH) was constructed in 2023-2024 (upto November 2023) (Provisional Figures). The length of the National Highways has increased by more than 60% from 91,287 km in 2014 to around 146,145 km in 2023. As of November 2023, the length of the National Highways is ~1,46,145 Km. Pace of construction of NH roads increased from 12.1 km per day in Fiscal Year 2015 to 36.5 km per day in Fiscal Year 2021 and was around 28.6 km per day in Fiscal Year 2022. (*Source: Year End Review 2023-Ministry of Road Transport and Highways, January 2024, PIB Delhi*)

Road Construction in India

India's road network has grown 59% to become the second largest in the world in the last ten years. India has nearly 66.71 lakh km of total road network and the National Highways network alone stood at 146,145 km in CY 2023. India had a total of 97,830 km of National Highways in 2014-15 which has expanded to 146,145 km by December 2023. (*Source: Road Infrastructure in India, India Brand Equity Foundation*)

In FY24 (until November), cumulatively 5,248 km of National Highways have been constructed. A total of 202 national highway projects worth ₹ 79,789 crore (US$ 9.59 billion) are at the implementation stage in the country and are 6,270 km in length. The Government of India has allocated ₹ 111 lakh crore (US$ 1.4 trillion) under the National Infrastructure Pipeline for FY25. The roads sector is likely to account for 18% capital expenditure over FY25. As of November 2023, there were 352 PPP projects worth US$ 76.95 billion in India. (*Source: Road Infrastructure in India, India Brand Equity Foundation*)

In March 2024, Prime Minister Narendra Modi inaugurated and laid the foundation stone for 112 national highway projects across various states, with a total worth of approximately ₹ 1 lakh crore. (*Source: PM Inaugurates and Lays Foundation Stone of 112 National Highway Projects for Different States worth about ₹ One Lakh Crore, PM India, March, 2024*)

Average Annual Budgetary Allocation of the Ministry has increased by more than 940% from about ₹ 25,872 crore/year during 2009-14 to about ₹ 2,70,435 crore during 2023-24. (*Source: Annual Budgetary Allocation of the MoRTH has increased by more than 940% from about ₹ 25,872 Crore/year during 2009-14 to about ₹ 2,70,435 Crore during 2023-24, December 2023, PIB Delhi*)

Development and Maintenance of Roads and Highways

The Government has taken several initiatives for development of roads and highways in India.

Bharatmala Pariyojana

Bharatmala Pariyojana is an umbrella program for the highways sector that focuses on optimizing efficiency of freight and passenger movement across the country by bridging critical infrastructure gaps through interventions including development of economic corridors, inter corridors and feeder routes, national corridor efficiency improvement, border and international connectivity roads, coastal and port connectivity roads and green-field expressways. It envisages a corridor approach in place of the existing package-based approach which has, in many cases, resulted in skewed development.

(Source: Optimizing the Efficiency of Movement – Move towards New India Ensuring Ease of Living, MoRTH)

Bharatmala Pariyojana envisages development of about 26,000 km length of economic corridors, which along with Golden Quadrilateral and North-South and East-West Corridors are expected to carry majority of the freight traffic on roads. *(Source: Annual Report* 2022-2023*, MoRTH and BharatMala)*

The Government approved Phase-I of Bharatmala Pariyojana in October 2017 with an aggregate length of about 34,800 km (including the residual NHDP stretches of 10,000 km) at an estimated outlay of ~₹ 5.35 trillion. Phase-I will involve development of the following:

Scheme	Length (km)	Cost (in ₹ Crore)
Economic Corridors	9,000	120,000
Inter-Corridors & feeder roads	6,000	80,000
National Corridor Efficiency improvement	5,000	100,000
Border & International connectivity roads	2,000	25,000
Coastal & port connectivity roads	2,000	20,000
Expressways	800	40,000
Sub-total	**24,800**	**385,000**
Ongoing Projects (incl. NHDP)	10,000	150,000
Total	**34,800**	**535,000**

Source: Major Programmes / Project, MoRTH

Bharatmala Pariyojana envisages 60% projects on HAM, 10% projects on Build Operate Transfer (BOT) Toll model and 30% projects on EPC model. Total aggregate length of 25,713 km with a total capital cost of ₹ 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 ₹ 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%*(Source: Annual Report 2022-23, MoRTH)*

Financing of Road Projects in India under Public Private Partnership

The Public Private Partnership ("**PPP**") framework was introduced to increase the efficiency of infrastructure projects through a long-term collaboration between the public and private sectors. Discussed below are the frameworks which are widely used in order to execute and implement roads and highway projects by the NHAI:

- **Build Operate Transfer ("BOT"):**

  Under the BOT model, the authority/ government agency provides the concessionaire with the rights to build, operate and maintain a facility on public land for a fixed period, after which the assets are transferred back to the authority. Funding for the project is arranged by the concessionaire. The concessionaire charges toll from the users of the project and the concessionaire may either transfer the toll collected to the authority or may retain the entire amount as revenue. Contracts under the BOT model are further classified as under:

- **Build Operate Transfer (BOT) Toll:**

  Under this model, the concessionaire is responsible for the construction and maintenance of the project, after which the ownership of the project is transferred to the public authority. However, the toll collected is retained by the concessionaire and not transferred to the authority. Therefore, the concessionaire bears the revenue risk during the concession period. Toll charged under these contracts are regulated by NHAI.

- **Build Operate Transfer (BOT) Annuity:**

  Under this model, the concessionaire is responsible for construction and maintenance of the project during the concession period. The concessionaire collects the toll and transfers it to the authority. Variability in the toll gives rise to revenue risk, which is borne by the authority. However, the concessionaire generates revenue through fixed annuity payments received from the authority over the concession period. As this annuity payment is a cost to the authority, the contract is awarded to the lowest bidder.

- **Engineering, Procurement and Construction ("EPC"):** EPC contracts are fixed price contracts. The contractor undertakes the responsibility for investigation, design and construction of roads on the basis of specifications and performance standards provided by the authority. Based on the project parameters and specifications, the contractor draws up cost estimates and accordingly bids for the project, which is determined through competitive bidding process.

- **Toll Operate Transfer:** This is a new model introduced by the MoRTH for the maintenance of roads. The model involves leasing out of operational national highways for periods as long as 30 years to collect toll revenue in return for one-time upfront payment to the Government.

- **Hybrid Annuity Model ("HAM"):** HAM combines the features of EPC and BOT models. Under this model, the concessionaire receives 40% of the project cost from the authority during the construction period. The concessionaire is responsible for designing, building, financing (60% of the total project cost), operating and transferring the project. Under this model, toll is collected by the authority. The amount financed by the concessionaire is to be recovered from the authority through semi-annual payments. The bidding parameter for a contract under HAM is the lifecycle cost, which is the sum of the net present value ("**NPV**") of the project cost and the NPV of the O&M cost for the entire O&M period.

BUSINESS

*Some of the information in this section, including information with respect to our plans, strengths, and strategies, contain forward-looking statements that involve risks and uncertainties. You should read "**Forward Looking Statements and Financial Projections**" on page 15 for a discussion on the risks and uncertainties related to those statements and also "**Risk Factors**", "**Special Purpose Combined Financial Statements**", "**Projections of Revenue from Operations and Cash Flow from Operating Activities**" and "**Management's Discussion and Analysis of Financial Condition and Results of Operations of the Initial Portfolio Assets of the Trust** " on pages 21, 227, 379 and 301, respectively, for a discussion of certain factors that may affect our business, financial condition or results of operations. Our actual results may differ materially from those expressed in or implied by these forward-looking statements.*

Our fiscal year ends on March 31 of each year, and references to a particular Fiscal are to the twelve months ended March 31 of that year.

*Unless otherwise stated or the context requires otherwise, the financial information included herein is based on our Special Purpose Combined Financial Statements included in this Offer Document. For further details, see the section "**Special Purpose Combined Financial Statements**" on page 227. Unless otherwise stated or the context requires otherwise, references in this section to "we", "our" or "us" are to the Trust along with the Initial Portfolio Assets of the Trust. We have included various operational and financial performance indicators in this section, some of which may not have been derived from our Special Purpose Combined Financial Statements. The manner in which such operational and financial indicators are calculated and presented, and the assumptions and estimates used in such calculations, may vary from that used by other entities in the business similar to ours. Investors are accordingly cautioned against placing undue reliance on such information in making an investment decision and must evaluate such information in the context of the Special Purpose Combined Financial Statements.*

Unless stated otherwise or the context otherwise requires, industry and market data used in this section has been obtained or derived from, publicly available information as well as industry publications and sources, including from various government publications and websites. The data may have been re-classified by us for the purposes of presentation. 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 sources and publications are also prepared based on information as of specific dates and may no longer be current or reflect current trends. Industry sources and publications may also base their information on estimates, projections, forecasts and assumptions that may prove to be incorrect. Investors must rely on their independent examination of, and should not place undue reliance on, or base their investment decision solely on this information. For more information about the industry, *see "**Industry Overview**" on page 146.*

Unless otherwise stated or the context requires otherwise, references in this section to "we", "our" or "us" are to the Trust along with the Initial Portfolio Assets of the Trust.

Overview

Capital Infra Trust (erstwhile National Infrastructure Trust) is an infrastructure investment trust sponsored by Gawar Construction Limited ("**GCL**" or "**Sponsor**"), established on September 25, 2023 with the objective to carry on the activities of, and to make investments as, an infrastructure investment trust, as permissible under the SEBI InvIT Regulations. We were settled by way of the Trust Deed, by GCL (the Sponsor), read along with Amendment to the Trust Deed and registered as an infrastructure investment trust with SEBI on March 7, 2024 (updated vide SEBI registration certificate dated October 16, 2024) in accordance with the SEBI InvIT Regulations.

Our Sponsor is an infrastructure development and construction company in India, with over 15 years of experience, primarily engaged in the construction of road and highway projects across 19 states in India for various government/ semi-government bodies and statutory authorities including NHAI, Ministry of Road Transport & Highways (MoRTH), Mumbai Metropolitan Regional Development Authority (MMRDA) and Central Public Works Department (CPWD). Since 2008, our Sponsor has undertaken more than 100 road construction projects. As on the date of this Offer Document, our Sponsor has a portfolio of 26 road projects on a hybrid annuity mode ("**HAM**") with NHAI, of which 11 are completed projects, including the five acquired assets which were erstwhile owned by Sadbhav Infrastructure Project Limited, and 15 under-construction projects.

Our Sponsor has an established track record of efficient project management and execution involving trained and skilled manpower, efficient deployment of equipment and an in-house integrated business model. We believe that these attributes have enabled to complete projects on or ahead of the scheduled period of completion. The in-house materials supply chain management ensures that key construction materials are delivered in a timely manner to the facilities and construction sites thereby enabling our Sponsor to manage its processes effectively and maintain its key raw material inventory to an optimal manner. The project management team working in conjunction with the design and engineering team, ensures operational efficiencies through overall supervision of the development and project execution process. Five out of the seven indigenous HAM projects were completed before scheduled time and have received early completion bonus from NHAI.

Our Sponsor complies with the eligibility requirements under the SEBI InvIT Regulations of requisite track record in development of infrastructure projects.

We primarily intend to acquire, manage and invest in the nine completed and revenue generating Initial Portfolio Assets, aggregating to approximately 682.425 kms, operated and maintained pursuant to concessions granted by the NHAI and are owned and operated by the Project SPVs. These roads are located in the states of Haryana, Rajasthan, Bihar, Uttarakhand, Himachal Pradesh, Madhya Pradesh and Karnataka. Our Initial Portfolio of Assets has a weighted average residual concession life of 11.7 years as of September 30, 2024. For more information about the Initial Portfolio Assets, see "– ***Details of the Project SPVs and the Initial Portfolio Assets*** " on page 159.

In addition to the Initial Portfolio Assets, the Trust, through the Investment Manager, will also have the right to acquire new projects through a right of first offer with our Sponsor in accordance with the Right of First Offer Agreement ("**ROFO Agreement**"). For more details, see "– ***Assets under ROFO*** *" and "****Formation Transactions in relation to the Trust– Acquisition of future assets by the Trust- ROFO Agreement***" on pages 172 and 112, respectively.

The Formation Transactions

The Trust intends to acquire 100% of the equity shares in each of the Project SPVs from the Sponsor. As consideration for the acquisition of the equity shares of the Project SPVs, the Trust will issue Units, in accordance with the relevant Share Purchase Agreements, to the Sponsor after the Bid/Issue Closing Date and prior to the Allotment in the Offer, i.e., the closing date pursuant to the Share Purchase Agreements. For more information about the Formation Transactions and key terms of the Share Purchase Agreements, see "***Formation Transactions in relation to the Trust***" on page 102.

As of September 30, 2024, the following projects, which are owned, operated and maintained by the Project SPVs, comprise the Initial Portfolio Assets consisting of approximately 682.425 km of constructed and operational roads across seven states in India:

Name of the Initial Portfolio Assets	Rohna Jhajjar Highway Asset	Khajuwala Bap Highway Asset	Narnaul Highway Asset	Rohna Sonepat Highways Asset	Hardiya Hasanpur Highway Asset	Kiratpur Nerchowk Highway Asset	Dewas Ujjain Highway Asset	Bangalore Highways Asset	Nainital Highways Asset
Brief Description	GRJHPL is a special purpose vehicle which was incorporated to undertake redesigning, rehabilitation, upgradation and development of road of Rohna/Hassangarh to Jhajjar section from km 44.80 to km 80.250 (Design Chainage) (Length 35.450 Km) of NH-334B in Haryana by four laning on a HAM basis.	GKBHPL is a special purpose vehicle which was incorporated to undertake upgradation of road from km 0.00 of NH 911 to km 30.812 of NH 911 via Khajuwala-Poogal Section and the road from km 1.430 of NH 911 to km 182.725 of NH 911 via Poogal Dantour Jaggasar Gokul Goddu Ranjeetpura Charanwala Naukh Bap section under Bharatmala Pariyojna for the stretch of 212.107 km in Rajasthan by two laning on a HAM basis.	GNHPL is a special purpose vehicle which was incorporated for the development of road 4/6 Lanning of Narnaul Bypass Crossing to Paniyala Mor (NH-148 B) at NH-48 Junction for a stretch of 31.24 km Nizampur Link Road for a stretch of 2.76 km and Narnaul Bypass crossing to Pacheri Kalan=11.30 km of NH-11 in Haryana on a HAM basis.	GRSHPL is a special purpose vehicle which was incorporated for redesigning, rehabilitation and upgradation road from km 0.00 of NH-334B to km 44.80 of NH-334B via Uttar Pradesh /Haryana border to Rohna section for the stretch of 40.500 km in Haryana by four laning on a HAM basis.	HHHPL is a special purpose vehicle which was incorporated for development of the road from km 54.405 of NH 20 to km 101.630 of NH 31 (New NH 20) via Rajauli-Bakhtiyarpur Section for the stretch of 47.225 km in Bihar by four laning on a HAM basis.	GKNHPL is a special purpose vehicle was incorporated for undertaking development of balance work for the road from km 12.750 of NH 21 to km 26.500 of NH 21, km 126.500 to km 158.500 including ACC link road from km 0.00 of NH 21 to km 2.003 of NH 21 via Kiratpur to Nerchowk Section under greenfield alignment (excluding Sunder Nagar Bypass) for the stretch of 47.753 km in Himachal Pradesh by four laning on a HAM basis.	DUHPL is a special purpose vehicle which was incorporated for the development of the road from km 0.00 of NH 148 to km 19.733 of NH 148, the road from km 19.733 of NH 148 to km 26.90 of NH 148 and the road from km 0.00 of NH 148 to km 14.52 via Dewas Ujjain Section and thereof for the stretch of 41.42 km in Madhya Pradesh by four laning on a HAM basis.	GBHPL is a special purpose vehicle which was incorporated for the development of road from km 287.52 of NH 209 to km 461.55 of NH 209 via BRT Tiger Reserve Boundary to Bangalore Section under National Highways Development Project Phase- IV for the stretch of 164.34 km in Karnataka by two/ four laning on a HAM by. way of harmonious substitution of SBHPL (the erstwhile concessionaire) under the SBHPL Concession Agreement.[1]	GNHPL II is a special purpose vehicle which was incorporated for the development of road from km 42.791 of NH 87 (New NH 09, 109) to km 88 of NH 87 (New NH 09, 109) via Rampur Kathgodam Section under NHDP Phase-III for the stretch of 49.78 km in Uttarakhand by four laning on a HAM basis by way of harmonious substitution of SNHL (the erstwhile concessionaire) under the SNHL Concessionaire Agreement.[2]
State	Haryana	Rajasthan	Haryana	Haryana	Bihar	Himachal Pradesh	Madhya Pradesh	Karnataka	Uttarakhand
Design length (in kms)	35.450	212.107	45.300	40.220	47.225	47.753	40.250	164.340	49.78
Awarding Authority	NHAI	NHAI	NHAI	NHAI	NHAI	NHAI	NHAI	NHAI	NHAI
Date of signing of	May 09, 2018 (amendment to Concession	September 28, 2018	February 28, 2019	May 27, 2019	October 28, 2020	November 26, 2020	December 11, 2020	December 08, 2016	June 2, 2016

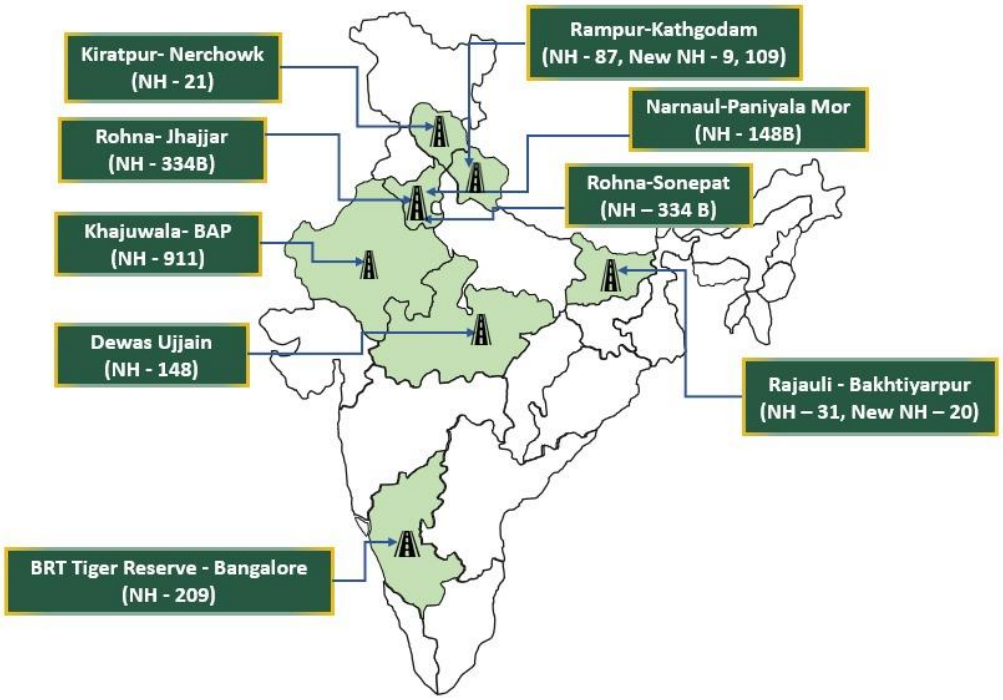
[1] *SBHPL is a wholly owned subsidiary of Sadbhav Infrastructure Projects Limited formed for undertaking development of Bangalore Highway Limited. However, due to persisting issues leading to delay in project completion, the project was endorsed to GBHPL through endorsement agreement on February 13, 2023.*

[2] *SNHL was incorporated by Sadbhav Infrastructure Projects Limited for undertaking development of Nainital Highway Asset. However, due to persisting issues leading to delay in project completion, the project was endorsed to GNHPL II through endorsement agreement on July 14, 2023, read along with settlement agreement dated October 15, 2024.*

Name of the Initial Portfolio Assets	Rohna Jhajjar Highway Asset	Khajuwala Bap Highway Asset	Narnaul Highway Asset	Rohna Sonepat Highways Asset	Hardiya Hasanpur Highway Asset	Kiratpur Nerchowk Highway Asset	Dewas Ujjain Highway Asset	Bangalore Highways Asset	Nainital Highways Asset
Concession Agreement	Agreement on February 13, 2019)								
Date of Signing of Endorsement Agreement	NA	NA	NA	NA	NA	NA	NA	February 13, 2023	July 14, 2023
PCOD	July 10, 2020	January 20, 2021	January 9, 2021	January 29, 2022	April 27, 2023	June 7, 2023	July 5, 2023	December 31, 2020	October 27, 2019
COD	July 31, 2020	October 30, 2021	January 09, 2021	April 5, 2022	To be notified	September 5, 2023	January 16, 2024	To be notified	To be notified
Operations and maintenance period (in years)	15	15	15	15	15	15	15	15	15
Bid Project Cost *(in ₹ millions)*	7,180	8,950	11,370	10,200	10,650	20,980	7,160	9,442.30	5,601.10
Completion cost (in ₹ million)**	7,571.31	9,657.88	11,779.32	10,998.10	12,090.88	24,431.21	8,233.30	10,495.62	7,684.70
Total annuities receivable until the concession end date (in ₹ million)	4,510.73	5,794.73	7,013.02	6,656.99	7,304.64	14,746.84	4,946.87	5,480.72	3,683.85
Annuities received until the concession end date or as on September 30, 2024 whichever is earlier) (in ₹ million)	804.04	891.08	1,083.82	724.20	311.91	629.69	211.23	668.65	219.97
Cash Inflows* received as on September 30, 2024 (in ₹ millions)	201.28	260.41	311.15	311.32	381.52	740.68	255.46	558.22	203.35

* *Cash Inflows include interest on annuity and O&M payments for April 1, 2024, to September 30, 2024.*

** *Completion Cost may be adjusted due to changes in the weighted price index, consumer price index, and any modifications to the reference date as per NHAI's evaluation under the Concession Agreement.*



All of the Initial Portfolio Assets are HAM projects awarded by NHAI. The Sponsor will be monetizing future annuity payments (including interest payable thereon) and O&M income receivable from the NHAI by transferring the Initial Portfolio Assets to the Trust. Our revenue stream primarily comprises interest income on financial assets receivable from NHAI, as well as revenue from operations, maintenance of roads, construction services, and operating revenues received from NHAI. The revenue from operations of the Initial Portfolio Assets based on the Special Purpose Combined Financial Statements for the six months period ended September 30, 2024, and Financial Years ended March 31, 2024, 2023 and 2022 was ₹ 7,054.55 million, ₹ 14,850.91 million, ₹ 20,330.90 million and ₹ 19,081.51 million respectively. For more information in relation to financial information of the Project SPVs, see **"*Management's Discussion and Analysis of Financial Condition and Results of Operations***" on page 301.

Our Investment Manager is Gawar Investment Manager Private Limited. The Investment Manager was incorporated as a private limited company on August 26, 2023, and will be relying on the experience/ expertise of its board of directors and key managerial personnel who has experience in various sectors including in the road and highways sector and brings expertise in the areas of infrastructure, fintech, finance and accounting, and regulatory compliance, financial management, advisory and/or infrastructure development sector, which cumulatively exceeds 30 years (with experience of the directors and key managerial personnel exceeding five years) and complies with the eligibility requirements under the SEBI InvIT Regulations. Accordingly, the Investment Manager is in compliance with the eligibility requirements prescribed under the SEBI InvIT Regulations. For more information about the Investment Manager, see "***Parties to the Trust– The Investment Manager – Gawar Investment Manager Private Limited***" on page 128.

The Trustee, the Investment Manager and the respective Project SPVs have appointed our Sponsor, Gawar Construction Limited, to act as the Project Manager for each Project SPV. Given its expertise and experience in constructing, operating and maintaining road projects in accordance with the terms of concession agreements, the operation and maintenance work in relation of the Project SPVs will be undertaken by GCL.

Axis Trustee Services Limited has been appointed as the sole Trustee of the Trust. The Trustee is registered with SEBI as a debenture trustee under the Securities and Exchange Board of India (Debenture Trustees) Regulations, 1993 and is eligible to act as the trustee to the Trust in accordance with the SEBI InvIT Regulations. For more information about the Trustee, see "***Parties to the Trust– The Trustee – Axis Trustee Services Limited***" on page 114.

In addition, the Trust (acting through the Trustee) intends to enter into the debt financing agreements with the Project SPVs. For more information, see "***Use of Proceeds***" on page 80.

Competitive Strengths

We believe that our competitive strengths are as follows:

Sizeable portfolio of stable revenue generating assets with no construction risk and long-term cash flows

We will own an initial portfolio consisting of nine Initial Portfolio Assets having an aggregate length of approximately 682.425 kms and 2,059 kms lane located on national highways networks across seven states in India. The projects are located on national highway networks that experience both commercial and passenger vehicular traffic. For a discussion of the historical financial performance of each of the Initial Portfolio Assets, see "***Management's Discussion and Analysis of Financial Condition and Results of Operations***" on page 301.

Given that all our Initial Portfolio Assets are on HAM basis, our entire revenue is expected to continue in the future from interest income on financial asset receivable from NHAI revenue from operations, maintenance of roads, construction services and operating revenues from the NHAI. In a HAM project, the concessioning authority shares a portion of the total project cost during the construction phase. As a mix of EPC and annuity models, HAM reduces the financial burden of a concessionaire during the project construction phase and provides an assured revenue in form of fixed pre-determined annuities, interest on reducing balance of completion cost (BCC) and O&M payments linked to inflation in the operational phase. Annuity payments eliminate the risk of income fluctuations resulting from changes in traffic volume. Some of our Initial Portfolio Assets have been receiving regular semi-annual annuities from NHAI since January 06, 2021, the aggregate annuity received till September 30, 2024 is ₹ 5,544.59 million. The residual terms of the concession agreements range between 10.09 years and 13.84 years as of September 30, 2024.

The following table sets forth the standalone revenue from operations for each Project SPV for the periods indicated:

(in ₹ million)

Project	Six months period ended September 30, 2024	For the Financial Year ended March 31,		
		2024	2023	2022
GRJHPL	170.09	448.10	393.50	(1.40)
GKBHPL	196.96	454.18	525.29	650.10
GNHPL	327.21	662.71	644.62	951.04
GKNHPL	2,478.07	4,435.31	11,088.05	7,247.20
HHHPL	413.80	1,565.81	5,151.08	3,106.53
GRSHPL	306.68	639.44	872.07	4,716.31
DUHPL	515.37	1,400.48	2,608.29	2,299.81
GNHPL II	1216.71	1,616.57	Nil	Nil
GBHPL	1433.06	3,655.00	53.65	Nil
Total	**7,057.95**	**14,877.60**	**21,336.55**	**18,969.59**

Geographically diversified road asset portfolio and revenue base

The Initial Portfolio Assets consist of nine operational HAM assets located across seven states of India, namely, Haryana, Rajasthan, Bihar, Uttarakhand, Himachal Pradesh, Madhya Pradesh and Karnataka. We believe that the geographic diversity of the Initial Portfolio Assets will play a major role in developing our experience and expertise, including our ability to evaluate, acquire, operate and maintain new projects.

The Concession Agreements of the Project SPVs are also temporally diverse and are expected to expire at different times. The residual terms of the operations period range between 10.09 years to 13.84 years. We believe that our temporally and geographically diverse project portfolio and project manager's expertise leveraged from existing projects 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 project and reducing the potential impact on our business of any economic slowdown or force majeure event or with respect to any particular project.

Attractive industry sector with strong underlying fundamentals and favourable government policies

The roads and highways sectors play an important role in the overall economy of India. The development of the infrastructure sector has been a priority area for the Government and has witnessed enhanced public investment over the years. In the Union Budget for Fiscal Year 2023-24, a total of approximately ₹2.7 trillion has been budgeted for the MoRTH, which is 25% higher than the revised estimates for Fiscal Year 2022-23. Further, Phase I of Bharatmala Pariyojana envisages to construct about 24,800 km of highways under the following categories: National Corridor (North-South, East-West and the Golden Quadrilateral), economic corridors, inter-corridor roads, feeder roads, international connectivity, border roads, coastal roads, port connectivity roads and expressways. The scheme will include the existing NHDP programme as well. (*Source: Annual Report 2021-22, MoRTH*). The Government approved Phase-I of Bharatmala Pariyojana in October 2017 with an aggregate length of about 34,800 km (including the residual NHDP stretches of 10,000 km) at an estimated outlay of approximately ₹5.35 trillion. We believe that the Government's focus on and sustained increases in budgetary allocations for the sector as well as the development of comprehensive infrastructure policies will be beneficial to our business in terms of bringing in more opportunities for acquisition of assets. For further details on the market opportunity and the roads and highways industry in India, see "***Industry Overview***" on page 146.

Growth opportunities and rights to expand portfolio of assets through acquisition of Sponsor's portfolio and third party projects

Established sponsors often have a network and access to a pipeline of potential projects or acquisition opportunities in the roads sector. This can enable the Trust to expand its portfolio strategically, diversify risk, and capitalize on growth opportunities as they arise.

Through the ROFO Agreement, we will have a right of first offer to acquire certain assets owned by the Sponsor or which may be acquired by the Sponsor. For more details, see "– ***Assets under ROFO****" and "****Formation Transactions in relation to the Trust– Acquisition of future assets by the Trust- ROFO Agreement***" on pages 172 and 112, respectively. As on date of this Offer Document, our Sponsor is currently developing 17 HAM assets consisting of approximately 546.164 km of roads across eleven states in India. Details of the under-construction HAM projects being developed by our Sponsor includes:

S. No.	Name of the ROFO SPV	Length (km)	Bid Project Cost (in ₹ million)	Status	End of concession period
1.	Hasanpur Bakhtiyarpur Highway Private Limited	50.89	23,100.00	Applied for PCOD	June, 2039
2.	Gawar Kangra Highways Private Limited	18.13	11,000.00	Under Construction	December, 2039
3.	Korba Highway Private Limited	38.2	8,300.00	Project has achieved PCOD on March 26, 2024 for Project Length 32.843 KM.	March, 2039
4.	Gawar Sihuni Highway Private Limited	18.45	3,890.00	Under Construction	September, 2040
5.	Gawar Pathankot Highways Private Limited	19.05	5,450.00	Construction is yet to start	Yet to receive appointed date
6.	Gawar Shimla Highway Private Limited	10.985	20,700.00	Under Construction	March, 2042
7.	Gawar Bhiwani Highway Private Limited	42.934	7,990.00	Under Construction	December, 2040
8.	Gawar Rudrapur Highway Private Limited	20.64	5,889.99	Under construction	January, 2041
9.	Gawar Fazilka Highway Private Limited	44.96	11,989.08	Under construction	April, 2041
10.	Gawar Bijnor Highways Private Limited	39.56	11,809.98	Under construction	May, 2041
11.	Gawar Mandi Highways Private Limited	5.357	9,719.99	Construction is yet to start	Yet to receive appointed date
12.	Gawar KBNC Highway Private Limited	17.45	6,399.99	Construction is yet to start	Yet to receive appointed date
13.	Gawar Basukinath Highways Private Limited	45.159	9,990.00	Under construction	December, 2040
14.	Gawar Pathankot Mandi Highway Private Limited	8.33	5,290.00	Applied for PCOD	June, 2039
15.	JRR Highways Private Limited	74.619	11,610.00	Project has achieved PCOD on April 10, 2024, and Received IE recommendation for COD	April, 2039
16.	Gawar Kim Expressway Private Limited	24.57	14,040.00	Under Construction	April, 2040
17.	Gawar Waranga Highways Private Limited	66.88	10,710.00	Applied for PCOD	October, 2039

We believe that this access to existing ROFO SPVs and future road assets of our Sponsor will be an important source of the Trust's growth in the future. In addition to the afore mentioned the Trust intends to acquire road assets from third parties.

Strong support from our Sponsor, Project Manager and the Investment Manager

Over time, experienced sponsors build strong relationships with stakeholders such as government authorities, local communities, and financial institutions. We intend to leverage the experience and expertise of our Sponsor to gain a competitive advantage within the road infrastructure industry. Our Sponsor, which will also be our project manager, and it has over 15 years of experience in the construction of road and highway projects across 19 states in India for government/semi-government bodies and statutory authorities including National Highways Authority of India (NHAI), Ministry of Road Transport & Highways (MoRTH), Mumbai Metropolitan Regional Development Authority (MMRDA) and Central Public Works Department (CPWD).

Drawing upon this depth of experience, our Sponsor has established a strong track record of developing and operating and managing large and complex road and highway projects. Our Sponsor's projects have a proven long operating life and long residual life, which will benefit us across all stages of project operations. We believe our Sponsor also provides us the ability to leverage its parentage and long-term industry relationships and project execution skills. We also believe these relationships can facilitate smoother project execution, quicker issue resolution, and access to financing on favourable terms for the Trust.

Skilled and experienced management team with industry experience with a focus on corporate governance

We will be managed by qualified personnel of the Investment Manager who has a strong management team with extensive experience, in-depth understanding and a proven track record of performance in the road and highways sector. The board of directors and key managerial personnel have a cumulative of more than 30 years of experience in various sectors including in the road and highways sector and brings expertise in the areas of infrastructure, fintech, finance and accounting, and regulatory compliance. We believe this will be key to the execution of our growth strategies. In addition, the board of directors of the Investment Manager comprises of professionals having experience of serving in senior management roles of multinational banks. For further details, see "***Parties to the Trust– The Investment Manager – Gawar Investment Manager Private Limited***" and "***Parties to the Trust– The Project Manager***" on pages 128 and 141, respectively.

We believe that the experience and leadership of these teams will contribute to our growth and success and will enable our road assets to be operated and managed in an efficient manner. The Investment Manager's Board has and will also adopt policies for corporate governance as may be required from time to time in accordance with applicable law and the SEBI InvIT Regulations. For further details, see "***Corporate Governance***" on page 196.

Consistent track record of the Project Manager in operating and maintaining projects in the infrastructure sector in India

The Project Manager has a strong presence in the infrastructure sector and is credited with developing several projects, including the Kiratpur project, Narnaul project, Hardiya project, and Mumbai Metro Rail Project under the PPP model. The Kiratpur project is a route connecting Shimla and Mandi, significantly reducing travel time between the two cities. The Hardiya project connects Patna to Ranchi, providing substantial commercial and business benefits to both states. Additionally, the Khajuwala project is strategically important, aiding the movement of the armed forces. Lastly, the Mumbai Metro Rail project is estimated to significantly reduce traffic congestion in the metropolitan city.

The Sponsor's consistent track record in the development and maintenance of the road assets brings operational expertise in managing road infrastructure projects including efficient maintenance of road assets, handling regulatory compliance, and minimising operational risks. Their experience can lead to smoother operations and potentially lower major maintenance and other related costs for the Initial Portfolio Assets and the Trust. We believe that the minimized need for frequent stops and starts could potentially result in a smoother, more uniform pavement surface and a significant reduction in construction time.

As the Sponsor will also act as the Project Manager of the Trust, we believe we will be able to minimise the maintenance cost of Initial Portfolio Assets. Additionally, the independent engineers of the Initial Portfolio Assets have not highlighted any operation and maintenance flaws in the Initial Portfolio Assets in past and the maintenance activities have been largely undertaken in the ordinary course.

Hedge against adverse interest rate movements

The NHAI hybrid annuity projects provide a natural hedge against the risk of adverse interest rate movement. In addition to the annuity payments due under the respective Concession Agreements during the operations period, NHAI is required to pay interest on the reducing balance of the completion cost (equivalent to 60% of the Bid Project Cost) throughout the operation period at the rate of 3% above the Reserve Bank of India Bank Rate.

Accordingly, any increase in the interest payable on loans with floating interest rates by the Trust due to an increase in interest rates gets offset by the increased revenues as a result of increase in interest on reducing balance of completion cost. This structure of the concession agreements effectively mitigates the interest rate risk to the Project SPVs and provides a greater financial predictability and stability to the Trust investors.

Investment Strategy and Risk and Capital Management Strategy

Our principal business strategies are as set out below:

Goal to maintain optimum capital structure to maximise distributions to Unitholders

We intend to focus on achieving an optimal capital structure for our projects and will continue to draw upon the experience, relationship and expertise of our Sponsor and its affiliates in sourcing funds from multiple sources. The Trusts' total outstanding consolidated net debt after full utilization of the Offer Proceeds, will be within the regulatory requirement of 49% of the value of the Initial Portfolio Assets upon completion of the Offer (net of cash and cash equivalents) as specified under the SEBI InvIT Regulations.

We also intend to optimise our leverage to retain enough flexibility to provide sustainable and predictable cash flows while also evaluating potential acquisition opportunities in the future. After the completion of the Offer, we believe that we will have sufficient equity capital and ability to add additional debt to support acquisition of additional assets while maintaining an optimum capital structure.

We will seek to employ appropriate financing policies and also diversify our funding sources with an objective of minimising our overall cost of capital. We will seek to optimise our debt and equity mix in such a manner that the aggregate consolidated borrowings and deferred payments of the Trust, net of cash and cash equivalents does not exceed 70% of the value of the Initial Portfolio Assets at any time subject to the approval of the unitholders and in accordance with the SEBI InvIT Regulations.

Further, any additional debt beyond 49% of the value of the Initial Portfolio Assets will be raised only upon compliance with the conditions set out in the SEBI InvIT Regulations. In accordance with the Trust Deed, and subject to the Applicable Law permitting such additional debt, any additional debt will be raised only with consent of 75% of the Unitholders by value of the Trust. If it is in the interests of the Unitholders, the Investment Manager may also pursue growth opportunities that require raising additional capital through the issuance of new Units.

Active asset management

We intend to continue to manage our assets through the services of the Project Manager and the Investment Manager. The Project Manager is responsible for providing the Project SPVs management-related services and routine O&M services pursuant to the provisions of the Project Management Agreement.

The Project Manager will also assist the Trust and the Project SPVs in managing the project operating expenses. The roads sector is a highly competitive sector that is capital intensive and requires significant expenditure.

As part of our operations and maintenance systems and processes, the Investment Manager intends to work with the Project Manager to employ both preventive and corrective measures in order to optimise the long-term performance of each project, to minimize downtime or defects with respect to the Initial Portfolio Assets.

Project Manager's ability to manage the costs associated with the Initial Portfolio Assets is critical to maintain the Project SPVs' profit margins.

The Project Manager will also coordinate with the NHAI and local authorities to make sure that any new requirements of such agencies, to the extent reasonable, and in accordance with concession agreement, if any, are complied with within the scheduled timelines for each project.

Expand the portfolio of road assets

The Investment Manager intends to expand our initial portfolio by identifying and acquiring additional road projects that meet our investment objective in accordance with the provisions of the Trust Deed. For more details, see "***Overview of the Trust***" on page 19.

The Investment Manager will be selective with respect to new projects it acquires in the future and will rely on the relevant policies of the Trust to make investment decisions in road projects.

The Trust has entered into the ROFO Agreement with our Sponsor, pursuant to which the Sponsor has granted a right of first offer to us to acquire certain of its road assets. For details, see "– ***Assets under ROFO*****"** and **"*Formation Transactions – Acquisition of future assets by the Trust - ROFO Agreement***" on pages 172 and 112, respectively.

In addition, the Investment Manager believes that certain acquisition opportunities may be available in the industry. The Investment Manager intends to take advantage of these opportunities by sourcing and acquiring assets from such third parties on a case-by-case basis in accordance with the SEBI InvIT Regulations, the concessions and other road project related agreements and policies.

Details of the Project SPVs and the Initial Portfolio Assets

The Initial Portfolio Assets consist of nine road assets, operating on HAM basis, in seven states, namely, Haryana, Rajasthan, Bihar, Uttarakhand, Himachal Pradesh, Madhya Pradesh and Karnataka. The Project SPVs operate and maintain the Initial Portfolio Assets pursuant to concessions granted by NHAI.

The table below sets forth details of the Project SPVs as on September 30, 2024:

Project	Design Length (in Kms)	Location	State	Commencement of concession period / Appointed Date	End of concession period (excluding reduction or extension if any)	Residual Concession Period (in years) as on September 30,2024	Bid Project Costs (in ₹ millions)	Number of Annuities received till the period ended September 30, 2024/Total Annuities to be paid in the Concession period
Gawar Rohna Jhajjar Highway Private Limited	35.45	NH-334B	Haryana	December 18, 2018	July 10, 2035	10.84	7,180.00	8/30
Gawar Khajuwala Bap Highway Private Limited	212.107	NH-911	Rajasthan	May 22, 2019	January 20, 2036	11.34	8,950.00	7/30
Gawar Narnaul Highway Private Limited	45.30	NH-148B at NH-48	Haryana	September 19, 2019	January 9, 2036	11.34	11,370.00	7/30
Gawar Rohna Sonepat Highways Private Limited	40.220	NH- 334B	Haryana	January 22, 2020	January 29, 2037	12.35	10,200.00	5/30
Hardiya Hasanpur Highway Private Limited	47.225	NH-31 (New NH-20)	Bihar	April 28, 2021	April 27, 2038	13.59	10,650.00	2/30
Gawar Kiratpur Nerchowk Highway Private Limited	47.753	NH-21	Himachal Pradesh	August 12, 2021	June 7, 2038	13.76	20,980.00	2/30
Dewas Ujjain Highway Private Limited	40.250	NH - 148	Madhya Pradesh	July 6, 2021	July 5, 2038	13.84	7,160.00	2/30
Gawar Bangalore Highways Private Limited	164.34	NH-209	Karnataka	August 21, 2017	December 31, 2035	11.26	9,442.30	7/30
Gawar Nainital Highways Private Limited	49.78	NH – 87 (New NH 09, 109)	Uttarakhand	October 28, 2017	October 27, 2034	10.09	5,601.10	9/30
Total	**682.425**						**91,533.40**	**49/270**

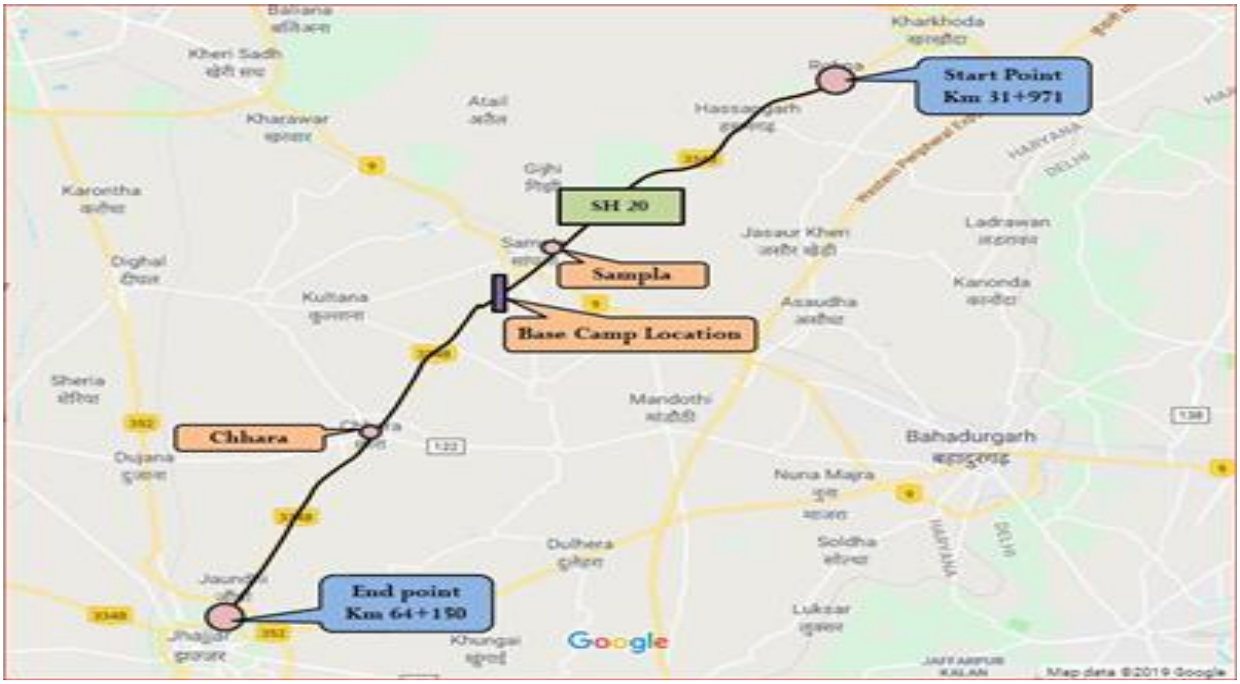
1. ***Gawar Rohna Jhajjar Highway Private Limited (GRJHPL)***

Concession agreement

A concession agreement was executed between GRJHPL and NHAI dated May 9, 2018 (the "**GRJHPL Concession Agreement**") for DBOT of the road from km 44.80 of NH- 334B to km 80.250 of NH- 334B via Rohna/ Hassangarh to Jhajjar section for the stretch of 35.45 kms in Haryana by four laning on a HAM basis. The provisional certificate of completion was issued on July 10, 2020 and the completion certificate was issued on July 31, 2020. For details, see "***Summary of Concession Agreements***" on page 177.

The following map illustrates the location of Rohna Jhajjar Highway Asset and the corridor it covers:

Figure 1: Gawar Rohna Jhajjar Highway Private Limited



Concession period

GRJHPL Concession Agreement provided for a construction period and an operational period. The operational period of 15 years commenced from the date of pre-commercial operations date or the commercial operations date, whichever is earlier ("**PCOD/COD**"). Accordingly, concession period will be ending on July 10, 2035 except for any extensions which may be granted. GRJHPL has started receiving annuities with respect to the Rohna Jhajjar Highway Asset from January 18, 2021.

Maintenance

GRJHPL is required to carry out the operation and maintenance of the Rohna Jhajjar Highway Asset, to ensure the safe, smooth and uninterrupted use of the project highway, including prevention of loss or damage during normal operating conditions, to minimize disruption in the event of accidents or other incidents affecting the safety and use of the project highway by providing a rapid and effective response and liaising with the emergency services of the state. In operating and maintaining the project, GRJHPL is required to comply with detailed general and project-specific operating and maintenance requirements detailed in the concession agreement, for more details, "***Summary of Concession Agreements - Operations & Maintenance Obligations and Expenses***" see on page 178.

GRJHPL has entered into an operation and maintenance agreement with GCL *(Project Manager to Trust)* dated July 13, 2020 to meet these obligations.

The following table sets forth GRJHPL's operation and maintenance costs during the periods indicated:

(in ₹ million)

Project	Six months period ended September 30, 2024	For the Financial Year ended March 31		
		2024	2023	2022
GRJHPL	(18.22) *	54.82	36.52	55.79

**This is due to Non-Recoverable GST written back amounting to ₹32.87 million.*

Borrowings

As of September 30, 2024, the outstanding debt was ₹ 1,934.55 million. For more information, see "***Financial Indebtedness and Deferred Payments***" *and* ***"Formation Transactions in relation to the InvIT"*** on pages 321 and 102, respectively.

Structure of ownership of the project

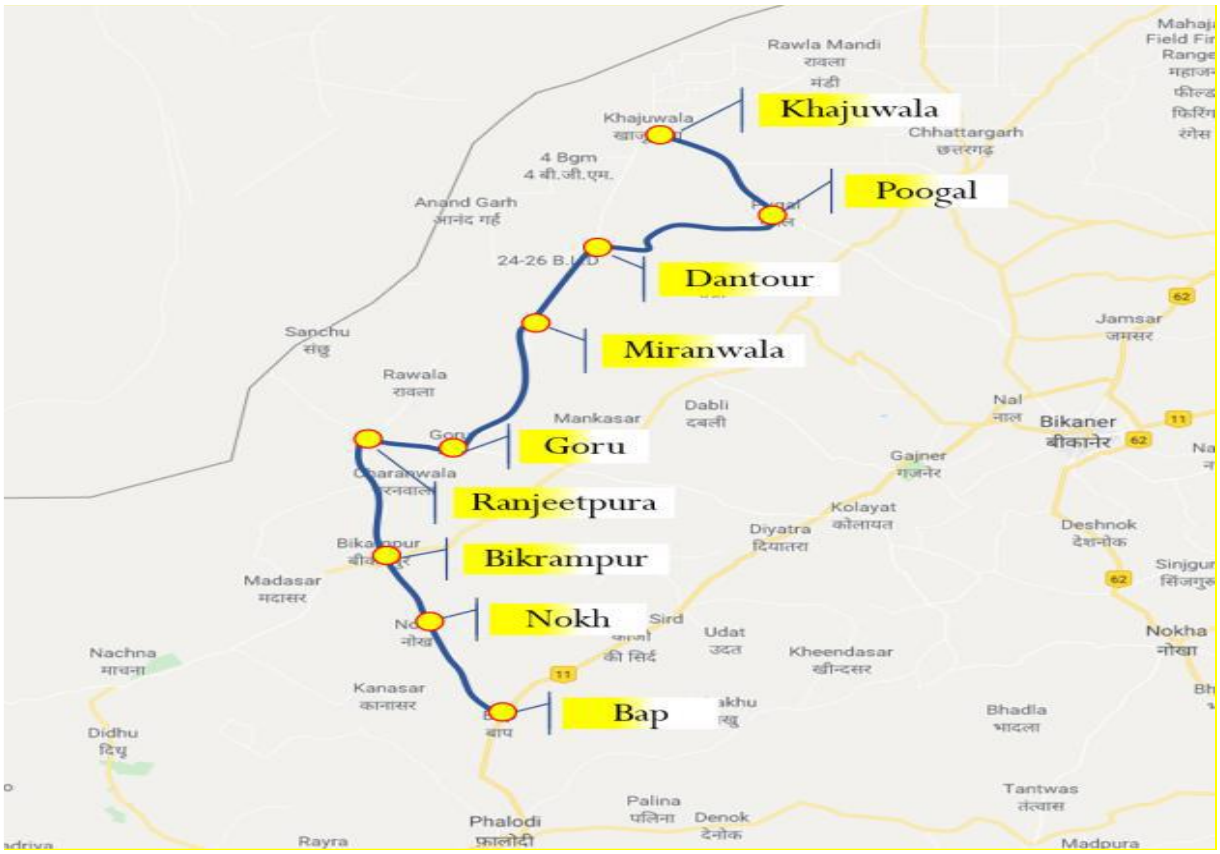
For information about the proposed structure of ownership of the project by the Trust see "***Overview of the Trust – Structure and Description of the Trust"*** on page 19.

2. ***Gawar Khajuwala Bap Highway Private Limited (GKBHPL)***

Concession agreement

A concession agreement was executed between GKBHPL and NHAI dated September 28, 2018 (the "**GKBHPL Concession Agreement**") for DBOT of the road from km 0.00 of NH 911 to km 30.812 of NH 911 via Khajuwala- Poogal Section and the road from km 1.430 of NH 911 to km 182.725 of NH 911 via Poogal Dantour Jaggasar Gokul Goddu Ranjeetpura Charanwala Naukh Bap section under Bharatmala Pariyojna for the stretch of 212.107 km in Rajasthan by two laning with paved shoulder four laning on a HAM basis. The completion certificate was issued on October 30, 2021. For details, see "***Summary of Concession Agreements***" on page 177.

Figure 2: Gawar Khajuwala BAP Highway Private Limited



Concession period

GKBHPL Concession Agreement provided for a construction period and an operational period. The operational period of 15 years commenced from the date of pre – commercial operations date or the commercial operations date, whichever is earlier ("**PCOD/COD**"). Accordingly, concession period will be ending on January 20, 2036 except for any extensions which may be granted. GKBHPL began receiving annuities with respect to this project from August 19, 2021 and started receiving O&M from October 13, 2021.

Maintenance

GKBHPL is required to carry out the operation and maintenance of the project to ensure the safe, smooth and uninterrupted use of the project highway, including prevention of loss or damage during normal operating conditions, to minimize disruption in the event of accidents or other incidents affecting the safety and use of the project highway by providing a rapid and effective response and liaising with the emergency services of the state. In operating and maintaining the project, GKBHPL is required

to comply with detailed general and project-specific operating and maintenance requirements detailed in the concession agreement. For further details, see "***Summary of Concession Agreements- Operations & Maintenance Obligations and Expenses***" on page 178.

GKBHPL has entered into an operation and maintenance agreement with GCL *(Project Manager to Trust)* dated February 19, 2021 further amended on June 6, 2021 to meet these obligations. The following table sets forth the GKBHPL's operation and maintenance costs for the periods indicated:

(in ₹ million)

Project	Six months period ended September 30, 2024	For the Financial Year ended March 31		
		2024	2023	2022
GKBHPL	(17.55) *	68.92	50.67	33.83

* *This is due to Non-Recoverable GST written back amounting to ₹42.58 million.*

Borrowings

As of September 30, 2024, the outstanding debt with respect to this project was ₹ 1,819.04 million. For more information, see "***Financial Indebtedness and Deferred Payments***" on page 321.

Structure of ownership of the project

For information about the proposed structure of ownership of the project by the Trust, see "***Overview of the Trust –Structure and Description of the Trust***" on page 19.

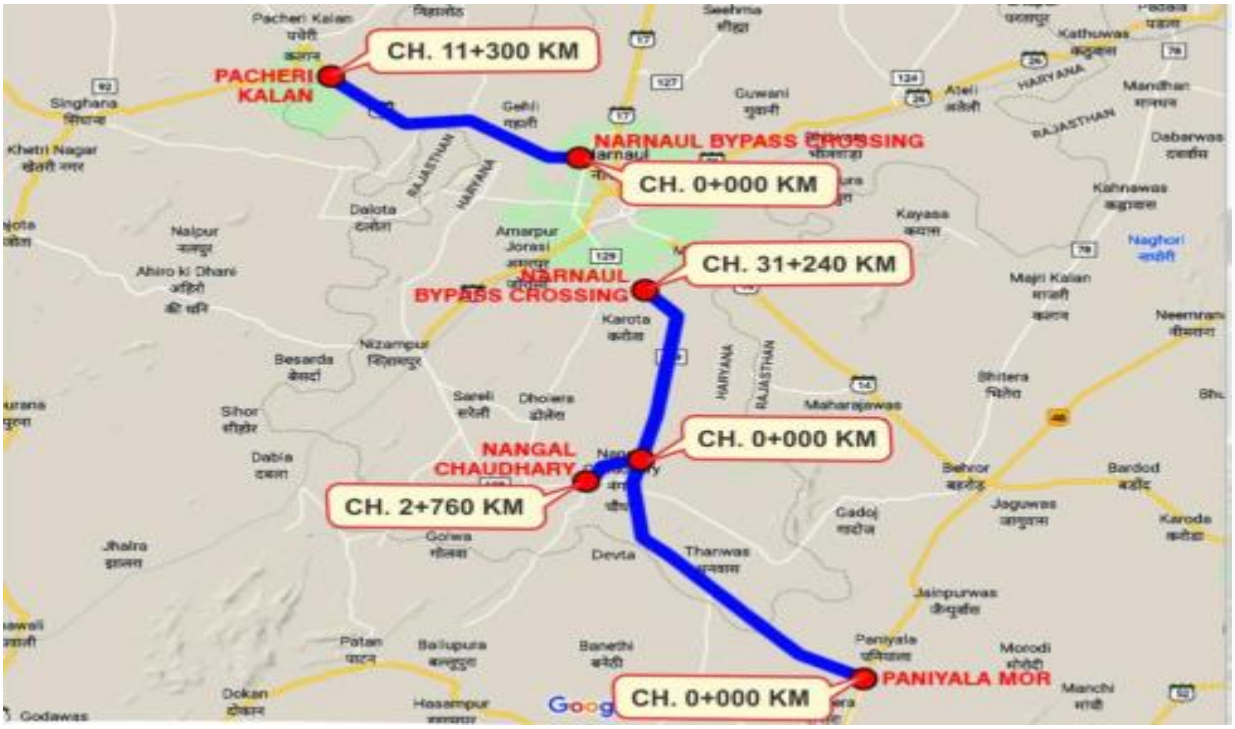
3. ***Gawar Narnaul Highway Private Limited (GNHPL)***

Concession agreement

A concession agreement was executed between GNHPL and NHAI dated February 28, 2019 (the "**GNHPL Concession Agreement**") for DBOT of the road from km 39.400 of NH-148B to km 8.500 of NH- 148B at Paniyala Mor (at NH-48 junction) for a stretch of 34.000 km and the road from km 68.000 of NH- 11 to km 79.800 of NH-11 at Nizampur Link Road of 2.76 km and Narnaul Bypass crossing to Pacheri Kalan (Rajasthan/Haryana Border) in Haryana by 4/6 laning on a HAM basis. The certificate of completion was issued on January 9, 2021. For details, see "***Summary of Concession Agreements- Operations & Maintenance Obligations and Expenses***" on page 178.

The following map illustrates the location of GNHPL and the corridor it covers:

Figure 3: Map of Gawar Narnaul Highway Private Limited



Concession period

GNHPL Concession Agreement provided for a construction period and an operational period. The operational period of 15 years commenced from the date of pre – commercial operations date or the commercial operations date, whichever is earlier ("**PCOD/COD**"). Accordingly, concession period will be ending on January 9, 2036 except for any extensions which may be granted. GNHPL began receiving annuities with respect to this project on August 2, 2021.

Maintenance

GNHPL is required to carry out the operation and maintenance of the project, to ensure the safe, smooth and uninterrupted use of the project highway, including prevention of loss or damage during normal operating conditions, to minimize disruption in the event of accidents or other incidents affecting the safety and use of the project highway by providing a rapid and effective response and liaising with the emergency services of the state. In operating and maintaining the project, GNHPL is required to comply with detailed general and project-specific operating and maintenance standards detailed in the concession agreement. For further details, see "***Summary of Concession Agreements- Operations & Maintenance Obligations and Expenses***" on page 178.

GNHPL has entered into an operation and maintenance agreement with GCL *(Project Manager to Trust)* dated December 3, 2020 and further amended on June 6, 2021 to meet these obligations. The following table sets forth the GNHPL 's operation and maintenance costs for the periods indicated:

(in ₹ million)

Project	Six months period ended September 30, 2024	For the Financial Year ended March 31 2024	2023	2022
GNHPL	52.90	78.17	56.84	79.20

Borrowing

As of September 30, 2024, the outstanding debt was ₹ 2,998.99 million. For more information, see "***Financial Indebtedness and Deferred Payments***" on page 321.

Structure of ownership of the project

For information about the proposed structure of ownership of the project by the Trust, see "***Overview of the Trust –Structure and Description of the Trust***" on page 19.

4. ***Gawar Rohna Sonepat Highways Private Limited (GRSHPL)***

Concession agreement

A concession agreement was executed between GRSHPL and NHAI dated May 27, 2019 (the "**GRSHPL Concession Agreement**") for DBOT of a road from km 0.00 of NH-334B to km 44.80 of NH-334B via Uttar Pradesh /Haryana border to Rohna section for the stretch of 40.500 km in Haryana by four laning on a HAM basis. A provisional certificate of completion was issued on January 29, 2022 and the completion certificate was issued on April 5, 2022. For details, see "***Summary of Concession Agreements***" on page 177.

The following map illustrates the location of GRSHPL and the corridor it covers:

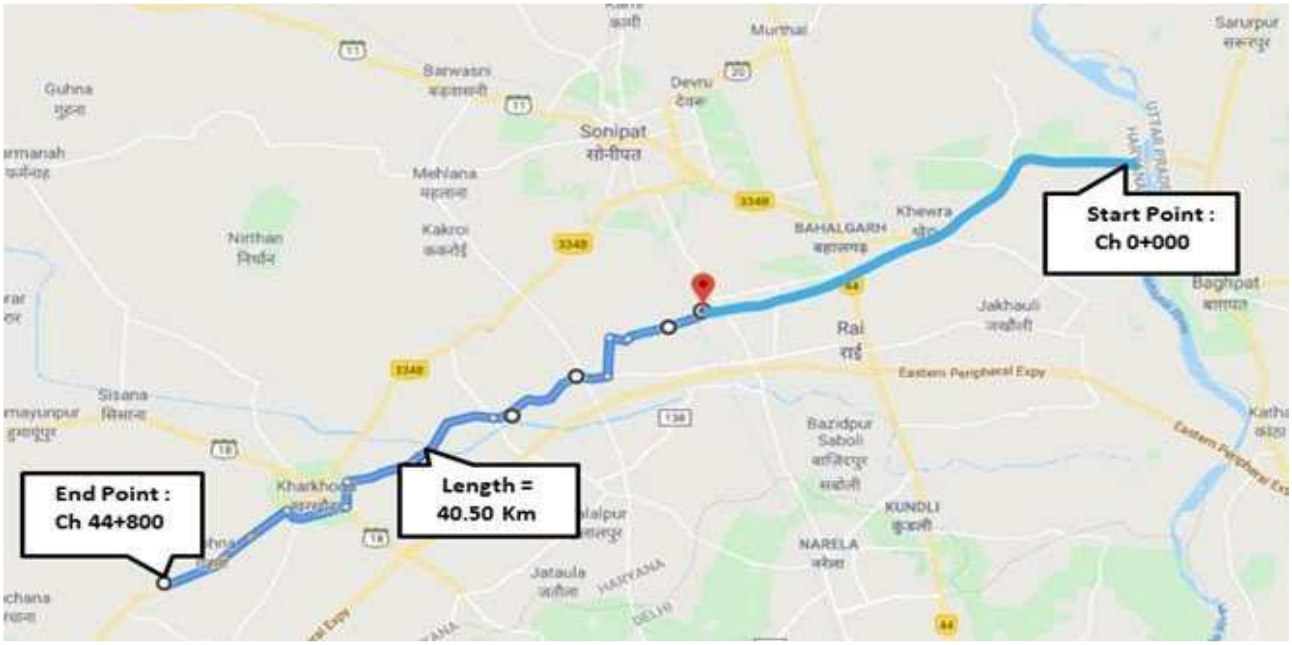


Figure 4: Map of the Gawar Rohna Sonepat Highways Private Limited

Concession period

GRSHPL Concession Agreement provided for a construction period and an operational period. The operational period of 15 years commenced from the date of pre – commercial operations date or the commercial operations date, whichever is earlier ("**PCOD/COD**"). Accordingly, concession period will be ending on January 29, 2037 except for any extensions which may be granted. GRSHPL began receiving annuities with respect to this project on August 2, 2022.

Maintenance

GRSHPL is required to carry out the operation and maintenance of the project, to ensure the safe, smooth and uninterrupted use of the project highway, including prevention of loss or damage during normal operating conditions, to minimize disruption in the event of accidents or other incidents affecting the safety and use of the project highway by providing a rapid and effective response and liaising with the emergency services of the state. In operating and maintaining the project, GRSHPL is required to comply with detailed general and project-specific operating and maintenance standards as detailed in the GRSHPL Concession Agreement. For further details, see "***Summary of Concession Agreements- Operations & Maintenance Obligations and Expenses***" on page 178.

GRSHPL has entered into an operation and maintenance agreement with GCL *(Project Manager to Trust)* dated November 24, 2021 and further amended on June 6, 2022 to meet these obligations. The following table sets forth GRSHPL's operation and maintenance costs during the periods indicated:

(in ₹ million)

Project	Six months period ended September 30, 2024	For the Financial Year ended March 31		
		2024	2023	2022
GRSHPL	16.97	74.09	54.60	20.45

Borrowings

As of September 30, 2024, the outstanding debt was ₹ 2,978.66 million. For more information, see "***Financial Indebtedness and Deferred Payments***" on page 321.

Structure of ownership of the project

For information about the proposed structure of ownership of the project by the Trust, see "***Overview of the Trust – Structure and Description of the Trust***" on page 19.

5. ***Hardiya Hasanpur Highway Private Limited (HHHPL)***

Concession agreement

A concession agreement executed between HHHPL and NHAI dated October 28, 2020 (the "**HHHPL Concession Agreement**") for DBOT of the road from km 54.405 of NH 20 to km 101.630 of NH 31 (New NH 20) via Rajauli- Bakhtiyarpur

Section for the stretch of 47.225 km in Bihar by four laning on a HAM basis. A provisional certificate of completion was issued on April 27, 2023. For details, see "***Summary of Concession Agreements***" on page 177.

The following map illustrates the location of HHHPL and the corridor it covers:

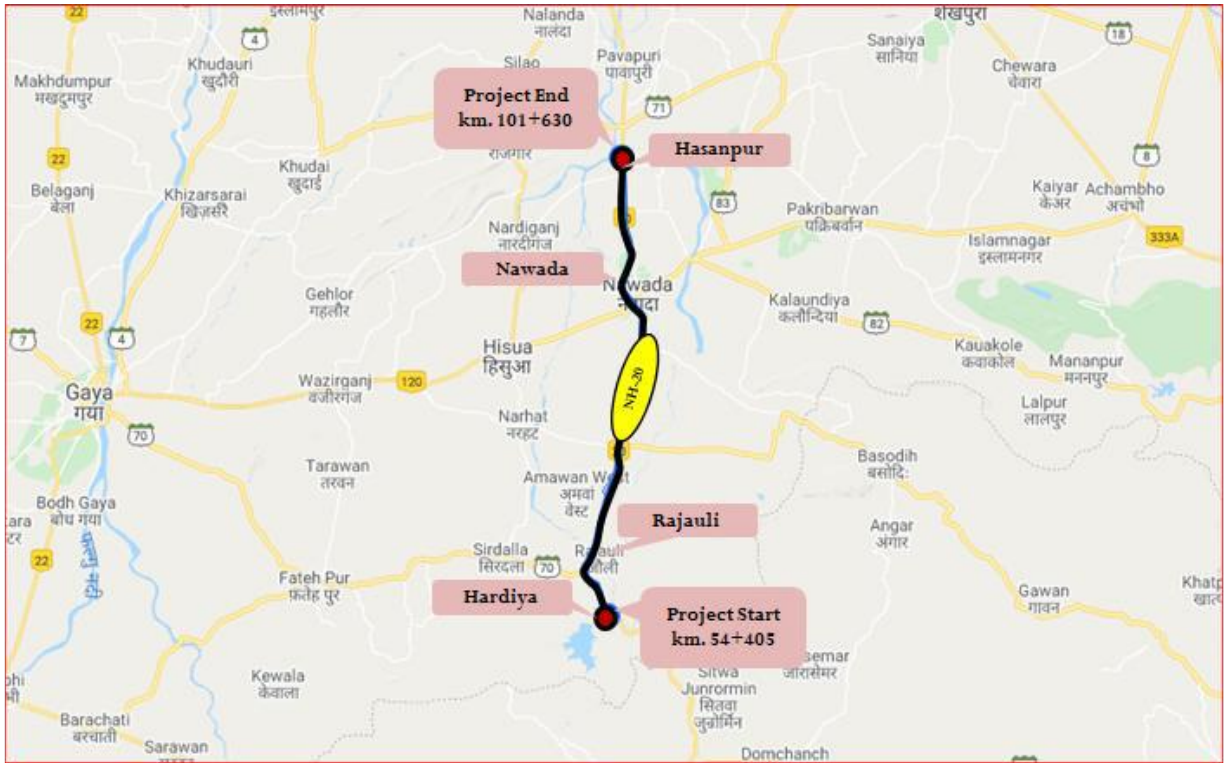


Figure 5: Hardiya Hasanpur Highway Private Limited

Concession period

HHHPL Concession Agreement provided for a construction period and an operational period. The operational period of 15 years commenced from the date of pre – commercial operations date or the commercial operations date, whichever is earlier ("**PCOD/COD**"). Accordingly, concession period will be ending on April 27, 2038 except for any extensions which may be granted. HHHPL began receiving annuities with respect to this project on December 15, 2023.

Maintenance

HHHPL is required to carry out the operation and maintenance of the project, to ensure the safe, smooth and uninterrupted use of the project highway, including prevention of loss or damage during normal operating conditions, to minimize disruption in the event of accidents or other incidents affecting the safety and use of the project highway by providing a rapid and effective response and liaising with the emergency services of the state. In operating and maintaining the project, HHHPL is required to comply with detailed general and project-specific operating and maintenance standards as detailed in the HHHPL Concession Agreement. For further details, see "***Summary of Concession Agreements- Operations & Maintenance Obligations and Expenses***" on page 178.

HHHPL has entered into an operation and maintenance agreement with GCL *(Project Manager to Trust)* dated April 14, 2023 to meet these obligations The following table sets forth the HHHPL's operation and maintenance costs during the periods indicated:

(in ₹ million)

Project	Six months period ended September 30, 2024	For the Financial Year ended March 31		
		2024	2023	2022
HHHPL	71.61	47.42	5.98	0.77

Borrowings

As of September 30, 2024, the outstanding debt was ₹ 4,382.82 million. For more information, see "***Financial Indebtedness and Deferred Payments***" on page 321.

Structure of ownership of the project

For information about the proposed structure of ownership of the project by the Trust, see "***Overview of the Trust –Structure and Description of the Trust***" on page 19.

6. ***Gawar Kiratpur Nerchowk Highway Private Limited (GKNHPL)***

Concession agreement

A concession agreement was executed between GKNHPL and NHAI dated November 26, 2020 (the "**GKNHPL Concession Agreement**") for DBOT of the road from km 12.750 of NH 21 to km 26.500 of NH 21, km 126.500 to km 158.500 including ACC link road from km 0.00 of NH 21 to km 2.003 of NH 21 via Kiratpur to Nerchowk Section under Greenfield Alignment (excluding Sunder Nagar Bypass) for the stretch of 47.753 km in Himachal Pradesh by four laning on a HAM basis. A completion certificate was issued on September 5, 2023. For details, see "***Summary of Concession Agreements***" on page 177.

The following map illustrates the location of GKNHPL and the corridor it covers:

Figure 6: Map of Gawar Kiratpur Nerchowk Highway Private Limited

Concession period

GKNHPL Concession Agreement provided for a construction period and an operational period. The operational period of 15 years commenced from the date of pre – commercial operations date or the commercial operations date, whichever is earlier ("**PCOD/COD**"). Accordingly, concession period will be ending on June 7, 2038 except for any extensions which may be granted. GKNHPL has started receiving annuities with respect to this project from December 20, 2023.

Maintenance

GKNHPL is required to carry out the operation and maintenance of the project, to ensure the safe, smooth and uninterrupted use of the project highway, including prevention of loss or damage during normal operating conditions, to minimize disruption in the event of accidents or other incidents affecting the safety and use of the project highway by providing a rapid and effective response and liaising with the emergency services of the state. In operating and maintaining the project, GKNHPL is required to comply with detailed general and project-specific operating and maintenance standards as detailed in the concession agreement. For further details, see "***Summary of Concession Agreements***" on page 177.

GKNHPL has entered into an operation and maintenance agreement with GCL dated May 07, 2023 *(Project Manager to Trust)* to meet these obligations. The following table sets forth GKNHPL's operation and maintenance costs during the periods indicated:

(in ₹ million)

Project	Six months period ended September 30, 2024	For the Financial Year ended March 31		
		2024	2023	2022
GKNHPL	104.97	100.79	12.43	3.05

Borrowings

As of September 30, 2024, the outstanding debt was ₹ 8,285.62 million. For more information, see "***Financial Indebtedness and Deferred Payments***" on page 321.

Structure of ownership of the project

For information about the proposed structure of ownership of the project by the Trust, see "***Overview of the Trust –Structure and Description of the Trust***" on page 19.

7. ***Dewas Ujjain Highway Private Limited (DUHPL)***

Concession agreement

A concession agreement executed between DUHPL and NHAI dated December 11, 2020 (the "**DUHPL Concession Agreement**") for DBOT of the road from km 0.00 of NH 148 to km 19.733 of NH 148, the road from km 19.733 of NH 148 to km 26.90 of NH 148 and the road from km 0.00 of NH 148 to km 14.52 via Dewas Ujjain Section thereof for the total stretch of 41.42 km in Madhya Pradesh by four laning on a HAM basis. A completion certificate was issued with effect from January 16, 2024. For details, see "***Summary of Concession Agreements***" on page 177.

The following map illustrates the location of DUHPL and the corridor it covers:

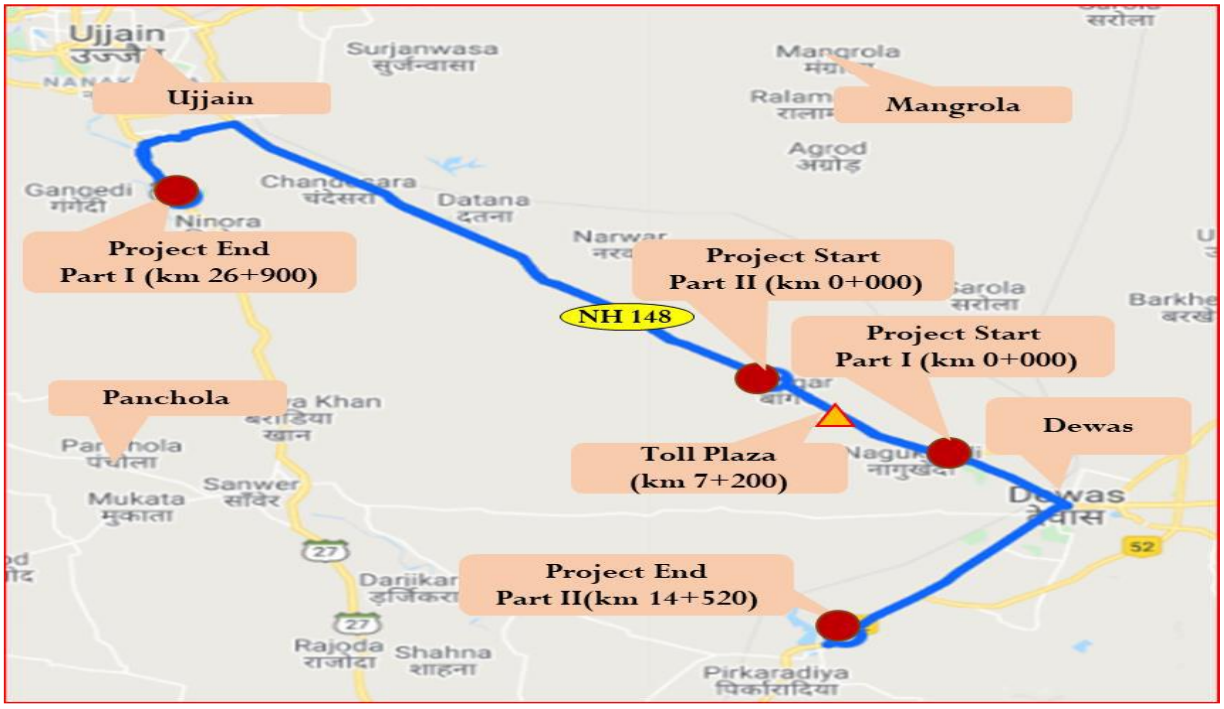


Figure 7: Map of Dewas Ujjain Highway Private Limited

Concession period

DUHPL Concession Agreement provides for a construction period and an operational period. The operational period of 15 years commenced from the date of pre – commercial operations date or the commercial operations date, whichever is earlier ("**PCOD/COD**"). Accordingly, concession period will be ending on July 5, 2038 except for any extensions which may be granted. DUHPL has started receiving annuities with respect to this project from. January 31, 2024.

Maintenance

DUHPL is required to carry out the operation and maintenance to ensure the safe, smooth and uninterrupted use of the project highway, including prevention of loss or damage during normal operating conditions, to minimize disruption in the event of accidents or other incidents affecting the safety and use of the project highway by providing a rapid and effective response and liaising with the emergency services of the state. In operating and maintaining the project, DUHPL is required to comply with detailed general and project-specific operating and maintenance standards as detailed in the concession agreement. For further details, see "***Summary of Concession Agreements- Operations & Maintenance Obligations and Expenses***" on page 178.

DUHPL has entered into an operation and maintenance agreement with GCL dated June 22, 2023 *(Project Manager to Trust)* to meet these obligations. The following table sets forth DUHPL's operation and maintenance costs during the periods indicated:

(in ₹ million)

Project	Six months period ended September 30, 2024	For the Financial Year ended March 31		
		2024	2023	2022
DUHPL	49.12	39.34	19.21	0.97

Borrowings

As of September 30, 2024 the outstanding debt with respect to this project was ₹ 2,706.88 million. For more information, see "***Financial Indebtedness and Deferred Payments***" on page 321.

Structure of ownership of the project

For information about the proposed structure of ownership of the project by the Trust, see "***Overview of the Trust –Structure and Description of the Trust***" on page 19.

8. ***Gawar Bangalore Highways Private Limited (GBHPL)***

Concession agreement

A concession agreement executed between Sadbhav Bangalore Highway Private Limited ("**SBHPL**") and NHAI dated December 8, 2016 (the "**SBHPL Concession Agreement**") for DBOT of the road from km 287.52 of NH 209 to km 461.55 of NH 209 via BRT Tiger Reserve Boundary to Bangalore Section under NHDP Phase- IV for the stretch of 174.03 km in Karnataka by two/ four laning on a HAM basis. A provisional certificate of completion was issued on December 31, 2020 by NHAI to erstwhile concessionaire i.e. SBHPL. Subsequently due to persisting issues leading to delay in project completion, the project was endorsed to GBHPL through endorsement agreement on February 13, 2023 ("**GBHPL Endorsement Agreement**", read along with the SBHPL Concession Agreement will be referred as **GBHPL Concession Agreement)**. For details, see "***Summary of Concession Agreements***" on page 177.

The following map illustrates the location of GBHPL and the corridor it covers:

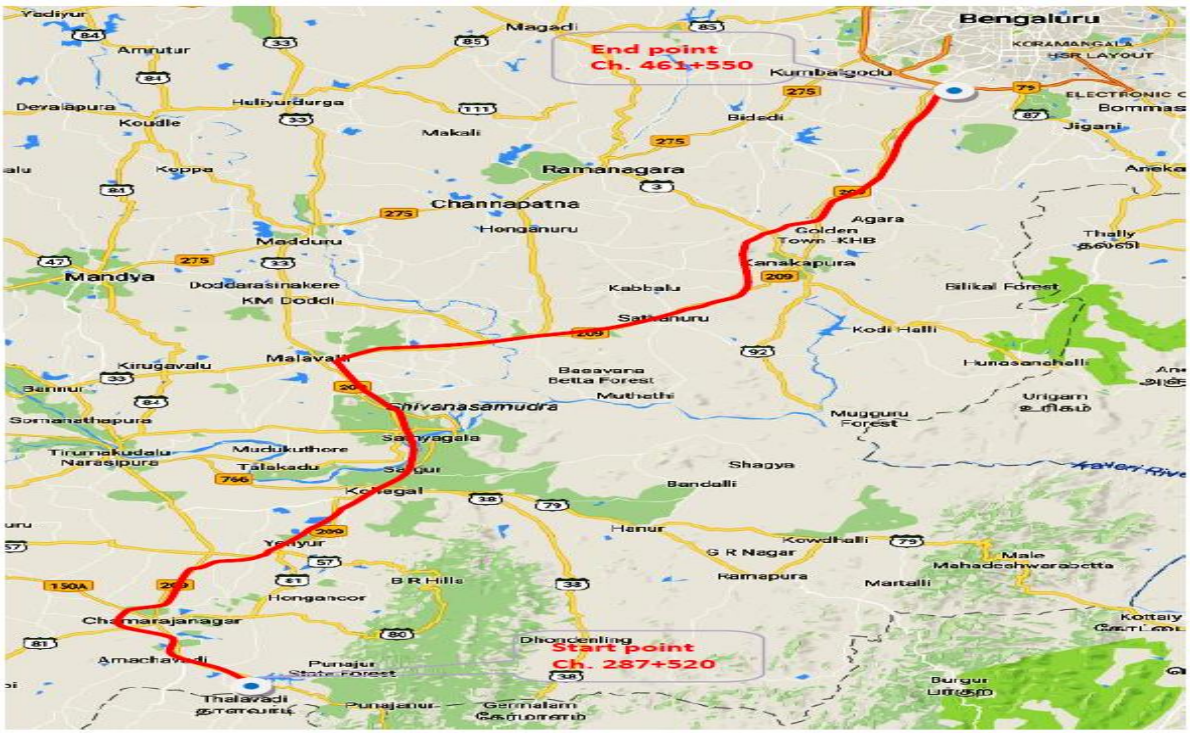


Figure 8: Map of Gawar Bangalore Highways Private Limited

Concession period

The GBHPL Concession Agreement provides for a construction period and an operational period. The operational period of 15 years commenced from the date of pre – commercial operations date or the commercial operations date, whichever is earlier ("**PCOD/COD**"). Accordingly, concession period will be ending on December 31, 2035 except for any extensions which may be granted. GBHPL has become entitled to receive annuities post entering into the GBHPL Endorsement Agreement from February 13, 2023.

Maintenance

GBHPL is required to carry out the operation and maintenance, to ensure the safe, smooth and uninterrupted use of the project highway, including prevention of loss or damage during normal operating conditions, to minimize disruption in the event of accidents or other incidents affecting the safety and use of the project highway by providing a rapid and effective response and liaising with the emergency services of the state.

In operating and maintaining the project, GBHPL is required to comply with detailed general and project-specific operating and maintenance standards as detailed in the concession agreement. For further details, see "***Summary of Concession Agreements- Operations & Maintenance Obligations and Expenses***" on page 178.

GBHPL has entered into an operation and maintenance agreement with GCL *(Project Manager to Trust)* dated April 28, 2023 to meet these obligations. The following table sets forth GBHPL's operation and maintenance costs during the periods indicated:

(in ₹ million)

Project	Six months period ended September 30, 2024	For the Financial Year ended March 31		
		2024	2023	2022
GBHPL	131.19	171.20	0.75	-

Borrowings

As of September 30, 2024, the outstanding debt with respect to this project was ₹5,542.39 million. For more information, see "***Financial Indebtedness and Deferred Payments***" on page 321.

Structure of ownership of the project

For information about the proposed structure of ownership of the project by the Trust, see "***Overview of the Trust –Structure and Description of the Trust***" on page 19.

9. ***Gawar Nainital Highways Private Limited ("GNHPL II")***

Concession agreement

A concession agreement was executed between Sadbhav Nainital Highway Private Limited ("**SNHPL**") and NHAI dated June 2, 2016 (the "**SNHL Concession Agreement**") for DBOT of the road from km 42.791 of NH 87 (New NH no. 9, 109) (Design Chainage km 43.446) to km 88 of NH 87 (New NH no. 9, 109) (Design Chainage 93.226) via Rampur Kathgodam Section under NHDP Phase- III for the stretch of 49.78 km in Uttarakhand by four laning on a HAM basis. A provisional certificate of completion was issued on October 27, 2019 by NHAI to erstwhile concessionaire i.e. Sadbhav Nainital Highway Limited (*formerly known as Sadbhav Nainital Highway Private Limited)*. Subsequently due to persisting issues leading to delay in project completion, the project was endorsed to GNHPL II through endorsement agreement on July 14, 2023 ("**GNHPL II Endorsement Agreement**").

Pursuant to the GNHPL II Endorsement Agreement, GNHPL II was vested with the concession rights, entitlements, interests, obligations and liabilities of the Sadbhav Entity. As per the GNHPL II Endorsement Agreement, the annuity for the remaining length will be released only upon completion of all pending works and issuance of the provisional completion certificate ("**PCC**") for the balance stretch, with no part PCC issued before that. However, PCC of only 18.085 km substantially completed 4-lane length was issued so far out of total project length of 49. 78 km. Due to certain unforeseen event, GNHPL II failed to obtain PCC for the work completed from the independent engineer as per the terms of the Concession Agreement. Subsequently, GNHPL II and NHAI agreed to enter into settlement agreement dated October 15, 2024 ("**GNHPL II Settlement Agreement**"), pursuant to which the parties agreed to waive the restriction under the endorsement agreement dated July 14, 2023, and allow NHAI to issue a provisional completion certificate for work completed up to July 11, 2024, following the procedures of the Concession Agreement and NHAI policies. GNHPL II Settlement Agreement read along with GNHPL II Endorsement Agreement and the SNHL Concession Agreement will be referred as GNHPL II Concession Agreement. For details, see "***Summary of Concession Agreements***" on page 177.

The following map illustrates the location of the corridor it covers:

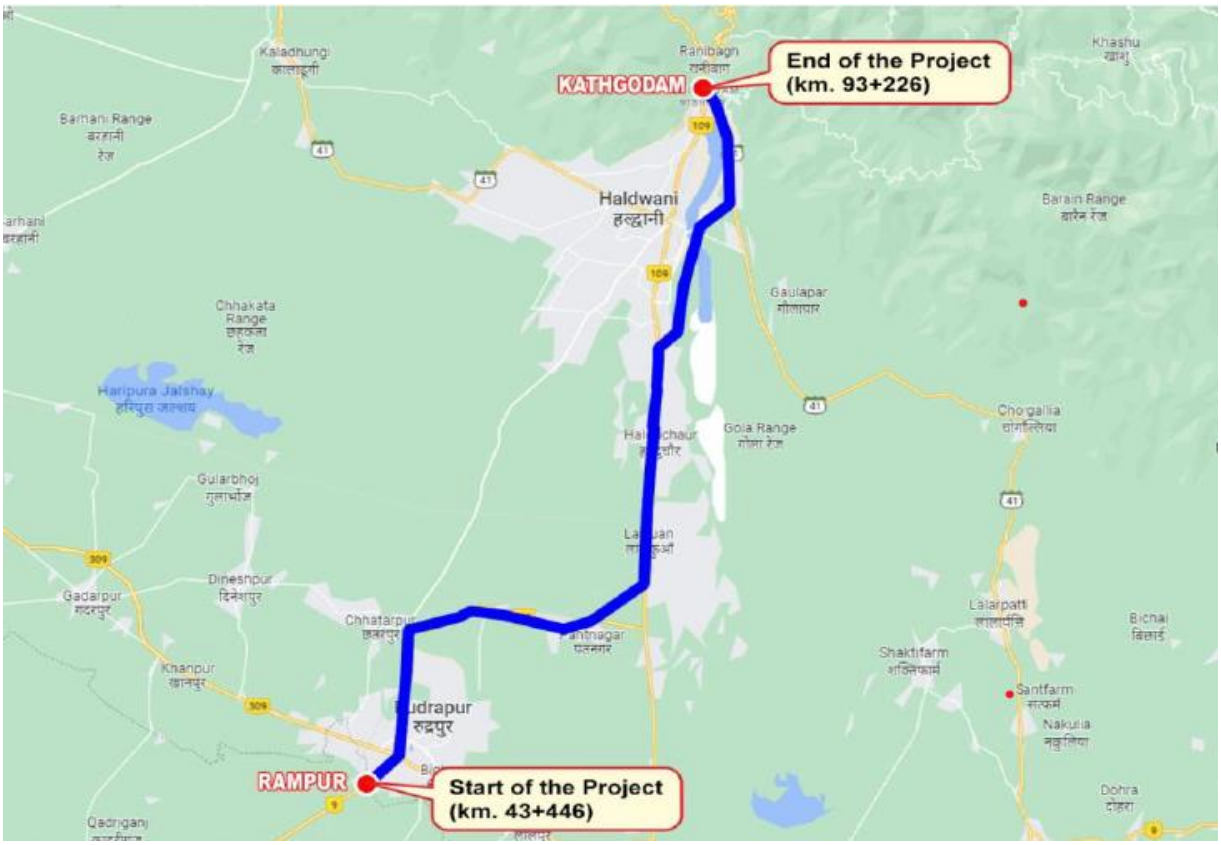


Figure 9: Map of Gawar Nainital Highways Private Limited

Concession period

The GNHPL II Concession Agreement provides for a construction period and an operational period. The operational period of 15 years commenced from the date of pre – commercial operations date or the commercial operations date, whichever is earlier

("**PCOD/COD**"). Accordingly, concession period will be ending on October 27, 2034 except for any extensions which may be granted. GNHPL II has become entitled to receive annuities post entering into the GNHPL II Endorsement Agreement dated July 14, 2023.

As the substitution of the concessionaire from SNHL with GNHPL II has been completed in this financial year, as on the date of this Offer Document, GNHPL II has started receiving annuities with respect to this project from December 20, 2023.

Maintenance

GNHPL II is required to carry out the operation and maintenance, to ensure the safe, smooth and uninterrupted use of the project highway, including prevention of loss or damage during normal operating conditions, to minimize disruption in the event of accidents or other incidents affecting the safety and use of the project highway by providing a rapid and effective response and liaising with the emergency services of the state. In operating and maintaining the project, GNHPL II is required to comply with detailed general and project-specific operating and maintenance standards as detailed in the concession agreement. For further details, see "***Summary of Concession Agreements***" on page 177.

GNHPL II has entered into an operation and maintenance agreement with GCL *(Project Manager to Trust)* dated August 9, 2023 to meet these obligations. The following table sets forth GNHPL II's operation and maintenance costs during the periods indicated:

(in ₹ million)

Project	Six months period ended September 30, 2024	For the Financial Year ended March 31		
		2024	2023	2022
GNHPL II	71.57	21.23	-	-

Borrowings

As of September 30, 2024, the outstanding debt with respect to this project was ₹ 2,903.95 million. For more information, see "***Financial Indebtedness and Deferred Payments***" on page 321.

Structure of ownership of the project

For information about the proposed structure of ownership of the project by the Trust, see "***Overview of the Trust –Structure and Description of the Trust***" on page 19.

Assets under ROFO

In addition to the Initial Portfolio Assets that will be transferred by our Sponsor to the Trust pursuant to the Formation Transactions in relation to the Trust as on the date of this Offer Document, our Sponsor also owns 17 additional HAM assets. Under the ROFO Agreement between our Sponsor and the Trust (acting through the Trustee), GCL shall provide to the Trust with a right of first offer in relation to these additional road assets as well as any road assets that our Sponsor may get awarded/acquire in the future, in each case so long as those road assets meet certain criteria specified in the Trust Documents, including the ROFO Agreement and in compliance with the SEBI InvIT Regulations. For more information about these criteria and the ROFO Agreement, see "***Formation Transactions in relation to the Trust"*** on page 102.

The table below sets forth details of the existing projects currently owned by the Sponsor:

S. No.	Name of the SPV	Description of the asset	State	Length (km)	Bid Project Cost (in ₹ million)	Status	End of concession period
1.	Hasanpur Bakhtiyarpur Highway Private Limited	Construction of Four Laning of Rajauli - Bakhtiyarpur section of NH – 31 (New NH - 20) from Km 101+630 to Km 152+520 (Package - III) on Hybrid Annuity Mode in the State of Bihar	Bihar	50.89	23,100.00	Applied for PCOD	June, 2039
2.	Gawar Kangra Highways Private Limited	Rehabilitation and Upgrading of Existing 2 lane to 4 lane from Bhangbar (Near Ranital) to Kangra Bypass Section of NH-88 (New NH-303,503) up to Intersection with NH-154 (Design Chainage - Km 175+270 to Km 193+400, Design Length-18.130 Km) in the State of Himachal Pradesh under NH (O) on HAM Mode (Package-VB).	Himachal Pradesh	18.13	11,000.00	Under Construction	December, 2039
3.	Korba Highway Private Limited	Construction of Four Lane Champa – Korba –Katghora section of NH-149B from design ch. 0+000 to ch. 38+200, (From NH- 49 near Saragaon village to Bhaisma village) under NH (O) in the State of Chhattisgarh on Hybrid Annuity Mode	Chhattisgarh	38.2	8,300.00	Project has achieved PCOD on March 26, 2024 for Project Length 32.843 KM.	March, 2039
4.	Gawar Sihuni Highway Private Limited	'Rehabilitation and Upgradation to Four Lane configuration & Strengthening of Sihuni to Rajol from Km 51.000 to Km 72.000 of NH-20 (New NH-154) (Design Length 18.450 KM) of Pathankot-Mandi Section under NH(O) in HP on HAM basis (Package-IIA).	Himachal Pradesh	18.45	3,890.00	Under Construction	September, 2040
5.	Gawar Pathankot Highways Private Limited	'Rehabilitation and Upgradation to 2 Lane with paved shoulder configuration & Strengthening of Padhar to Bijni section from Km 180.000 to Km 202.815 of NH-20 (New NH-154) (Design Length 19.050 KM) of Pathankot-Mandi under NH(O) in HP on HAM basis (Package-VA).	Himachal Pradesh	19.05	5,450.00	Construction yet to start	Yet to receive appointed date
6.	Gawar Shimla Highway Private Limited	'Construction of 4 laning of NH-5 from Shakral Village to Dhalli Section (Shimla Bypass Package II: from Km 146.300 to Km 156.560 and Shimla connectivity from Km 0.000 to Km 0.725 for Design Length =10.985 km) in Himachal Pradesh on Hybrid Annuity Mode.	Himachal Pradesh	10.985	20,700.00	Under Construction	March, 2042
7.	Gawar Bhiwani Highway Private Limited	'4-Laning of Bhiwani-Hansi road section of NH 148B (Design Length 42.934 Km) under Bharatmala Pariyojana in the State of Haryana on Hybrid Annuity Mode	Haryana	42.934	7,990.00	Under Construction	December, 2040
8.	Gawar Rudrapur Highway Private Limited	'Construction of Rudrapur Bypass Section from Km. 0.000 to Km. 20.640 in the State of Uttar Pradesh & Uttarakhand on Hybrid Annuity Mode	Uttar Pradesh and Uttarakhand	20.64	5,889.99	Under construction	January, 2041
9.	Gawar Fazilka Highway Private Limited	'Four Laning of Abohar (Design chainage 75.500, Existing Km. 49+070 of NH-07) to Fazilka (Design chainage 114.080, Existing Km. 80+655 of SH-20) and Construction of 4-lane Greenfield highway of Abohar bypass (From design chainage 0.000, Existing Km 58+230, Malout-Abohar Road on NH-07 to Design chainage 6.380, Existing Km 42+305, Abohar-Fazilka Road on NH-07) (Total design length=44.96 Km) on HAM Mode in the state of Punjab under Bharatmala Pariyojana.	Punjab	44.96	11,989.08	Under construction	April, 2041
10.	Gawar Bijnor Highways Private Limited	'4-Laning of Behsuma – Bijnor Section of NH-119 (New NH-34) from Design Ch.39.250 km (Existing chainage 39/240) to Design Ch. 78.810 km (Existing chainage 89/590) with Design Length 39.560 km in the State of Uttar Pradesh on Hybrid Annuity Mode under Bharatmala Pariyojna on Hybrid Annuity Mode	Uttar Pradesh	39.56	11,809.98	Under construction	May, 2041

S. No.	Name of the SPV	Description of the asset	State	Length (km)	Bid Project Cost (in ₹ million)	Status	End of concession period
11.	Gawar Mandi Highways Private Limited	'Construction of 4-Laning with Paved Shoulder of Bijni to Mandi Section from existing Km 202.815 to Km 208.000 of NH-20 (New NH-154) (Design Length 5.357 Km) including construction of Twin Tube Tunnel for a length of 3.500 Km of Pathankot-Mandi under NH(O) in Himachal Pradesh on Hybrid Annuity Mode basis (Package-VB)	Himachal Pradesh	5.357	9,719.99	Construction is yet to start	Yet to receive appointed date
12.	Gawar KBNC Highway Private Limited	'Rehabilitation and Upgrading of Existing Road from Kalar Bala Village to Nauni Chowk of NH 205 for 4 Lane with Paved Shoulder (Design Chainage – Km 41+000 to Km 58+450 , Design Length - 17.450 Km) Package-IIC in the State of Himachal Pradesh under NH (O) on Hybrid Annuity Mode	Himachal Pradesh	17.45	6,399.99	Construction is yet to start	Yet to receive appointed date
13.	Gawar Basukinath Highways Private Limited	'4 Laning of Basukinath-Deoghar Section of NH 114A from Km 85.081 to Km 130.240 (Design Length – 45.159 Km) under NHDP Phase-IV in the State of Jharkhand on Hybrid Annuity mode	Jharkhand	45.159	9,990.00	Under construction	December, 2040
14.	Gawar Pathankot Mandi Highway Private Limited	Rehabilitation and Upgradation to Four Lane configuration & Strengthening of Mo to Sihuni from Km 42.000 to Km 51.000 (Design Length 8.330 KM) of NH-20 (New NH-154) of Pathankot-Mandi Section in the state of Himachal Pradesh on Hybrid Annuity Mode (HAM) (Package-IB).	Himachal Pradesh	8.33	5,290.00	Applied for PCOD	June, 2039
15.	JRR Highways Private Limited	Four Laning of Dangiawas (km 96.595 of NH-112) to Jajiwal (km 283.500 of NH-65 Nagaur Road) Section- Package-I (Design length 74.619 km) of Jodhpur Ring Road (In Principally declared NH) in the State of Rajasthan under NHDP Phase VII on design, build, operate and transfer (the “DBOT Annuity or Hybrid Annuity”) basis	Rajasthan	74.619	11,610.00	Project has achieved PCOD on April 10, 2024. Received IE recommendation for COD	April, 2039
16.	Gawar Kim Expressway Private Limited	Construction of Eight Lane Kim Vadodara from Km. 254.430 to Km. 279.00 (Kim to Ankleshwar section of Vadodara Mumbai Expressway) in the state of Gujarat under NHDP Phase VI on Hybrid Annuity Mode (Phase IA – Package V	Gujarat	24.57	14,040.00	Under Construction	April, 2040
17.	Gawar Waranga Highways Private Limited	Four laning of Waranga-Mahagaon (Pkg-1) from Km.253.700 to Km.320.580 Section of NH-361 in the State of Maharashtra under NHDP Phase-IV on Hybrid Annuity Mode	Maharashtra	66.88	10,710.00	Applied for PCOD	October, 2039

Operation and Maintenance Services

Project Manager's key business activity will be the operation and maintenance of infrastructure assets, pursuant to, and in accordance with, the provisions of the concessions and other project related agreements.

The Project SPVs have currently entered into O&M contract with GCL (also, the Project Manager) pursuant to the Concession Agreements to ensure the safe, smooth and uninterrupted use of the project highway, including prevention of loss or damage during normal operating conditions, to minimize disruption in the event of accidents or other incidents affecting the safety and use of the project highway by providing a rapid and effective response and liaising with the emergency services of the state.

GCL has an established track record of development, operation, and management of road project, through its trained and skilled manpower, efficient deployment of equipment and an in-house integrated model. GCLs in-house materials supply chain management ensures that key construction materials are timely delivered to its facilities for development and construction sites, thereby enabling them to manage the project management processes effectively and maintain key raw material inventory in an optimal manner. GCL's O&M team, working in conjunction with the design and engineering team, ensures operational efficiencies through overall supervision of the manufacturing and project execution process. These provisions of the concession agreement may require modifying, repairing, or otherwise making improvements to the roads.

In particular, each of the Concession Agreements requires the Project SPVs to maintain the Initial Portfolio Assets in accordance with requisite standards during the concession period. The NHAI has used, and will likely continue to use, independent engineers to carry out periodic tests jointly with us to assess the quality of the roads or bridges and their related maintenance.

The Project Manager, together with the Project SPVs, will manage the day-to-day operation and maintenance of the Initial Portfolio Assets. The Project Manager through appointment of qualified personnel, pursuant to the Project Management Agreement, shall provide project and contract management support, such as liaising with the NHAI and local authorities and ensuring that local administrative support is available for safety and risk mitigation. A Project SPV is generally responsible for carrying out operation and maintenance activities at its road during its concession period and 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 and prevent any unauthorized entry to and exit from the project as may be required. The Project Manager through appointment of qualified personnel shall provide management services in relation to the Trust the Initial Portfolio Assets including procurements, compliance at the Project SPV level and controlling expenses, leads contracts and claims management with the NHAI, hire and manage human resources and related standard operating procedures and other audits, change of scope and approval, liaises with local authorities, complies with instructions of the Investment Manager, the Trustee and provisions of the SEBI InvIT Regulations and provides access to the Trustee regarding data and information pertaining to the Trust. For more information on the role of the Project Manager, see "***Parties to the Trust – The Project Manager – Key terms of the Project Management Agreement***" on page 141.

Assistance and recovery services

The O&M contractor for the Project SPVs maintains a fleet of vehicle(s), comprising patrol vehicle(s), an ambulance and a crane, to respond to unexpected conditions or situations on the Initial Portfolio Assets, such as the removal of obstructions or broken-down vehicles. Assistance and recovery services for immobilised vehicles are carried out using the fleet vehicles, which include, among others:

- highway patrolling vehicles: equipped with necessary equipment, that remain in contact with the control room, clear the road of obstructions and provide assistance to broken-down vehicles and passengers in distress;
- heavy recovery vehicles: equipped with configuration as specified under the Concession Agreements for handling heavy vehicle recoveries (up to 20 tonnes), including the clearing of disabled vehicles; and
- ambulance services: manned by trained paramedics and equipped with first aid and life-saving medical support systems to provide initial first aid and to transfer injured persons to nearby hospitals.

Safety Measures

Under the Concession Agreements, the Project SPVs are obligated to abide by certain safety requirements, which include measures such as road signs, pavement marking, traffic control devices, roadside furniture, enforcement and emergency response. The Project SPVs must abide by among others, applicable laws and applicable permits, the Manual for Safety in Road Design as issued by the MoRTH, relevant standards and guidelines of the Indian Roads Congress and good industry practice.

Management

We will be managed by qualified personnel of the Investment Manager and the IM Board. For further details about the Investment Manager, see "***Parties to the Trust – The Investment Manager – Gawar Investment Manager Private Limited***" on page 128. In addition, the Initial Portfolio Assets will be managed by an experienced professional team engaged by the Project Manager. For further details about the Project Manager, see "***Parties to the Trust – The Project Manager***" on page 141.

The majority of the directors on the board of each Project SPV shall be appointed by the Investment Manager in consultation with the Trustee, in accordance with the SEBI InvIT Regulations. Each Project SPV's board of directors will also form committees as may be required under the Companies Act, 2013 and rules notified thereunder.

Health, Safety and Environment

We believe that our Project SPVs are in compliance, in all material respects, with applicable health, safety and environmental regulations and other requirements in their operations as well as other relevant policies as required under the Employees' State Insurance Scheme of India. Further, the Project Manager appointed by the Project SPVs for the Initial Portfolio Assets is principally responsible for ensuring that safety standards are met at the relevant project sites.

However, there might be risks associated with the compliance of health, safety and environmental standards by the Initial Portfolio Assets and the ROFO SPVs. The Trust might be required to undertake certain assessments and actions to show its commitment to employ its financial and human resources to mitigate any potential negative impact. The Trust might incur additional expenses for meeting the standards and requirements of the policies including expenditure for appointing third party consultants.

Property

As on the date of this Offer Document, the Trust and the Project SPVs do not own any immoveable property. The Investment Manager's registered office is located at Unit 1401-1403, 14th Floor, Tower B, SAS Tower, Medicity, Sector-38, Gurgaon 122001, Haryana, India, and it conducts its operations pertaining to the Trust from its corporate office situated at Unit No 1401-1403, 14th Floor, Tower B, SAS Tower, Medicity, Sec 38, Gurgaon 122001, Haryana, India.

Under the terms of the Concession Agreements, title to the roads and related infrastructure such as toll plazas and monitoring posts remains with the NHAI for the duration of the concession period. During the concession period, the Project SPVs are licensed to use the roads and the related infrastructure which constitute the concession assets. Upon the expiration of a concession period, each Project SPVs is required to transfer possession of its concession assets to the NHAI.

Insurance

The Trust's 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 Project SPVs' principal types of insurance coverage include fire and allied perils insurance, contractor all-risk for under construction projects and public liability for operation of roads.

We believe that our Project SPVs are in compliance, in all material respects, with applicable insurance requirements in their operations and also maintain loss damage or destruction of the Initial Portfolio Assets, third party liability insurance including injury or death of personnel, general liability, liability to third parties for goods or property damage and adequate workmen compensation, as well as other relevant insurances under the relevant concession agreement

The Trustee confirms the Project SPVs have obtained adequate insurance coverage for the infrastructure assets proposed to form part of the portfolio of the Trust.

SUMMARY OF CONCESSION AGREEMENTS

*The following are brief descriptions of the concession agreements entered into by the Initial Portfolio Assets or SPVs. The descriptions and summaries of the concession agreements below are indicative and they are not, nor do they purport to be, full, complete or exhaustive descriptions and summaries. Capitalized terms used in this section and not defined, have the meaning as assigned to such terms in the respective concession agreements. Copies of these concession agreements have been made available for inspection at the office of the Capital Infra Trust (erstwhile National Infrastructure Trust), Unit No. 1401-1403, 14th Floor, Tower B, SAS Tower, Medicity, Sector- 38, Gurugram, Haryana- 122001. For further details, please see "**Material Contracts and Documents for Inspection"** on page 389.*

The Initial Portfolio Assets, being, GRJHPL, GKBHPL, GNHPL, GKNHPL, HHHPL, GRSHPL, DUHPL (collectively referred to as "**Gawar SPVs**" and individually, the "**Gawar SPV**") and GNHPL II, GBHPL (collectively referred to as "**Acquired SPVs**"), (collectively with the Gawar SPVs, the "**SPVs**") have undertaken projects which are design, build, operate and transfer ("**DBOT Annuity or Hybrid Annuity**") assets and the concession has been granted on the basis of a hybrid annuity mode ("**HAM**") and accordingly, have entered into concession agreements with NHAI.

The concession agreements for the Gawar SPVs includes the following:

(i) the concession agreement executed between GRJHPL and NHAI dated May 9, 2018 (the "**GRJHPL Concession Agreement**") for DBOT Annuity or Hybrid Annuity of the four-laning of the project highway comprises of four laning of the Rohna Jhajjar section from km 44.800 km to 80.250 km having a total length of 35.450 km in Haryana at a Bid Project Cost (as defined in the GRJHPL Concession Agreement) of ₹ 7,180.00 million;

(ii) the concession agreement executed between GKBHPL and NHAI dated September 28, 2018 (the "**GKBHPL Concession Agreement**") for DBOT Annuity or Hybrid Annuity for the upgradation of two lane with paved shoulder/ four lane the Khajuwala- Poogal section (design chainage section of NH-911) (Design chainage 0.000 to 30.812) and the Poogal – Dantour- Jaggasar- Gokul- Goddu- Ranjeetpura- Charanwla- Naukh- Bap section of NH- 911 (design chainage 1.430 to 182.725) in Rajasthan having a total length of 212.107 km at a Bid Project Cost (as defined in the GKBHPL Concession Agreement) of ₹ 8,950.00 million;

(iii) the concession agreement executed between GNHPL and NHAI dated February 28, 2019 (the "**GNHPL Concession Agreement**") for DBOT Annuity or Hybrid Annuity of two lane highway comprising of (i) NH-148B (at NH-48 junction) commencing from Ex. km 39.400 at Paniyala Mor (at NH-48 junction) to Ex. km 8+500 at Narnaul having a total length of 34.000 km and (ii) National Highway NH-11 commencing from Ex. km 68.000 at Narnaul to Ex. km 79.800 at at Nizampur Link Road of 2.76 km and Narnaul Bypass crossing to Pacheri Kalan (Rajasthan/Haryana Border) in Haryana having a total length of 11.300 km at a Bid Project Cost (as defined in the GNHPL Concession Agreement)of ₹ 11,370.00 million;

(iv) the concession agreement executed between GKNHPL and NHAI dated November 26, 2020 (the "**GKNHPL Concession Agreement**") for DBOT Annuity or Hybrid Annuity for the balance work for four laning of Kiratpur to Nerchowk section of NH- 21 (from km 12.750 to km 26.500, km 126.500 to km 158.500 including ACC link road from km 0.00 to km 2.003) Greenfield Alignment (excluding Sundernagar Bypass) of NH 21 in Himachal Pradesh for at a Bid Project Cost (as defined in the GKNHPL Concession Agreement)of ₹ 20,980.00 million;

(v) the concession agreement executed between HHHPL and NHAI dated October 28, 2020 (the "**HHHPL Concession Agreement**") for DBOT Annuity or Hybrid Annuity of the four laning of Rajauli Bakhtiyarpur section of NH-31 (New NH 20) from km 54.405 to km 101.630 in (package II) Bihar for a total length of 47.225 km at a Bid Project Cost (as defined in the concession agreement) of ₹ 10,650.00 million;

(vi) the concession agreement executed between GRSHPL and NHAI dated May 27, 2019 (the "**GRSHPL Concession Agreement**") for DBOT Annuity or Hybrid Annuity for the upgradation of the four lane Uttar Pradesh/ Haryana border to Rohna section of National Highway No. 334B from km 0.000 to km. 44.800 in the Haryana by four- laning for a total length of 40.500 km at a Bid Project Cost (as defined in the GRSHPL Concession Agreement) of ₹ 10,200.00 million;

(vii) the concession agreement executed between DUHPL and NHAI dated December 11, 2020 (the **"DUHPL Concession Agreement**") for DBOT Annuity or Hybrid Annuity of the four laning of Dewas Ujjain section of NH No. 148 NG from Design Ch. 0.000 to 19.733 & Construction of four laning of Ujjain Bypass from Design Ch. 19.733 to 26.900 (Part-I) and construction of four lane Dewas Bypass from Design Ch. 0.000 to 14.520 (Part-II) in Madhya Pradesh by four-laning thereof for a total length of 41.420 km at a Bid Project Cost (as defined in the DUHPL Concession Agreement) of ₹ 7,160.00 million.

(Hereinafter collectively referred to as "**Gawar SPVs Concession Agreements**").

A summary of the key terms of the Gawar SPVs Concession Agreements has been set out below:

1. *Grant of Concession:*

In accordance with the provisions of the Gawar SPVs Concession Agreement and applicable laws and applicable permits, the NHAI has granted to Gawar SPV, and Gawar SPV has accepted the concession, including the exclusive right, license, and authority to construct, operate and maintain the projects of the Gawar SPV during the concession periods under the Gawar SPV Concession Agreements. The Gawar SPV Concession Agreements granted oblige or entitle, the Gawar SPV 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 Gawar SPV Concession Agreement;

b. finance and construct the projects of the Gawar SPVs;

c. manage, operate, and maintain the projects of the Gawar SPV;

d. perform and fulfil all of its obligations under and in accordance with the Gawar SPV Concession Agreement;

e. save as otherwise expressly provided in the Gawar SPV Concession Agreement, bear and pay all costs, expenses and charges in connection with or incidental to the performance of the obligations of Gawar SPV under the Gawar SPV Concession Agreement;

f. neither assign, transfer or sublet, or create any lien or encumbrance on the Gawar SPV Concession Agreement, or the concession granted, or on the whole or any part of the project of the Gawar SPVs, nor transfer, lease, or part possession thereof, save and except as expressly permitted by the Gawar SPV Concession Agreement or the agreement for the substitution of Gawar SPV entered into by Gawar SPV, the NHAI, and the lenders' representative on behalf of the senior lenders.

2. *Commercial Operations Date (COD)*

The Project shall be deemed to be complete when the completion certificate or the provisional certificate, as the case may be, is issued under the provisions of concession agreement, and accordingly the commercial operation date of the Gawar SPV Project shall be the date on which such completion certificate or the provisional certificate is issued (the "**COD**"). The Project shall enter into commercial service on COD whereupon the Gawar SPV shall be entitled to demand and collect Annuity Payments *(as defined and in the manner prescribed in the relevant concession agreements).*

3. *Operations & Maintenance Obligations and Expenses:*

O&M Obligations:

The Gawar SPVs during the Operation Period *(as defined in the relevant concession agreements)* are required to operate and maintain the project highway either by themselves, or through O&M contractors and if required, modify, repair, or make improvements to the project highway undertaken by them ("**Project Highways**") to comply with provisions mentioned in the respective concession agreements, good industry practice, applicable laws and applicable permits as specified in the concession agreement and more specifically to comply with the following ("**Maintenance Requirements**"):

a) To procure and ensure safe, smooth and uninterrupted use of the Project Highways, including prevention of loss or damage thereto, during normal operating conditions;

b) To minimize disruption in the event of accidents or other incidents affecting the safety and use of the Project Highways by providing a rapid and effective response and maintaining liaison with emergency services of the corresponding state governments;

c) To carry out periodic preventive maintenance of the Project Highways;

d) To undertake routine maintenance including prompt repairs of potholes, cracks, joints, drains, embankments) structures, markings, lighting, signage and other control devices;

e) To undertake major maintenance such as resurfacing, repairs to structures, and repairs and refurbishment of system and equipment;

f) To prevent, with the assistance of concerned law enforcement agencies, any unauthorized use of the Project Highways;

g) To prevent, with the assistance of the concerned law enforcement agencies any encroachments on, or unauthorized entry to the Project Highways;

h) To protect the environment and provision of equipment and materials thereof;

i) To operate and maintain all communication, control and administrative systems necessary for the efficient operation of the Project Highways and for providing safe, smooth and uninterrupted use of the Project Highways.

j) To maintain a public relations unit to interface with and attend to suggestions from the users, government agencies, media and other agencies; and

k) To comply with safety requirements in accordance with the terms of the concession agreements.

4. Change of Scope:

NHAI may require the provision of additional works and services which are not included in the scope of the project as contemplated by the concession agreements. Any such change of scope ("**COS**") shall be made in accordance with the provisions of the concession agreements and the costs thereof shall be expended by the Gawar SPVs and reimbursed by the NHAI.

The SPVs may by way of a written notice to NHAI request a change in scope is necessary for providing safer and improved services to the users. The NHAI shall, within 15 days of receipt of such notice, either such change of scope with modification, if any, an initiate proceeding therefor in accordance to the provisions of the Gawar SPVs Concession Agreements accept such change of scope with modifications, if any, or inform the Gawar SPV in writing of its reasons for not accepting such change of scope, which decision of the NHAI shall be final and binding. The Authority shall make an advance payment of 20% (twenty percent) of the cost of the COS, and in the event of a dispute on the COS cost, 20% (twenty percent) of the cost assessed by the independent engineer as appointed under the concession agreement.

5. Insurance:

The Gawar SPVs are required to maintain, at their own cost, during the construction period and operation period, insurance of such types and such maximum amounts as may be considered necessary or prudent in accordance with the financing arrangements, applicable laws and good industry practices. The insurance is required to cover loss damage or destruction of Project Highways and its assets, third party claims including property damage, injury to or death of personnel of NHAI or others, workmen's compensation, general liability arising out of the concession and force majeure events. NHAI is required to be designated as '*co-insured*' under such insurances. Such insurance must include a waiver of any right of subrogation of the insurers against, among others, NHAI.

The failure by the Gawar SPVs to maintain such insurance entitles NHAI to either keep in force any such insurances and pay such premium and recover the cost of such insurance from the Gawar SPVs or in the event of computation of a termination payment, treat an amount equal to the Insurance Cover as deemed to have been received by the Gawar SPV.

6. Escrow Account:

The Gawar SPVs are prior to the appointed date required to open an escrow account with an escrow bank and all funds, which, among other things, includes funds from the project lenders, the financial package, fee and other revenues in respect of Project Highways and all payments, insurance claims with respect to any claims in relation to the Project Highways made by NHAI are required to be credited to such escrow account. The concession agreements also provide for order of disbursement and order of appropriation of funds during the concession period and on termination.

7. Withdrawals during Concession Period

Any withdrawals from the Escrow Account shall be conducted by the escrow bank in the following order:

a) All taxes due and payable by the Project SPVs for and in respect of their project;

b) All payments relating to construction of the project, subject to and in accordance with the conditions, if any, set forth in the financing agreements;

c) 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 Concession Agreement, and certified by the NHAI as due and payable to it;

e) Any amounts due and payable to the NHAI;

f) Monthly proportionate provision of debt service due in an accounting year;

g) all payments and Damages certified by the NHAI as due and payable to it by the Gawar SPVs pursuant to the Gawar SPV Concession Agreement;

h) Monthly proportionate provision of 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 the Gawar SPVs.

8. Withdrawals upon Termination

Any withdrawals post termination of the Gawar SPV Concession Agreements from the Escrow Account shall be conducted by the escrow bank in the following order:

a) All taxes due and payable by the Concessionaire for and in respect of the Project;

b) Certain percentage of Debt Due excluding Subordinated Debt if required to be paid as per the terms of the Gawar SPV Concession Agreement;

c) all payments and Damages certified by the NHAI as due and payable to it by the Gawar SPV pursuant to the Gawar SPVs Concession Agreement, including any claims in connection with or arising out of Termination;

d) Retention and payments arising out of, or in relation to, liability for defects and deficiencies set forth under the Gawar SPVs Concession Agreement;

e) Outstanding Debt Service including the balance of Debt Due as define d under the Gawar Concession Agreement;

f) Outstanding subordinated debt as defined under the Gawar SPVs Concession Agreement;

g) Incurred or accrued O&M Expenses as defined under the Gawar SPVs Concession Agreement;

h) Any other payments required to be made under the Gawar SPVs Concession Agreements and

i) Balance, if any, in accordance with the instructions of the Gawar SPV:

Provided that the disbursements specified in sub-clause (i) of this clause shall be undertaken only after the vesting certificate has been issued by the NHAI.

9. Payments during the Construction and Operation Period

Payments during Construction Period

The 40% of the Bid Project Cost (as defined in the concession agreement adjusted) adjusted as provided in the corresponding concession agreement is due and payable to the Gawar SPVs in 5 (five) equal instalments of 8% (eight percent) each during the construction period in a manner provided in the concession agreements.

Upon receiving a report from the Independent Engineer certifying the achievement of the payment milestones specified in the Gawar SPV's Concession Agreement, which are directly determined by the physical progress of the project, NHAI is required to disburse, an instalment equal to 8% (eight percent) of the Bid Project Cost (*as defined in the relevant concession agreement*) , adjusted in a periodical manner for the Price Index Multiple as applicable on the Reference Index Date (*both terms have the same meaning as defined in the respective concession agreements*) preceding the date of that report in accordance with the payment milestone for release of payment during construction period as specified in the Gawar SPVs Concession Agreement. Provided that in case of COS, the payment milestones shall be recalculated to account for the revised scope.

The Bid Project Cost (*as defined in the relevant concession agreement*) shall be revised from time to time in accordance with the Gawar SPV's Concession Agreement to reflect the variation in price index (as defined in the concession agreement) occurring after the reference index date (as defined in the concession agreement) immediately preceding the bid date.

Annuity Payments during the Operation Period

NHAI pays a portion of the completion cost as payments during Construction Period and the balance completion cost becomes due and payable during the Gawar SPV's Operation Period as given in the Concession Agreement. Accordingly. the remaining 60% of the Bid Project Cost (*as defined in the relevant concession agreement*) adjusted for the price index multiple, as provided in the corresponding concession agreement is due and payable to the Gawar SPVs in 30 (thirty) biannual installments commencing from the 180th day of COD as per the schedule provided under the respective Gawar SPV's concession agreement.

Interest shall be due and payable on the reducing balance of the completion cost at an interest rate (*as defined in the relevant concession agreement*) and such interest shall be due and payable on a biannual basis with each aforementioned instalment.

O&M Payments:

The O&M expenses pertaining to the project shall be solely borne by the Gawar SPV and in lieu of the same, a lump sum financial support in the form of bi-annual instalments shall be due and payable by NHAI. Such sum shall be a product of the amount determined post adjustment of the price index multiple and reference index multiple in the manner specified under the concession agreements and shall become due and payable by the NHAI, in accordance with the terms of the concession agreements. The payments shall be disbursed by the NHAI together with the corresponding instalments of annuity payments. Any O&M expenses in excess of the amount mentioned in concession agreements shall be borne solely by the Gawar SPVs to save and except as expressly provided in the Gawar SPVs Concession Agreements. For avoidance of doubt it is that the O&M payments will be subjected to any change in the scope of the project of Gawar SPVs under the provisions of the Gawar SPVs Concession Agreements.

10. Force majeure and effects:

Upon the occurrence of any force majeure event (as defined in the concession agreements) prior to appointed date till the COD, as provided for in the concession agreement, the period for achieving a financial closure and fulfilling the conditions precedent (as defined under the respective concession agreement) would be extended by a period equal in length to the duration of such force majeure event.

If any force majeure event occurs after the COD, the Gawar SPV is entitled to receive the annuity payments including any interest incurred under the terms of the concession agreement. Provided any such annuity payments shall be subject to deduction of outstanding dues of the NHAI.

Allocation of costs arising out of Force Majeure

Upon occurrence of any force majeure event prior to the appointed date, the parties to the Gawar SPVs Concession Agreements will be required to bear the respective costs and no party shall be required to pay to the other party any costs thereof. Upon occurrence of a force majeure event after the appointed date, the costs incurred and attributable to such event and directly relating to the project (hereinafter referred to as "**Force Majeure Costs**") shall be allocated and paid as follows:

- upon occurrence of a Non-Political Event (as defined in the Gawar SPVs Concession Agreement), the parties shall bear their respective Force Majeure Costs and neither party shall be required to pay to the other party any costs thereof;

- upon occurrence of an Indirect Political Event (as defined in the Gawar SPVs Concession Agreement), all Force Majeure Costs attributable to such Indirect Political Event, and not exceeding the insurance cover for such Indirect Political Event, shall be borne by Gawar SPVs, and to the extent Force Majeure Costs exceed such insurance cover, one half of such excess amount shall be reimbursed by NHAI to Gawar SPVs; and

- upon occurrence of a Political Event (as defined in the Gawar SPVs Concession Agreement), all Force Majeure Costs attributable to such Political Event will be reimbursed by NHAI to Gawar SPVs.

Force Majeure Costs may include interest payments on Debt Due (as defined in the respective concession agreements), O&M expenses, any increase in the cost of construction works on account of inflation and all other costs directly attributable to the force majeure event, but will not include loss of fee revenues or debt repayment obligations, and for determining such costs, information contained in the financial package, as defined in the Gawar SPVs concession agreement, may be relied upon to the extent that such information is relevant.

Termination

If force majeure event subsists for a period of 180 days or more within a continuous period of 365 days, either party to the respective concession agreement would be entitled to terminate the concession agreement.

The Termination Payment (as defined in the Gawar SPVs Concession Agreements) upon a termination post COD:

- In case the Termination is on account of a Non- Political Event, the NHAI shall make a Termination payment for an amount of 75% of the annuity payments remaining unpaid including any interest incurred up to the Transfer Date (as defined in the Gawar SPVs Concession agreements). This amount shall be reduced by the insurance cover.

- In case the Termination is on account of an Indirect Political Event, the NHAI shall make a Termination payment for an amount of 90% of the annuity payments remaining unpaid including any interest incurred up to the Transfer Date (as defined in the Gawar SPVs Concession agreements); and

- In case the Termination is on account of a Political Event, the NHAI shall make a Termination payment shall be payable and computes as per "*Termination Payment- NHAI Default: Prior to COD achievement"*

11. Compensation for breach of Concession Agreement

Compensation for default by the Gawar SPVs

In the event a Gawar SPV is in material breach or default of the concession agreement, the Gawar SPV is required to compensate NHAI for all direct costs suffered or incurred by NHAI, as a result of such material breach or default, within 30 days of the receipt of the demand supported by the necessary particulars thereof. No compensation would be payable for material breach or default in respect of items for which damages are expressly provided for in the respective concession agreement, including any consequential losses incurred by NHAI.

Compensation for default by NHAI

In the event NHAI is in material breach or default of the concession agreement, NHAI is required to compensate the Gawar SPV for all direct costs suffered or incurred by the Gawar SPV, as a result of such material breach or default, within 30 days of the receipt of the demand. No compensation would be payable for costs directly attributable to the material breach or default and in respect of items for which damages are expressly provided for in the respective concession agreement including interest payments on debt, O&M expenses, increase in capital costs on account of inflation, but shall not include loss of annuity payment, debt repayment obligations or other consequential losses, loss of profits and EPC contractor claims.

Extension of Time Period

Extension of Concession Period:

If there is a suspension of the construction work, or delay in the maintenance or rectification of defects for reasons not attributable to the Gawar SPVs, the Gawar SPVs shall be entitled to an extension as per the terms of the concession agreement and as determined by the Independent Engineer (as defined in and appointed as per the terms of the concession agreements)

Extension of Maintenance Period:

a) If due to the nature and extent of any defect or deficiency justifies more time for the Projects repair or rectification than the time specified in the concession agreements, the Gawar SPVs shall be entitled to the additional time in conformity with the good industry practice.

12. Termination

Gawar SPV Defaults

If any of the defaults specified hereunder occur ("**SPV Defaults**"), and the Gawar SPVs fail to cure the same within the cure period set thereunder, or where no cure period is specified within a cure period of 60 days, the Gawar SPV would be deemed to be in default of the concession agreement. Some of the key Gawar SPV Defaults are specified below:

a) the performance security, as specified in the relevant concession agreement, is encashed/appropriated and the Gawar SPV 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 concession agreement, the Gawar SPVs fails to cure, within a cure period of 120 days, the concessionaire default for which whole or part of the performance security was appropriated;

c) the Gawar SPVs fails to achieve the latest outstanding Project Milestone *(as defined in the concession agreement)* and continues to be in default within a cure period of 120 days;

d) the Gawar SPVs abandons or manifests intention to abandon the operation and maintenance without the prior written consent of NHAI;

e) the COD *(as defined in the respective concession agreements)* does not occur as per the period laid down in the concession agreement;

f) the Punch List *(as defined in the Concession Agreements)* items have not been completed within the period set forth in concession agreement;

g) the Gawar SPV is in breach of the maintenance requirements or the safety requirements as specified in the concession agreement;

h) a breach of any of the project agreements by the Gawar SPVs has caused a material adverse effect;

i) the Gawar SPVs repudiate the concession agreement or otherwise takes any action or evidences or conveys an intention not to be bound by the concession agreement;

j) Upon occurrence of a Financial Default, the Lenders' Representative has by notice required NHAI to undertake Suspension or Termination, as the case may be, in accordance with the substitution agreement (as defined in the Gawar SPVs Concession Agreement) and the Gawar SPVs fail to cure the default within the specified cure period.

k) the Gawar SPV has failed to make any payment to NHAI within the period specified in the concession agreement;

l) the Gawar SPV creates any encumbrance in breach of the concession agreement;

m) a change in ownership has occurred in breach of the provisions of the respective concession agreement;

n) there is a transfer, pursuant to law either of (i) the rights and/or obligations of the Gawar SPV under any of the project agreements, or of (ii) all or part of the assets or undertaking of the Gawar SPV, and such transfer causes a material adverse effect as specified in the concession agreement;

o) an execution levied on any of the assets of the Gawar SPVs has caused a material adverse effect;

p) the Gawar SPV is adjudged bankrupt or insolvent, or if a trustee or receiver is appointed for the Gawar SPVs or for the whole or material part of its assets that has a material bearing on the project;

q) the Gawar SPVs have 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 NHAI, a material adverse effect;

r) any representation or warranty of the Gawar SPV which is, as of the date of the concession agreement, found to be materially false, incorrect or misleading;

s) any petition for the winding up of the Gawar SPV is passed or 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 Gawar SPV is ordered to be wound up by a court, except if there is an amalgamation or reconstruction, and the property, assets and undertaking of the Gawar SPV are transfer to the amalgamated or reconstructed entity and such entity has unconditionally assumed the obligations of the Gawar SPV under the concession agreement and provided that:

   (i) such entity has the technical capacity and operating experience to perform its obligations under the respective concession agreement;

   (ii) such entity has the financial standing to perform its obligations under the respective concession agreement and has a credit worthiness at least as good as that of the Gawar SPV, and;

   (iii) each of the project agreements remains in full force and in effect.

t) SPVs submits to NHAI any statement, notice or other document, in written or electronic form, which has a material effect on NHAI's rights, obligations or interests and which is false in material particulars;

u) SPVs have failed to fulfil any obligation, for which failure termination has been specified in concession agreement;

v) SPVs commits a default in complying with any other provision of this concession agreement if such default causes a material adverse effect on NHAI;

w) an escrow default has occurred and the Gawar SPVs fails to cure the default within a cure period of 15 days;

x) the Gawar SPV issues a Termination Notice in violation of this Agreement;

Upon occurrence of the Gawar SPV Default and expiry of the relevant cure period (or 60 days where no cure period is specified), NHAI is entitled to terminate the concession agreement provided that NHAI shall inform the Gawar SPV of its intention to issue the termination notice and grant 15 days to the Gawar SPV to make a representation to the NHA in the matter.

NHAI's Default

In the event any of the defaults specified below occur (the "**NHAI Defaults**"), and NHAI fails to cure such default within a cure period of 90 days or such longer period as has been expressly provided in the concession agreement, NHAI would be deemed to be in default: Some of the key NHAI Defaults are as follows:

a) NHAI commits a material default in complying with any of the provisions of the concession agreement and such default has a material adverse effect on the Gawar SPV *(as defined in the relevant concession agreement)*;

b) NHAI fails to provide statutory clearances required for the construction of the Project within180 days from the Appointed Date *(as defined in the corresponding concession agreement)*;

c) NHAI fails to make any payment to the Gawar SPV within the period prescribed under the provisions of the concession agreement, or;

d) NHAI repudiates the concession agreement or otherwise takes any action that amounts to or manifests an irrevocable intention not to be bound by the concession agreement.

Upon occurrence of NHAI Default and expiry of the 90 (ninety) day cure period or such longer period as prescribed, the Gawar SPV shall be entitled to terminate the respective concession agreement, provided that the Gawar SPV shall inform NHAI of its intention to issue the termination notice and grant 15 days to NHAI to make a representation to the Gawar SPV in the matter.

13. Termination Payment

SPV Default:

Upon termination on account of a Gawar SPV Default during the operation period, the NHAI shall pay to the Gawar SPV, an amount equal to 65% of the sum of annuity payments remaining unpaid for and in respect of the concession period, including interest thereon up to the transfer date.

Upon termination on account of a Gawar SPV Default during the Gawar SPV Construction Period, the termination payment shall be based on the payment milestone achieved which is in terms of the physical progress made by the Gawar SPV in the project and the termination payment corresponding to the achieved payment milestone shall be as per the prescribed percentages of the Debt Due or the Bid Project Cost (*both terms have the same meaning as defined in the respective concession agreements*), whichever is lower.

NHAI Default:

Prior to COD achievement:

Upon termination on account of an NHAI Default, prior to the COD, NHAI shall pay to Gawar SPV, an amount equal to the prescribed percentages of the Debt Due or the Bid Project Cost (*both terms have the same meaning as defined in the respective concession agreements*), whichever is lower and 150% of the adjusted equity (as defined in the respective concession agreement)..

The insurance claims shall be subtracted from the Debt Due, provided that 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 debt due in the following manner:

Payment Milestone	Basis of calculation for debt due payment
1st Payment Milestone	Debt Due or 1.50% of the Bid Project Cost, whichever is lower.
2nd Payment Milestone	Debt Due or 10.50% of the Bid Project Cost, whichever is lower.
3rd Payment Milestone	Debt Due or 19.50% of the Bid Project Cost, whichever is lower.
4th Payment Milestone	Debt Due or 33.75% of the Bid Project Cost, whichever is lower.
5th Payment Milestone	Debt Due or 40.50% of the Bid Project Cost, whichever is lower.

And shall also include certain percentage between 110% to 150% of the adjusted equity *(as specified in the Gawar SPVs Concession Agreements)*.

After COD achievement:

In case the termination occurs on or after Gawar SPV COD, the NHAI shall pay to Gawar SPV, by way of termination payment, an amount equal to 90% (ninety percent) sum of annuity payments remaining unpaid for and in respect of the concession period, including interest thereon up to the transfer date.

Termination payment shall become due and payable to the Gawar SPVs within 15 days of a demand being made by the Gawar SPV 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 daily average bank rate on the amount of termination payment remaining unpaid. The delay shall not exceed 90 days. The termination payment under the Gawar SPV Concession Agreement shall constitute a full and final settlement of all claims of the Gawar SPV on account of termination of the Gawar SPV Concession Agreement for any reason whatsoever and the Gawar SPV shall not have any further right or claim under any law, treaty, convention, contract or otherwise.

14. *Liability for defect after termination:*

The Gawar SPVs shall be responsible for all defects and deficiencies in the Project for a period of 120 days after termination *(only if the COD has been achieved)* and shall have the obligation to repair or rectify, at its own cost, all defects and deficiencies in the Gawar SPV Project 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 and in case of failure to do so, NHAI shall be entitled to get the same repaired and rectified at the Gawar SPV's risk and cost so as to make the project conform to the maintenance requirements. All costs incurred by the NHAI shall be reimbursed by the Gawar SPV to NHAI within 15 days of receipt of demand thereof, and in the event of default in reimbursing such costs, NHAI shall be entitled to recover the same from the funds retained in the Escrow Account or from the performance guarantee provided thereunder.

15. *Indemnity:*

Indemnity by the Gawar SPVs

The Gawar SPVs are required to fully indemnify hold harmless and define NHAI and the NHAI Indemnified Persons *(as defined in the Gawar SPVs concession agreements)* from and against any and all loss and/or damages arising out of or with respect to:

a) any loss, damage, cost and expense, whether arising out of any breach by the Gawar SPVs of any of its obligations under the concession agreement or any related agreement or on account of any defect or deficiency in the provision of services by the Gawar SPVs;

b) failure of the Gawar SPVs to comply with applicable laws and applicable permits *(as defined in the relevant concession agreement);*

c) payment of taxes required to be made by the Gawar SPVs in respect of the income or other taxes of BNHAI's contractors, suppliers and representatives; or

d) non-payment of amounts due as a result of materials or services furnished to the Gawar SPV or any of its contractors which are payable by the Gawar SPV or any of its contractors.

Indemnity by NHAI

NHAI is required to indemnify the Gawar SPVs against any and all suits, proceedings, actions, demands and claims from third parties for any loss, damage, cost and expense of whatever kind and nature arising out of (a) defect in title and/or the rights of the Authority in the land comprised in the site of the project, and/or (b) failure of NHAI to fulfil its obligations under the concession agreements, which materially or adversely affect the performance of the Gawar SPV.

Further the Sponsor through its Initial Portfolio assets has acquired two existing concessions by entering into endorsement agreements with NHAI, respective lenders and the Acquired Entities in the following manner:

(i) On June 2, 2016, SNHL entered into a concession agreement with the NHAI. (the "**SNHL Concession Agreement**") to design, build, operate, and transfer ("**DBOT**") of the four-lane Rampur-Kathgodam section of National Highway No. 87 (New NH No. 9, 109), covering from km 42.791 (design chainage 43.446) to km 88.00 (design chainage 93.226) in Uttarakhand, with a total length of 45.209 km. The agreed Bid Project Cost (*as defined in the relevant concession agreement*) was ₹6,570.00 million.

Due to several factors, such as project delays, time extensions, provisional certification issues, land acquisition problems, and the COVID-19 pandemic, NHAI granted an extension of time to SNHL through a Settlement Agreement dated October 25, 2021. Despite this extension, delays continued due to ongoing force majeure events, unfavourable weather conditions, regulatory permit issues, and SNHL's financial difficulties.

At the request of SNHL and its lenders, and in accordance with the terms of the SNHL Concession Agreement, NHAI provided in-principle approval on April 17, 2023, for the substitution of SNHL with a special purpose vehicle of Gawar Construction Limited. Subsequently, on July 14, 2023, an endorsement agreement was executed among NHAI, SNHL, GNHPL II, and IndusInd Bank Limited ("**GNHPLII Endorsement Agreement**"). This agreement transferred all concession rights, entitlements, interests, obligations, and liabilities of SNHL under the SNHL Concession Agreement to GNHPL II. The revised bid project cost under the endorsement agreement ₹5,601.10 million.

Pursuant to the GNHPL II Endorsement Agreement, GNHPL II was vested with the concession rights, entitlements, interests, obligations and liabilities of the Sadbhav Entity. As per the GNHPL II Endorsement Agreement, the annuity for the remaining length will be released only upon completion of all pending works and issuance of the provisional completion certificate ("**PCC**") for the balance stretch, with no part PCC issued before that. However, PCC of only 18.085 km substantially completed 4-lane length was issued so far out of total project length of 49. 78 km. Due to certain unforeseen event, GNHPL II failed to obtain PCC for the work completed from the independent engineer as per the terms of the Concession Agreement. Subsequently, GNHPL II and NHAI agreed to enter into settlement agreement dated October 15, 2024, pursuant to which the parties agreed to waive the restriction under the endorsement agreement dated July 14, 2023, and allow NHAI to issue a provisional completion certificate for work completed up to July 11, 2024, following the procedures of the Concession Agreement and NHAI policies.

(ii) On December 8, 2016, SBHPL entered into a concession agreement with NHAI (the "**SBHPL Concession Agreement**") to DBOT of the two-laning/four-laning of the BRT Tiger Reserve Boundary to Bangalore section of National Highway No. 209 from km 287.520 to km 461.550 (design chainage from km 287.500 to km 458.420) in Karnataka for a total length of 174.030 km, for Bid Project Cost (*as defined in the relevant concession agreement*) of ₹10,080.00 million.

Subsequently, due to delays in the implementation of the project arising from multiple factors, including delays in land acquisition and the COVID-19 pandemic, an extension of time was granted by NHAI to SBHPL via a settlement agreement dated August 16, 2021. Despite the extension, the project delays persisted, prompting NHAI to issue a notice of termination of the SBHPL Concession Agreement on January 21, 2022. Consequently, the lenders of SBHPL exercised their right to substitute SBHPL as per the terms of the SBHPL Concession Agreement.

A bidding process was conducted to identify a replacement for SBHPL under the SBHPL Concession Agreement, resulting in Gawar Construction Limited being selected as the successful bidder. Pursuant to this, NHAI provided its in-principle approval on December 30, 2022, for the substitution of SBHPL by a special purpose vehicle of Gawar Construction Limited. An endorsement agreement was executed on February 13, 2023, among NHAI, SBHPL, GBHPL, and the State Bank of India ("**GBHPL Endorsement Agreement**"), transferring the concession rights, entitlements, interests, obligations, and liabilities of SBHPL under the SBHPL Concession Agreement to GBHPL. The revised bid project cost under the endorsement agreement ₹9,442.30 million.

(Hereinafter GNHPL II and GBHPL are collectively referred to as Acquired SPVs and Individually, as Acquired SPV, additionally the aforementioned agreements are collectively referred to as "**Acquired SPVs Concession Agreements**")

A summary of the key terms of the Acquired SPVs Concession Agreements has been set below:

1. *Grant of Concession*:

The Acquired SPVs Concession Agreements granted obliges and entitles, the Acquired SPVs to the following:

a. right of way, access and license to the site for the purpose of, and to the extent conferred by the provisions of the respective Acquired SPVs Concession Agreements;

b. finance and construct the projects of the Acquired SPVs Project and construct the Acquired SPVs Project Highway;

c. manage, operate, and maintain the projects of the Acquired SPVs;

d. perform and fulfil all of its obligations under and in accordance with the Acquired SPVs Concession Agreement;

e. bear and pay all costs, expenses and charges in connection with or incidental to the performance of the obligations of Acquired SPVs under the Acquired SPVs Concession Agreement;

f. neither assign, transfer or sublet, or create any lien or encumbrance on the Acquired SPVs Concession Agreement, or the concession granted, or on the whole or any part of the projects of the Acquired SPVs, nor transfer, lease, or part possession thereof, save and except as expressly permitted by the Acquired SPVs Concession Agreement or the agreement for the substitution of Acquired SPVs entered into by Acquired SPVs, the NHAI, and the lenders' representative on behalf of the senior lenders.

2. Commercial Operations Date (COD)

The project shall be deemed to be complete when the completion certificate or the provisional certificate, as the case may be, is issued under the respective provisions of Acquired SPVs Concession Agreement, and accordingly the commercial operation date (the "**COD**") of the project shall be the date on which such completion certificate or the provisional certificate is issued. The Projects under the Acquired SPVs shall enter into commercial service on COD whereupon the Acquired SPVs shall be entitled to demand and collect Annuity Payments *(as defined and in the manner prescribed in the relevant Acquired SPVs Concession Agreements).*

3. Operations & Maintenance Obligations and Expenses:

O&M Obligations:

The Acquired SPVs during the Operation Period *(as defined in the relevant concession agreements)* are required to operate and maintain the project highway by themselves, or through O&M contractors and if required, modify, repair, improvements to the project highway undertaken by them ("**Acquired SPVs Project Highways**") to comply with specifications and standards mentioned in the respective concession agreements, good industry practice, applicable laws and applicable permits as specified in the concession agreement and more specifically to comply with the following ("**Maintenance Requirements**"):

a) To procure and ensure safe, smooth and uninterrupted use of the Acquired SPVs Project Highways, including prevention of loss or damage thereto, during normal operating conditions;

b) To minimize disruption in the event of accidents or other incidents affecting the safety and use of the Acquired SPVs Project Highways by providing a rapid and effective response and maintaining liaison with emergency services of the corresponding state governments;

c) To carry out periodic preventive maintenance of the Acquired SPVs Project Highways;

d) To undertake routine maintenance including prompt repairs of potholes, cracks, joints, drains, embankments) structures, markings, lighting, signage and other control devices;

e) To undertake major maintenance such as resurfacing, repairs to structures, and repairs and refurbishment of system and equipment;

f) To prevent, with the assistance of concerned law enforcement agencies, any unauthorized use of the Acquired SPVs Project Highways;

g) To prevent, with the assistance of the concerned law enforcement agencies any encroachments on, or unauthorized entry to the Acquired SPVs Project Highways;

h) To protect the environment and provision of equipment and materials thereof;

i) To operate and maintain all communication, control and administrative systems necessary for the efficient operation of the Acquired SPVs Project Highways and for providing safe, smooth and uninterrupted use of the Acquired SPVs Project Highways.

j) To maintain a public relations unit to interface with and attend to suggestions from the users, government agencies, media and other agencies; and

k) To comply with safety requirements in accordance with the terms of the Acquired SPVs Concession Agreements.

4. Change of Scope:

NHAI may require the provision of additional works and services which are not included in the scope of the project as contemplated by the respective Acquired SPVs Concession agreements. Any such change of scope ("**COS**") shall be made in accordance with the provisions of the respective Acquired SPVs Concession Agreements and the costs thereof shall be expended by the Acquired SPVs and reimbursed by the NHAI.

The Acquired SPVs may by way of a written notice to NHAI request a change of scope, necessary for providing safer and improved services to the users. The NHAI shall, within 15 days of receipt of such notice, either accept such change of scope or inform the respective Acquired SPVs in writing of its reasons for not accepting such change of scope, which decision of the NHAI shall be final and binding.

5. Insurance:

The Acquired SPVs are required to maintain, at their own cost, during the construction period and operation period, insurance of such types and such maximum amounts as may be considered necessary or prudent in accordance with the financing arrangements, applicable laws and good industry practices. The insurance is required to cover loss damage or destruction of Acquired SPVs Project Highways and its assets, third party claims including property damage, injury to or death of personnel of NHAI, workmen's compensation, general liability arising out of the concession and force majeure events. NHAI is required to be designated as '*co-insured*' under such insurances. Such insurance must include a waiver of any right of subrogation of the insurers against, among others, NHAI.

The failure by the Acquired SPVs to maintain such insurance entitles NHAI to either keep in force any such insurances and recover the cost of such insurance from the respective Acquired SPVs or in the event of computation of a termination payment, treat an amount equal to the Insurance Cover as deemed to have been received by the respective Acquired SPVs.

6. Escrow Account

The Acquired SPVs are required to open an escrow account with an escrow bank and all funds, which, among other things, includes funds from the project lenders, the financial package, fee and other revenues in respect of Acquired SPVs Project Highways and all payments, insurance claims with respect to any claims in relation to the Acquired SPVs Project Highways made by NHAI are required to be credited to such escrow account. The concession agreements also provide for order of disbursement and order of appropriation of funds during the concession period and on termination.

7. Withdrawals during Concession Period

Any withdrawals from the Escrow Account shall be conducted by the escrow bank in the following order:

a) All taxes due and payable by the Acquired SPV for and in respect of the project;

b) Any amount due on account of appropriation of the Deemed Performance Security (as defined under the Acquired Concession Agreements);

c) All payments relating to construction of the project, subject to and in accordance with the conditions, if any, set forth in the financing agreements;

d) O&M Expenses, subject to the ceiling, if any, set forth in the financing agreements;

e) O&M Expenses and other costs and expenses incurred by the NHAI in accordance with the provisions of the Acquired SPVs Concession Agreement, and certified by the NHAI as due and payable to it;

f) Any amounts due and payable to the NHAI;

g) Monthly proportionate provision of debt service due in an accounting year;

h) all payments and Damages certified by the NHAI as due and payable to it by the Acquired SPVs pursuant to the Acquired SPVs Concession Agreement;

i) Monthly proportionate provision of 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 the Acquired SPVs.

8. Withdrawals upon Termination

Any withdrawals post termination of the Acquired SPVs Concession Agreements from the Escrow Account shall be conducted by the escrow bank in the following order:

a) All taxes due and payable by the Concessionaire for and in respect of the project;

b) Any amount due on account of appropriation of the Deemed Performance Security (as defined under the concession agreement);

c) Any withdrawals post termination of the Acquired SPVs Concession Agreements from the Escrow Account shall be conducted by the escrow bank;

d) Outstanding payments due to NHAI;

e) all payments and Damages certified by the NHAI as due and payable to it by the Acquired SPV pursuant to the Gawar Concession Agreement, including any claims in connection with or arising out of Termination;

f) Retention and payments arising out of, or in relation to, liability for defects and deficiencies set forth under the Acquired SPVs Concession Agreement;

g) Outstanding Debt Service including the balance of Debt Due as defined under the Acquired SPVs Concession Agreement;

h) Outstanding Subordinated Debt as defined under the Acquired SPVs Concession Agreement;

i) Incurred or accrued O&M Expenses as defined under the Acquired SPVs Concession Agreement;

j) Any other payments required to be made under the Acquired SPVs Concession Agreements and

k) Balance, if any, in accordance with the instructions of the Acquired SPV:

Provided that the disbursements specified in sub-clause (i) of this clause shall be undertaken only after the vesting certificate has been issued by the NHAI.

9. Payments during the Construction and Operation Period

Payments during Construction Period

The 40% of the Bid Project Cost (as defined in the Concession Agreement) adjusted as provided in the corresponding concession agreement is due and payable to the Acquired SPVs in 5 (five) equal installments of 8% (eight percent) each during the construction period in a manner provided in the concession agreements.

Upon receiving a report from the Independent Engineer certifying the achievement of the payment milestones specified in the Acquired SPV's Concession Agreement, which are directly determined by the physical progress of the project, NHAI is required to disburse, an instalment equal to 8% (eight percent) of the Bid Project Cost (*as defined in the relevant concession agreement*), a adjusted in a periodical manner for the Price Index Multiple as applicable on the Reference Index Date (*both terms have the same meaning as defined in the respective concession agreements*) in accordance with the payment milestone for release of payment during construction period as specified in the respective Acquired SPVs Concession Agreement, as per the provisions of the corresponding concession agreement. Provided that in case of COS, the payment milestones shall be re-calculated to account for the revised scope.

The Bid Project Cost (*as defined in the relevant concession agreement*)shall be revised from time to time in accordance with the Acquired SPV's Concession Agreement to reflect the variation in price index *(as defined in the respective Acquired SPVs Concession Agreement)* occurring after the reference index date *(as defined in the respective Acquired SPVs Concession Agreement)* immediately preceding the bid date.

Annuity Payments during the Operation Period

NHAI pays a portion of the completion cost as payments during construction period and the balance completion cost becomes due and payable during the Acquired SPV's Operation Period as given in the Acquired SPVs Concession Agreement. Accordingly, the remaining 60% of the Bid Project Cost (*as defined in the relevant concession agreement*) adjusted for the price index multiple, as provided in the corresponding concession agreement is due and payable to the Acquired SPVs in 30 (thirty) biannual instalments commencing from the 180th day of COD as per the schedule provided under the respective Acquired SPV's Concession Agreement.

Interest shall be due and payable on the reducing balance of the completion cost at an interest rate (*as defined in the relevant concession agreement*) and such interest shall be due and payable on a biannual basis with each aforementioned instalment.

O&M Payments

The O&M expenses pertaining to the project shall be solely borne by the Acquired SPV and in lieu of the same, a lump sum financial support in the form of bi-annual instalments shall be due and payable by NHAI. Such sum shall be a product of the amount determined post adjustment of the price index multiple and reference index multiple in the manner specified under the concession agreements and shall become due and payable by the NHAI, in accordance with the terms of the respective Acquired SPVs Concession Agreements. The payments which shall be due and payable to the Acquired SPVs shall be disbursed by the NHAI in two equal bi-annual instalments together with the corresponding instalments of annuity payments. Any O&M expenses in excess of the amount mentioned in concession agreements shall be borne solely by the respective Acquired SPVs to save and except as expressly provided in the Acquired Concession Agreements. For avoidance of doubt it is that the O&M payments will be subjected to any change in the scope of the project of Acquired SPVs under the provisions of the Acquired SPVs Concession Agreements.

10. Force majeure and effects

Upon the occurrence of any force majeure event *(as defined in the* Acquired *SPVs Concession Agreements)* prior to COD, as provided for in the respective Acquired SPVs Concession Agreement, the period for achieving the financial closure and fulfilling the conditions precedent (as defined under the respective concession agreement) would be extended by a period equal in length to the duration of such force majeure event.

If any force majeure event occurs after the COD, the Acquired SPVs are entitled to receive the annuity payments including any interest incurred under the terms of the Acquired SPVs Concession Agreement. Provided any such annuity payments shall be subject to deduction of outstanding dues of the NHAI.

Allocation of costs arising out of Force Majeure

Upon occurrence of any force majeure event prior to the appointed date, the parties to the Acquired SPVs Concession Agreements will be required to bear the respective costs and no party shall be required to pay to the other party any costs thereof. Upon occurrence of a force majeure event after the appointed date, the costs incurred and attributable to such event and directly relating to the project *(hereinafter referred to as "**Force Majeure Costs**")* shall be allocated and paid as follows:

- upon occurrence of a Non-Political Event *(as defined in the* Acquired *SPVs Concession Agreements)*, the parties shall bear their respective Force Majeure Costs and neither party shall be required to pay to the other party any costs thereof;

- upon occurrence of an Indirect Political Event *(as defined in the* Acquired *SPVs Concession Agreement)*, all Force Majeure Costs attributable to such Indirect Political Event, and not exceeding the insurance cover for such Indirect Political Event, shall be borne by Acquired SPVs, and to the extent Force Majeure Costs exceed such insurance cover, one half of such excess amount shall be reimbursed by NHAI to Acquired SPVs; and

- upon occurrence of a Political Event *(as defined in the* Acquired *SPVs Concession Agreement)*, all Force Majeure Costs attributable to such Political Event will be reimbursed by NHAI to Acquired SPVs.

Force Majeure Costs may include interest payments on Debt Due (as defined in the respective concession agreements), O&M expenses, any increase in the cost of construction works on account of inflation and all other costs directly attributable to the force majeure event, but will not include loss of fee revenues or debt repayment obligations, and for determining such costs, information contained in the financial package, as defined in the Acquired SPVs Concession Agreement, may be relied upon to the extent that such information is relevant.

11. Termination

If a force majeure event subsists for a period of 180 days or more within a continuous period of 365 days, either party to the respective Acquired SPVs Concession Agreement would be entitled to terminate the respective Acquired SPV's Concession Agreement.

The Termination Payment (as defined in the concession agreements) where the termination occurs prior to the COD is calculated on the basis of the milestone achieved prior to the termination and a combination of the Debt Due and the Bid Project Cost (as defined in the respective concession agreements).

The Termination Payment (as defined in the Acquired SPVs Concession Agreements) upon a termination post COD:

- In case the Termination is on account of a Non- Political Event, the NHAI shall make a Termination payment for an amount of 75% of the annuity payments remaining unpaid including any interest incurred up to the Transfer Date (as defined in the Acquired SPVs Concession agreements). This amount shall be reduced by the insurance cover.

- In case the Termination is on account of an Indirect Political Event, the NHAI shall make a Termination payment for an amount of 90% of the annuity payments remaining unpaid including any interest incurred up to the Transfer Date (as defined in the Acquired SPVs Concession agreements); and

- In case the Termination is on account of a Political Event, the NHAI shall make a Termination payment shall be payable and computes as per "*Termination Payment- NHAI Default: Prior to COD achievement"*

12. Compensation for breach of Concession Agreement

Compensation for default by the SPVs

In the event, any Acquired SPV is in material breach or default of the Acquired SPVs Concession agreement, the respective Acquired SPV is required to compensate NHAI for all direct costs suffered or incurred by NHAI, as a result of such material breach or default, within 30 days of the receipt of the demand supported by the necessary particulars thereof. No compensation would be payable for material breach or default in respect of items for which damages are expressly provided for in the respective concession agreement, including any consequential losses incurred by NHAI.

Compensation for default by NHAI

In the event NHAI is in material breach or default of the respective Acquired SPV's Concession Agreement, NHAI is required to compensate the respective Acquired SPV for all direct costs suffered or incurred by such Acquired SPV, as a result of such material breach or default, within 30 days of the receipt of the demand. No compensation would be payable for costs directly attributable to the material breach or default and in respect of items for which damages are expressly provided for in the respective concession agreement including interest payments on debt, O&M expenses, increase in capital costs on account of inflation, but shall not include loss of annuity payment, debt repayment obligations or other consequential, loss of profits and EPC Contractor Claims.

Extension of Time Period

Extension of Concession Period:

If there is a suspension of the construction work, or delay in the maintenance or rectification defects for reasons not attributable to the Acquired SPVs, the Acquired SPVs shall be entitled to an extension as per the terms of the concession agreement and as determined by the Independent Engineer (as defined in and appointed as per the terms of the concession agreements).

Extension of Maintenance Period:

If due to the nature and extent of any defect or deficiency justifies more time for the Acquired SPV Projects repair or rectification than the time specified in the respective Acquired SPVs Concession Agreements, the Acquired SPVs shall be entitled to the additional time in conformity with the good industry practice.

13. Termination

Acquired *SPVs Defaults*

If any of the defaults specified hereunder occur ("**Acquired SPVs Defaults**"), and the Acquired SPVs fail to cure the same within the cure period set thereunder, or where no cure period is specified within a cure period of 60 days, the Acquired SPVs would be deemed to be in default of the concession agreement. Some of the key Acquired SPVs Defaults are specified below:

a) the performance security, as specified in the relevant Acquired SPVs Concession Agreements, is encashed/appropriated and the Acquired SPV 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 concession agreement, the Acquired SPVs fails to cure, within a cure period of 120 days, the Acquired SPVs Defaults for which whole or part of the performance security was appropriated;

c) the Acquired SPVs fails to achieve the latest outstanding Project Milestone *(as defined in the respective* Acquired *SPVs Concession Agreements)* and continues to be in default within a cure period of 120 days;

d) the Acquired SPVs abandons or manifests intention to abandon the operation and maintenance without the prior written consent of NHAI;

e) the COD *(as defined in the respective Acquired SPVs Concession Agreements)* does not occur as per the period laid down in the concession agreement;

f) the Punch List *(as defined in the respective Acquired SPVs Concession Agreements)* items have not been completed within the period set forth in concession agreement;

g) the *Acquired* SPVs are in breach of the maintenance requirements or the safety requirements as specified in the SPV Acquired Concession agreement;

h) a breach of any of the project agreements by the Acquired SPVs has caused a material adverse effect;

i) the Acquired SPVs repudiate the concession agreement or otherwise takes any action or evidences or conveys an intention not to be bound by the concession agreement;

j) Upon occurrence of a Financial Default, the Lenders' Representative has by notice required NHAI to undertake Suspension or Termination, as the case may be, in accordance with the substitution agreement (as defined in the Acquired SPVs Concession Agreement) and the Acquired SPVs fail to cure the default within the specified cure period

k) the Acquired SPVs have failed to make any payment to NHAI within the period specified in the concession agreement;

l) the Acquired SPVs creates any encumbrance in breach of the concession agreement;

m) a change in ownership has occurred in breach of the provisions of the respective concession agreement;

n) there is a transfer, pursuant to law either of (i) the rights and/or obligations of the Acquired SPVs under any of the project agreements, or of (ii) all or part of the assets or undertaking of the Acquired SPVs, and such transfer causes a material adverse effect as specified in the concession agreement;

o) an execution levied on any of the assets of the Acquired SPVs has caused a material adverse effect;

p) the Acquired SPVs are adjudged bankrupt or insolvent, or if a trustee or receiver is appointed for the Acquired SPVs or for the whole or material part of its assets that has a material bearing on the project;

q) the Acquired SPVs have been, or are in the process of being liquidated, dissolved, wound-up, amalgamated or reconstituted in a manner that would cause, in the reasonable opinion of NHAI, a material adverse effect;

r) any representation or warranty of the Acquired SPVs which is, as of the date of the concession agreement, found to be materially false, incorrect or misleading;

s) any petition for the winding up of the Acquired SPVs is passed or 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 Acquired SPVs are ordered to be wound up by a court, except if there is an amalgamation or reconstruction, and the property, assets and undertaking of the Acquired SPVs are transfer to the amalgamated or reconstructed entity and such entity has unconditionally assumed the obligations of the Acquired SPVs under the concession agreement and provided that:

   (i) such entity has the technical capacity and operating experience to perform its obligations under the respective concession agreement;

(ii) such entity has the financial standing to perform its obligations under the respective concession agreement and has a credit worthiness at least as good as that of the Acquired SPVs, and;

(iii) each of the project agreements remains in full force and in effect.

t) Acquired SPVs submits to NHAI any statement, notice or other document, in written or electronic form, which has a material effect on NHAI's rights, obligations or interests and which is false in material particulars;

u) Acquired SPVs have failed to fulfil any obligation, for which failure termination has been specified in concession agreement;

v) Acquired SPVs commits a default in complying with any other provision of this concession agreement if such default causes a material adverse effect on NHAI;

w) an escrow default has occurred and the Acquired SPVs fails to cure the default within a cure period of 15 days;

x) the Acquired SPV issues a Termination Notice in violation of the concession agreement;

Upon occurrence of the Acquired SPVs Default and expiry of the relevant cure period (or 60 days where no cure period is specified), NHAI is entitled to terminate the concession agreement provided that NHAI shall inform the relevant Acquired SPVs of its intention to issue the termination notice and grant 15 days to the relevant Acquired SPVs to make a representation to the NHAI in the matter.

NHAI's Default

In the event any of the defaults specified below occur (the "**NHAI Defaults**"), and NHAI fails to cure such default within a cure period of 90 days or such longer period as has been expressly provided in the Acquired SPVs Concession Agreement, NHAI would be deemed to be in default: Some of the key NHAI Defaults are as follows:

a) NHAI commits a material default in complying with any of the provisions of the Acquired SPVs Concession Agreement and such default has a material adverse effect on the Acquired SPVs *(as defined in the relevant Acquired SPVs Concession Agreement)*;

b) NHAI fails to provide statutory clearances required for the construction of the Acquired Project within180 days from the Appointed Date *(as defined in the corresponding* Acquired *SPVs Concession Agreement)*;

c) NHAI fails to make any payment to the Acquired SPV within the period prescribed under the provisions of the Acquired SPVs Concession Agreement;

d) NHAI repudiates the Acquired SPVs Concession Agreement or otherwise takes any action that amounts to or manifests an irrevocable intention not to be bound by the Acquired SPVs Concession Agreement;

Upon occurrence of NHAI Default (as per provisions of the Acquired SPVs Concession Agreement) and expiry of the 90 (ninety) day cure period or such longer period as prescribed, the Acquired SPVs shall be entitled to terminate the respective concession agreement, provided that the Acquired SPVs shall inform NHAI of its intention to issue the termination notice and grant 15 days to NHAI to make a representation to the Acquired SPVs in the matter.

14. Termination Payment

SPV Default:

Upon termination on account of a Acquired SPVs Default during the operation period, the NHAI shall pay to the SPV, an amount equal to 65% of the sum of annuity payments remaining unpaid for and in respect of the concession period, including interest thereon up to the transfer date.

Upon termination on account of an Acquired SPV Default during the Construction Period, the termination payment shall be based on the payment milestone achieved which is in terms of the physical progress made by the Acquired SPV in the project and the termination payment corresponding to the achieved payment milestone shall be as per the prescribed percentages of the Debt Due or the Bid Project Cost (*both terms have the same meaning as defined in the respective concession agreements*), whichever is lower.

NHAI Default:

Prior to COD achievement

Upon termination on account of an NHAI Default, prior to the COD, NHAI shall pay to SPV, an amount equal to the prescribed percentages of the Debt Due or the Bid Project Cost (*both terms have the same meaning as defined in the respective concession agreements*), whichever is lower and 150% of the adjusted equity (as defined in the respective Acquired SPVs Concession Agreement).

The insurance claims shall be subtracted from the Debt Due, provided that 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 debt due in the following manner:

Payment Milestone	Basis of calculation for debt due payment
1st Payment Milestone	Debt Due or 1.50% of the Bid Project Cost, whichever is lower.
2nd Payment Milestone	Debt Due or 10.50% of the Bid Project Cost, whichever is lower.
3rd Payment Milestone	Debt Due or 19.50% of the Bid Project Cost, whichever is lower.
4th Payment Milestone	Debt Due or 33.75% of the Bid Project Cost, whichever is lower.
5th Payment Milestone	Debt Due or 40.50% of the Bid Project Cost, whichever is lower.

And shall also include 110% (one hundred ten percent) of the adjusted equity.

After COD achievement

In case the termination occurs on or after Acquired SPVs COD, the NHAI shall pay to Acquired SPVs, by way of termination payment, an amount equal to 90% (ninety percent) sum of annuity payments remaining unpaid for and in respect of the concession period, including interest thereon up to the transfer date.

Termination payment shall become due and payable to the Acquired SPVs within 15 days of a demand being made by the Acquired SPVs 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 daily average bank rate on the amount of termination payment remaining unpaid. The delay shall not exceed 90 days. The termination payment under the Acquired SPVs Concession Agreement shall constitute a full and final settlement of all claims of the Acquired SPV on account of termination of the Acquired SPVs Concession Agreement for any reason whatsoever and the Acquired SPVs shall not have any further right or claim under any law, treaty, convention, contract or otherwise.

15. *Liability for defect after termination*

The Acquired SPVs shall be responsible for all defects and deficiencies in the Project for a period of 120 days after termination *(only if the COD has been achieved)* and shall have the obligation to repair or rectify, at its own cost, all defects and deficiencies in the Acquired SPVs Project 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 and in case of failure to do so, NHAI shall be entitled to get the same repaired and rectified at the Acquired SPV's risk and cost so as to make the project conform to the maintenance requirements. All costs incurred by the NHAI shall be reimbursed by the Acquired SPVs to NHAI within 15 days of receipt of demand thereof, and in the event of default in reimbursing such costs, NHAI shall be entitled to recover the same from the funds retained in the Escrow Account or from the performance guarantee provided thereunder.

16. *Indemnity:*

Indemnity by Acquired SPVs

The Acquired SPVs are required to fully indemnify NHAI and the NHAI Indemnified Persons *(as defined in the* Acquired SPVs Concession Agreement*)* from and against any and all loss and/or damages arising out of or with respect to:

a) any loss, damage, cost and expense, whether arising out of any breach by the Acquired SPVs of any of its obligations under the Acquired SPVs Concession Agreement or any related agreement or on account of any defect or deficiency in the provision of services by the Acquired SPVs;

b) failure of the Acquired SPVs to comply with applicable laws and applicable permits *(as defined in the relevant* Acquired SPVs Concession Agreement*);*

c) payment of taxes required to be made by the Acquired SPVs in respect of the income or other taxes of BNHAI's contractors, suppliers and representatives; or

d) Non-payment of amounts due as a result of materials or services furnished to the Acquired SPV or any of its contractors which are payable by the Acquired SPV or any of its contractors.

Indemnity by NHAI

NHAI is required to indemnify the Acquired SPVs against any and all suits, proceedings, actions, demands and claims from third parties for any loss, damage, cost and expense of whatever kind and nature arising out of (a) defect in title and/or the rights of the Authority in the land comprised in the site of the project, and/or (b) failure of NHAI to fulfil its obligations under the Acquired SPVs Concession Agreement which materially or adversely affect the performance of the Acquired SPVs.

Term Sheet dated February 15, 2023, between Sadbhav Infrastructure Project Limited, Sadbhav Nainital Highway Limited (formerly known as Sadbhav Nainital Highway Private Limited)and our Sponsor

Sadbhav Infrastructure Project Limited, Sadbhav Nainital Highway Limited (*formerly known as Sadbhav Nainital Highway Private Limited)* and our Sponsor entered into Term Sheet pursuant to which our Sponsor substituted SNHL with its Nominated SPV (*as defined below*), through harmonious substitution process, and agreed to complete all balance works in relation to project undertaken by SNHL pursuant to concession agreement with NHAI dated June 2, 2016 for 4-Laning of Rampur-Kathgodam section of NH-87 (New NH No. 9, 109) from Km. 42.791 (Design Chainage Km.43.446) to Km. 88.000 (Design Chainage Km. 93.226) [Package-II] in the state of Uttarakhand under NHDP Phase - Ill on Hybrid Annuity Mode (the "**Project**"). Our Sponsor paid a consideration of ₹ 900 million and applicable GST to Sadbhav Infrastructure Project Limited.

The consummation of the transaction was subject to certain conditions precedent *inter alia* (i) Approval of NHAI for Harmonious Substitution; (ii) Approval of Senior Lenders for Proposed Transaction and Harmonious Substitution; (iii) Gawar shall incorporate a Special Purpose Vehicle ("**Nominated SPV**") for its Harmonious Substitution with SNHL for the Project Works; (iv) Signing of Definitive Agreement and Endorsement Agreement.

As per the terms of the Term Sheet, our Sponsor or it Nominated SPV was responsible for procure additional funds required for completing Project (if any), including repayment of balance mobilization advances and interest due and /or to meet shortfall in project financing through its own sources. Further, Nominated SPV will recover for GST claims already passed to SNHL. SNHL will be responsible for its obligations including income tax, GST, labour cess, and will ensure that our Sponsor can complete the balance works without any hindrance.

Our Sponsor or its Nominated SPV will replace the existing bank guarantees against mobilization advance within 90 days of endorsement, and both parties together will ensure that the existing bank guarantees of SNHL are released by NHAI. Further, the outstanding debt of the lenders in the SNHL will be taken over by our Sponsor and it will ensure that debt is repaid to such senior lenders in terms of existing financing agreements. The senior lenders of SNHL will continue/make available the existing sanctioned limits to the Nominated SPV of the Sponsor on the same terms & conditions.

Further, as per the terms of the Term Sheet, the amount received under change in law/ change in rate from NHAI belongs to Sadbhav Infrastructure Project Limited/ SNHL and the Sponsor or the Nominated SPVs has to make payment of such amounts, without deducting any direct or indirect taxes, to SNHL.

CORPORATE GOVERNANCE

The section below is a summary of the corporate governance framework in relation to the Trust, implemented by or to be implemented by the Investment Manager, as applicable and as specified in this section.

1. Investment Manager

Gawar Investment Manager Private Limited is the investment manager of the Trust. For further details on the background of the Investment Manager, refer to the section titled "***Parties to the Trust – The Investment Manager***" on page 128.

The IM Board

Composition of the IM Board

The board of directors (the "**Board**") of the Investment Manager shall adhere to the following:

a) the Board shall comprise not less than six directors and has not less than one woman independent director;

b) not less than 50% of the Board of directors of the Investment Manager shall comprise independent directors and not directors or members of the governing board of the investment manager of another infrastructure investment trust registered under the SEBI InvIT Regulations; and

c) collective experience of the directors on the Board should cover a broad range of commercial experience, particularly experience in infrastructure sector (including the applicable sub-sector), including development, investment/fund management or advisory and financial matters.

The IM Board comprises:

Sr. No.	Name	DIN	Designation
1.	Yudhvir Singh Malik	00000555	Chairman and Non-Executive and Independent Director
2.	Vijayalakshmi R Iyer	05242960	Non-Executive and Independent Director
3.	Satish Chandra	02305699	Non-Executive and Independent Director
4.	Rakesh Kumar	02082036	Non-Executive Director
5.	Neeraj Sheoran	08572647	Non-Executive Director
6.	Bant Singh Singla	08620341	Non-Executive Director

2. Committees of the IM Board

InvIT Committee

The IM Board has constituted the InvIT Committee pursuant to a resolution dated March 26, 2024. The operation and functioning of the InvIT Committee would be under the strict supervision of the IM Board. The InvIT Committee consists of the following members:

Sr. No.	Name	Designation
1.	Rakesh Kumar	Chairman
2.	Neeraj Sheoran	Member
3.	Bant Singh Singla	Member

The terms of reference of the InvIT Committee include the following:

1. To approve and file, where applicable, the draft offer document, placement offer document and final offer document to be filed with SEBI and the Stock Exchanges and to make necessary amendments or alterations therein in relation to the Offer;

2. To decide on all the terms and conditions of the Offer, including the timing, pricing, allotment, opening and closing dates of the Offer and the future issues that the Trust may undertake and to accept any amendments, modifications, variations or alterations thereto;

3. To approve and adopt the necessary governance policies for the Trust as required under the SEBI InvIT Regulations;

4. To decide on any other matter that may be routed through the InvIT Committee in relation to any fund raising by the Trust;

5. Making applications, where necessary, to such authorities including Securities and Exchange Board of India, Stock Exchanges, Registrar of Companies or to such other statutory and governmental authorities or entities as may be required and accept on behalf of the Issuer such conditions and modifications as may be prescribed or imposed by any of them while granting such approvals, consents, permissions and sanctions as may be required in relation to the Offer;

6. To seek, if required, the consent of the lenders, parties with whom the Issuer and each of InvIT, Project SPVs and Sponsor have entered into various commercial and other agreements, all concerned government and regulatory authorities in India or outside India, and any other consents that may be required in connection with the Offer;

7. To appoint and enter into arrangements with the trustee, sponsor, lead managers, registrar and any other agencies or persons or intermediaries in relation to the Offer and to negotiate and finalise the terms of their appointment, subject to SEBI InvIT Regulations;

8. To negotiate, authorise settle, and execute where applicable and deliver or arrange the delivery of the draft offer document, offer document and final offer document, the preliminary and final international wraps, the agreements and all other documents, deeds, agreements and instruments and any notices, supplements and corrigenda thereto, as may be required or desirable in relation to the Offer;

9. To deal with all matters up to allotment of the Units to the Unit holders as per applicable laws;

10. To accept and utilize the proceeds of the Offer in the manner provided under the offer document and final offer document and the applicable law;

11. To open with the bankers to the Offer such accounts as may be required by the regulations issued by SEBI and to authorise one or more officers of the Investment Manager to execute all documents/ deeds as may be necessary in this regard;

12. To authorise and approve the incurring of expenditure and payment of fees, commission, remuneration and expenses in connection with the Offer;

13. To issue all documents and authorise one or more officers of the Investment Manager to sign all or any of the aforementioned documents;

14. To settle all questions, difficulties or doubts that may arise in regard to the Offer including such issues or allotment and matters incidental thereto as it may deem fit, and to delegate such of its powers as may be deemed necessary to the officials of the Investment Manager;

15. To authorise any director or directors of the Investment Manager or any other officials of the Investment Manager including by the grant of power of attorney, to do such acts, deeds and things as such authorized person as he/she may deem necessary in connection with the Offer and allotment and transfer of Units;

16. To enter into debt financing documentation, debenture subscription agreements, share purchase agreements, right of first offer agreements and other agreements, and to make any amendments or modifications thereto in connection with the Offer with the InvIT Assets;

17. To do all such acts, deeds and things as may be necessary in order to make the successful listing of InvIT.

Audit Committee:

The IM Board has constituted the Audit Committee pursuant to a resolution dated March 26, 2024. The Audit Committee consists of the following members:

Sr. No.	Name	Designation
1.	Satish Chandra	Chairman
2.	Vijayalakshmi R Iyer	Member
3.	Rakesh Kumar	Member

The terms of reference of the Audit Committee include the following:

1. Providing recommendations to the IM Board regarding any proposed distributions, in line with the distribution policy;

2. Oversight of the Trust's financial reporting process and the disclosure of its financial information to ensure that the financial statement is true, fair and correct;

3. Giving recommendations to the Board regarding for appointment, re-appointment and replacement, remuneration and terms of appointment of statutory auditors of the Trust and the fees, subject to the approval of the Unit holders, if required.

4. Reviewing the annual financial statements and auditor's report thereon with the management before submission to the Board for approval, with particular reference to:

   (a) matters required to be included in the director's responsibility statement to be included in the Board's report of the Investment Manager in terms of clause (c) of sub-section (3) of Section 134 of Companies Act 2013;

   (b) changes, if any, in accounting policies and practices and reason for the same;

   (c) major accounting entries involving estimates based on exercise of judgment by management;

   (d) significant adjustments made in the financial statements arising out of audit findings;

   (e) compliance with listing and other legal requirements relating to financial statements;

   (f) disclosure of any related party transactions; and

   (g) modified opinion(s) in the draft audit report;

5. Reviewing all periodic financial statements with the management including but not limited to quarterly, half-yearly and annual financial statements of the Trust, whether standalone or consolidated or in any other form as may be required under applicable law, before submission to the Board for approval;

6. Reviewing the statement of uses/ application of funds raised through an issue of units by the Trust (including but not limited to public issue, rights issue, preferential issue, private placement etc.) with the management and any issue of debt securities and the statement of funds utilised for purposes other than those stated in the offer documents/ notice, and making appropriate recommendations to the Board for follow-up action;

7. Reviewing and monitoring the auditor's independence and performance, and effectiveness of audit process;

8. Approval or any subsequent modification of all transactions of the Trust with related parties;

9. Recommending related party transactions to the Board or the Unit holders, as may be required under the SEBI InvIT Regulations;

10. Scrutiny of loans, including inter-corporate loans, and investments of the Trust;

11. Reviewing all valuation reports required to be prepared under applicable law, periodically, and as required, under applicable law;

12. Evaluation of internal financial controls and risk management systems of the Trust;

13. Reviewing the adequacy of internal audit function, if any, including the structure of the internal audit department, staffing and seniority of the official heading the department, reporting structure coverage and frequency of internal audit;

14. Hold discussions with internal auditors of any significant findings and follow up thereon;

15. Reviewing the findings of any internal investigations in relation to the Trust into matters where there is suspected fraud or irregularity or a failure of internal control systems of a material nature and reporting the matter to the Board;

16. Reviewing the procedures put in place by the Investment Manager for managing any conflict that may arise between the interests of the Unit holders, the parties to the Trust and the interests of the Investment Manager, including related party transactions, the indemnification of expenses or liabilities incurred by the Investment Manager, and the setting of fees or charges payable out of the Trust's assets;

17. Discussing with statutory auditors and valuers prior to commencement of the audit or valuation, respectively, about the nature and scope, as well as post-audit/ valuation discussion to ascertain any area of concern;

18. Reviewing and monitoring the independence and performance of the valuer of the Trust;

19. To look into the reasons for substantial defaults, if any, in the repayment to any lender/creditors;

20. Evaluating any defaults or delay in payment of distributions to the unit holders or dividends by the SPVs to the Trust and payments to any creditors of the Trust or the SPVs, and recommending remedial measures;

21. To review the functioning of the whistle blower mechanism;

22. Approve and recommend to the Board appointment of Chief Financial Officer after assessing the qualifications, experience and background, etc. of the candidate;

23. Approving any management information systems (MIS) or interim financial statements to be submitted by the Trust to any Unitholder or regulatory or statutory authority;

24. Considering and commenting on the rationale, cost-benefits and impact of schemes involving merger, demerger, amalgamation etc. on the Trust and its Unit holders;

25. Approving any reports required to be issued to the Unit holders under the SEBI InvIT Regulations;

26. Formulating any policy for the Investment Manager as necessary, in relation to its functions, as specified above.

27. Valuation of undertakings or assets of the Trust, wherever it is necessary.

28. All other activities as informed or delegated by the Board of Directors from time to time.

29. Review of management discussion and analysis of financial condition and results of operations;

30. Review of management letters/ letters of internal control weaknesses issued by the statutory auditors;

31. Review of internal audit reports relating to internal control weaknesses;

32. Review the appointment, removal and terms of remuneration of the chief internal auditor shall be subject to review by the audit committee; and

33. Review the statement of deviations, if any, in the use of proceeds from the objects stated in the offer document or explanatory statement to the notice for the meeting of Unit holders.

Nomination and Remuneration Committee:

The IM Board has constituted the Nomination and Remuneration Committee pursuant to a resolution dated March 26, 2024.

The Nomination and Remuneration Committee consists of the following members:

Sr. No.	Name	Designation
1.	Vijayalakshmi R Iyer	Chairperson
2.	Yudhvir Singh Malik	Member
3.	Rakesh Kumar	Member

The terms of reference of the Nomination and Remuneration Committee include the following:

1. Formulation of the criteria for determining qualifications, positive attributes and independence of a director and recommend to the Board a policy relating to the remuneration of the directors, key managerial personnel and other employees;

2. For every appointment of an independent director, evaluation of the balance of skills, knowledge and experience on the Board and on the basis of such evaluation, prepare a description of the role and capabilities required of an independent director. The person recommended to the Board for appointment as an independent director shall have the capabilities identified in such description. For the purpose of identifying suitable candidates, the Nomination and Remuneration Committee may:

   (a) use the services of external agencies, if required;

   (b) consider candidates from a wide range of backgrounds, having due regard to diversity; and

   (c) consider the time commitments of the candidates.

3. Formulation of criteria for evaluation of performance of independent directors and the Board of Directors;

4. Devising a policy on the diversity of Board of Directors;

5. Identifying persons who are qualified to become directors and who may be appointed in senior management in accordance with the criteria laid down, and recommend their appointment and removal to the IM Board;

6. Making all decisions in relation to appointment or replacement or removal of directors on the Board of Directors of the SPVs;

7. Determine whether to extend or continue the term of appointment of the independent director, on the basis of the report of performance evaluation of independent directors; and

8. Recommend to the board, all remuneration, in whatever form, payable to senior management as defined under LODR and SEBI InvIT Regulations.

Stakeholders' Relationship Committee:

The IM Board has constituted the Stakeholders' Relationship Committee pursuant to a resolution dated March 26, 2024. The Stakeholders' Relationship Committee consists of the following members:

Sr. No.	Name	Designation
1.	Vijayalakshmi R Iyer	Chairperson
2.	Yudhvir Singh Malik	Member
3.	Satish Chandra	Member

The terms of reference of the Stakeholders' Relationship Committee include the following:

1. To consider and resolve the grievances of the Unit holders, including complaints related to the transfer of units, non-receipt of annual report, general meetings and non-receipt of declared distributions;

2. To review the measures taken for effective exercise of voting rights by unit holders of the Trust;

3. To review adherence to the service standards adopted by the Trust in respect of various services being rendered by the registrar and unit transfer agent;

4. To review various measures and initiatives taken by the Trust for ensuring timely receipt of distributions/ annual reports/ statutory notices by the Unit holders of the Trust;

5. To update the Unit holders on acquisition/ sale of assets by the Trust and any change in the capital structure of the Holding Companies or the SPVs;

6. To review any litigation related to Unit holders' grievances and reporting specific material litigation related to Unit holders' grievances to the IM Board; and

7. To approve the report on investor grievances to be submitted to the Trustee.

Risk Management Committee:

The IM Board has constituted the Risk Management Committee pursuant to a resolution dated March 26, 2024. The Risk Management Committee consists of the following members:

Sr. No.	Name	Designation
1.	Satish Chandra	Chairman
2.	Yudhvir Singh Malik	Member
3.	Vijayalakshmi R Iyer	Member

The terms of reference of the Risk Management Committee include the following:

1. To Formulate a detailed risk management policy, which will include:

2. a framework for identification of internal and external risks specifically faced by the Trust in particular, including financial, operational, sectoral, sustainability (particularly, ESG related risks), information, cyber security risks or any other risk as may be determined by the risk management committee;

3. Measures for risk mitigation including systems and processes for internal control of identified risks; and

4. Business continuity plan;

5. To ensure that appropriate methodology, processes and systems are in place to monitor and evaluate risks associated with the business of the Trust;

6. To monitor and oversee implementation of the risk management policy, including evaluating the adequacy of risk management systems;

7. To periodically review the risk management policy, at least once in two years, including by considering the changing industry dynamics and evolving complexity;

8. To keep the IM Board informed about the nature and content of its discussions, recommendations and actions to be taken;

9. The appointment, removal and terms of remuneration of the chief risk officer, if any, shall be subject to review by the Risk Management Committee; and

10. To Coordinate its activities with other committees, in instances where there is any overlap with activities of such committees, as per the framework laid down by the IM Board.

Corporate Social Responsibility Committee:

The IM Board has constituted the corporate social responsibility committee pursuant to a resolution dated August 20, 2024. The corporate social responsibility committee consists of the following members:

S. No.	Name	Designation
1.	Satish Chandra	Chairman
2.	Rakesh Kumar	Member
3.	Bant Singh Singla	Member

The terms of reference of the corporate social responsibility committee include the following:

1. To formulate and recommend to the IM Board, a corporate social responsibility policy;

2. To identify projects, programs and activities to be undertaken under CSR during each year including mode and implementation schedule of their execution;

3. To recommend the budgets / amount of expenditure to be incurred on the CSR activities to be undertaken, formulation of corpus for CSR expenditures, rollover of unspent amounts, if any, from previous financial years and reviewing/monitoring the expenditure periodically;

4. To set up a transparent monitoring mechanism for ensuring successful implementation of the policy, projects, programs and activities and review the progress periodically;

5. To review CSR Reports and other related documents;

6. To carry out all such acts and deeds as may be necessary to discharge aforesaid responsibilities;

7. To delegate any of its responsibilities to such persons on such terms and conditions as it may deem fit, to the extent permitted by law.

Policies adopted in relation to the Trust

The IM Board will adopt policies for corporate governance as may be required from time to time in accordance with applicable law and the SEBI InvIT Regulations. The IM Board has adopted the following policies under the corporate governance framework of the Trust:

Distribution Policy

The IM Board has adopted the distribution policy pursuant to a resolution dated August 20, 2024, in relation to the Trust. The distribution policy provides a structure for distribution of the net distributable cash flows of the Project SPVs to the Trust and the Trust to the Unitholders. For details of the Distribution Policy, see "***Distributions***" on page 217.

Code of Conduct ("Code")

The IM Board has adopted the Code pursuant to a resolution dated August 20, 2024, in relation to the Trust and conduct of the Trust and the Parties to the Trust. The policy provides for principles and procedures for the Sponsor, the Investment Manager, the Project Manager, the Trustee and their respective employees, as may be applicable, for ensuring interest of the Unitholders and proper conduct and carrying out of the business and affairs of the Trust in accordance with applicable law. The key principles of the Code are set out below:

1. the Trust and the Parties to the Trust to conduct all affairs of the Trust in the interest of all the unitholders of the Trust;

2. the Trust and the Parties to the Trust to make adequate, accurate, explicit and timely disclosure of relevant material information to all unitholders of the Trust, the stock exchanges and the Securities and Exchange Board of India in accordance with the SEBI InvIT Regulations and as may be specified by the stock exchanges from time to time;

3. the Trust and the Parties to the Trust shall try to avoid conflicts of interest, as far as possible, in managing the affairs of the Trust and keep the interest of all unitholders of the Trust paramount in all matters. In case such events cannot be avoided, it shall be ensured that appropriate disclosures are made to the unitholders of the Trust and they are fairly treated;

4. the Trust and Parties to the Trust to ensure that fees charged by them with respect to activity of Trust shall be fair and reasonable;

5. the investment manager to the Trust to carry out the business of the Trust and invest in accordance with the investment objectives (as disclosed in the draft offer document and offer document, as applicable) and take investment decisions solely in the interest of unitholders of the Trust;

6. the Trust, the Parties to the Trust and any third party appointed by the investment manager to the Trust not to 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;

7. the Trust and the Parties to the Trust to maintain high standards of integrity and fairness in all their dealings and in the conduct of their business;

8. the Trust and the Parties to the Trust to render at all times high standards of service, exercise due diligence, ensure proper care and exercise independent professional judgment; and

9. the Trust and the Parties to the Trust not to make any exaggerated statement, whether oral or written, either about their qualifications or capabilities or experience.

Borrowing Policy

The IM Board, has adopted a borrowing policy ("**Borrowing Policy**") on August 20, 2024. The key terms of the Borrowing Policy include, *inter alia*:

(a) the Investment Manager to ensure that all funds borrowed in relation to the Trust are in compliance with the SEBI InvIT Regulations.

(b) subject to the SEBI InvIT Regulations and the Trust documents, the aggregate consolidated borrowings and deferred payments of the Trust, and the Project SPV, net of cash and cash equivalents to not exceed 70.00% of the value of the InvIT assets.

(c) if the aggregate consolidated borrowings and deferred payments of the Trust, Holdco, and the Project SPV, net of cash and cash equivalents exceed 25% of the value of the InvIT assets, for any further borrowing:

(i) up to 49%, of the Trust shall obtain-

- credit rating from a credit rating agency registered with the SEBI; and
- approval of Unitholders in the manner as specified in the SEBI InvIT Regulations.

(ii) above 49%, the Trust shall-

- obtain credit rating of 'AAA' or equivalent for its consolidated borrowing and the proposed borrowing from a credit rating agency registered with the SEBI;
- utilize the funds only for the acquisition or development of infrastructure projects;
- have a track record of at least six distributions, as specified in the SEBI InvIT Regulations, on a continuous basis, post listing, in the years preceding the financial year in which the enhanced borrowings are proposed to be made; and
- obtain approval of Unitholders in the manner as specified in the SEBI InvIT Regulations.

(d) if the conditions specified in SEBI InvIT Regulations are breached on account of market movements of the price of the underlying assets or securities, the Investment Manager to inform the same to the Trustee and ensure that the conditions are satisfied within six months of such breach.

(e) the Trust may raise debt and avail borrowings and deferred payments from time to time, including through issuance of debt securities and availing loans from banks and financial institutions in accordance with applicable law (including the SEBI InvIT Regulations). The Trust may issue debt securities in the manner specified by the SEBI, and in accordance with applicable law. In the event the aggregate consolidated borrowings and deferred payments (net of cash and cash equivalents) of the Trust, any holding company and the Project SPVs, exceed any thresholds prescribed under the SEBI InvIT Regulations in this regard, any further borrowings by the Trust shall be availed in accordance with the requirements prescribed under the SEBI InvIT Regulations, including any approval from Unitholders under Regulation 22 of the SEBI InvIT Regulations.

(f) the Investment Manager to ensure that if the value of funds borrowed from related parties in a financial year, exceeds 5% of the total consolidated borrowings of the Trust, any holding company and the Project SPV, approval from the Unitholders shall be obtained prior to entering into any such subsequent transaction with any related party, in accordance with Regulation 22 of the SEBI InvIT Regulations.

(g) for the purposes of the Borrowing Policy and in accordance with the SEBI InvIT Regulations, investments by the Trust in overnight mutual funds, characterized by their investments in overnight securities, having maturity of one day, shall be considered as cash and cash equivalents. Further, in accordance with the SEBI InvIT Regulations, the amount of cash and cash equivalents shall be excluded from the value of the assets of the Trust.

(h) the Trust to be permitted to borrow monies through any permitted means, by any instrument, in Indian or foreign currency, as permitted by applicable law, including as prescribed by the Reserve Bank of India. The Investment Manager and the Trustee (both on behalf of the Trust) shall be permitted to borrow monies in relation to the Trust, subject to the approval of its board of directors and such other committee of the board of directors of the Investment Manager as may be constituted in this regard.

(i) the Trust also has the power to create, mortgage or secure any of its assets or provide guarantees in order to borrow funds. However, the Investment Manager shall not be allowed to create any obligation which would allow the liabilities to extend beyond the assets held by the Trust.

(j) in addition to the above, any borrowing by any holding company (*if any)* or the Project SPV, incorporated under the Companies Act, 2013 and the SEBI InvIT Regulations will be in accordance with the conditions prescribed therein and the InvIT Regulations.

(k) any variation of the Borrowing Policy shall be only with the approval of the Unitholders of the Trust and in accordance with the SEBI InvIT Regulations.

(l) in case of any discrepancy, the provisions of applicable law shall prevail over the provisions of the Borrowing Policy. Notwithstanding the above, this Policy will stand amended to the extent of any change in applicable law, including any amendment to the SEBI InvIT Regulations, without any action from the Investment Manager or approval of the Unitholders of the InvIT.

Appointment of Auditor and Valuer Policy

The IM Board has adopted a policy on appointment of auditor and valuer ("**Appointment Policy**") pursuant to a resolution dated August 20, 2024, in relation to the Trust. For details, please see section titled "*Other Parties Involved in the Trust*".

Policy on Related Party Transactions ("**RPT Policy**")

The IM Board has adopted the RPT Policy pursuant to a resolution dated August 20, 2024, in relation to Trust. The RPT Policy is adopted to regulate the transactions of the Trust with its related parties based on the laws and regulations applicable to the Trust and best practices with the objective to ensure proper approval, supervision and reporting of the transactions between the Trust and its related parties. For details of the RPT Policy, please see "***Related Party Transactions – Procedure for dealing with Related Party Transactions***" on page 214.

Policy on Unpublished Price-Sensitive Information ("UPSI Policy")

The IM Board has adopted the UPSI Policy and code of internal procedures and conduct for regulating, monitoring and reporting of trade by designated persons, pursuant to a resolution dated August 20, 2024 which provides a framework for ensuring compliance with applicable law, including the SEBI InvIT Regulations and SEBI PIT Regulations prohibiting insider trading and governing disclosure of material, unpublished price sensitive information.

Policy for Determining Materiality of Information for Periodic Disclosures ("Materiality Policy")

The IM Board has also adopted the policy for determining materiality of information for periodic disclosures pursuant to a resolution dated August 20, 2024, which aims to outline process and procedures for determining materiality of information in relation to periodic disclosures required to be made on the website of the Trust, to the stock exchanges and to all stakeholders at large, in relation to the Trust.

Further, in terms of the SEBI Listing Regulations, the IM Board has also adopted the following policies, as amended pursuant to a resolution dated August 20, 2024:

(a) Policy on diversity of the board of directors;

(b) Policy for familiarization programme for independent directors;

(c) Risk management policy;

(d) Vigil mechanism/whistle blower policy;

(e) Policy on succession planning for the board of directors and senior management;

(f) Code of conduct for the board of directors and the senior management; and

(g) Policy for evaluation of performance of the board of directors.

(h) Policy on Anti-Bribery and Anti-Corruption; and

(i) Policy on Corporate Social Responsibility.

Pursuant to the change in name of the Trust, the Board took note in its meeting dated December 5, 2024, that the policies for corporate governance adopted for the erstwhile entity shall apply *mutatis mutandis* to the Trust.

Representatives on the board of directors of each Project SPV

The Investment Manager in consultation with the Trustee, shall appoint majority of the board of directors of the Project SPVs, in accordance with the SEBI InvIT Regulations.

REGULATIONS AND POLICIES IN INDIA

The following description is a summary of certain key statutes, bills, regulations, notifications, memorandums, circulars and policies which are applicable to the Trust and the business undertaken by the Trust. The information detailed in this chapter is based on the current provisions of key statutes, bills, regulations, notifications, memorandums, circulars and policies which are subject to amendments, changes and / or modifications. Such information has been obtained from sources available in the public domain. The regulations set out below are indicative and may not be exhaustive. They are only intended to provide general information to the investors and are neither designed nor intended to substitute for professional legal advice.

*For details of government approvals obtained by the Trust, see "**Regulatory Approvals**" on page 347.*

Highways-related laws

National Highways Act, 1956

The policy of the MoRTH, in implementing the National Highways Act, 1956 (the "**NH Act**") is to vest the MoRTH with the power to declare a national highway and for acquisition of land for this purpose. The GoI, by notification, can declare the intention to acquire any land for a 'public purpose' as envisaged by the law and such land can be used for building, maintenance, management and operation of the declared national highways throughout the country. The NH Act prescribes the procedure for such land acquisition. The procedure includes, inter alia, a declaration of an intention to acquire, entering and surveying 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 or ownership in the land has been affected. The NH Act vests MoRTH with the power to appoint a competent authority for the effective implementation of the NH Act and its policies. The said appointed authority retains the right and power to (a) survey, make any inspection, valuation or enquiry; (b) take levels; (c) dig or bore into sub-soil; (d) set out boundaries and intended lines of work; (e) mark such levels, boundaries and lines placing marks and cutting trenches; or (f) do such other acts or things as may be laid down by rules made in this behalf by that government.

All the notified national highways shall vest in the name of the Union of India and for the purposes, shall include all lands appurtenant thereto and all the bridges, culverts, tunnels and other enlisted constructions under the said NH Act. The Central Government shall assume the responsibility of maintaining and construction of national highways in proper condition in accordance with the law. The Central Government also retains the right to levy fee over the services and benefits rendered in relation to the use of such national highways.

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.

The National Highways (Amendment) Act, 2017, entails the competent authority to issue reports to the Central Government in respect of any land (either acquired or proposed to be acquired) which is, either under incorrect revenue record or which is not required due to change in geometry or alignment of the construction, to issue order for the denotification of such land from the acquisition for development and maintenance of the national highway. In pursuance of the foregoing amendment to the statute, the National Highways Rules, 1957, have been amended to ensure the exercise of the power under the NH Act. These rules provide for periodic regulatory compliance and reporting standards to be followed by the competent authority in reporting to the Central Government.

National Highways Authority of India Act, 1988

The National Highways Authority of India Act, 1988, as amended (the "**NHAI Act**") was enacted in pursuance of the powers of the Central Government for appointing a competent authority under the NH Act and provides for the constitution of an authority for the development, maintenance and management of national highways and for matters connected therewith or incidental thereto. In accordance with the NHAI Act, the GoI carries out development and maintenance of the national highways 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.

NHAI's objective is to ensure that all contract awards and procurements conform to the best industry practices with regard to transparency of process, adoption of bid criteria to ensure healthy competition in award of contracts. In accordance with the

NHAI Act, the NHAI shall consist of a full time chairman, not more than 6 full time members and not more than 6 part time members who are being appointed by the Central Government. Additionally, various project implementation units headed by project director have been set at various sites to oversee timely completion of the projects.

In view of the challenging task of construction, development, and management of national highways being undertaken by NHAI, the Committee on Public Undertakings selected the subject "National Highways Authority of India (NHAI)" for comprehensive examination and report. The National Highways Authority of India (Amendment) Act, 2013, received the assent of the President of India on September 10, 2013, and aimed at increasing the institutional capacity of NHAI to help execute the powers delegated to it. National Highways Development Project ("**NHDP**") was launched in 1998 with the objective of developing roads of international standards which facilitate smooth flow of traffic. The NHDP envisages creation of roads with enhanced safety features, better riding surface, grade separator and other salient features.

As per the NHAI Works Manual, 2006, NHAI's mandate is the time and cost bound implementation of the NHDP. The sources of finance available to the NHAI include fund assistance from external funding agencies like the International Bank of Reconstruction and Development and the Asian Development Bank. 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 and Infrastructure 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 International Bank of Reconstruction and Development, 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 issued model concession agreements ("**MCAs**") which have been formulated by the Planning Commission of India or NITI Aayog and other departments of Central Government where a private entity, being the concessionaire, is, through an international competitive bidding ("**ICB**") process, awarded a concession (in form of a bundle of licenses) to build, own, operate and collect toll on a road for a specified period of time. The concession to develop highway projects is given by the NHAI or other governmental authorities under various models of PPP like:

(i) Build, Operate, Transfer (BOT)/ Design, Build, Finance, Operate and Transfer (DBFOT) – In this model, the entire designing, financing and construction is undertaken by the concessionaire at its own cost. The concessionaire is entitled to collect toll or receive annuity payments from the NHAI, as the case may be, during the concession period after the construction of the highway project. The bid for the project may either be selected basis the lowest grant wanted by the private developer from the NHAI or the highest premium the private developer is willing to pay to NHAI, in the form of additional concession fee. The concessionaire at the end of the concession period transfers the highway project to the NHAI (free of charge and clear of all encumbrances). The concessionaire's investment in the highway project is recovered directly through user fees collected by way of tolls. Under the BOT model, the projects which are generally not viable based on toll revenue alone, the NHAI or the relevant governmental authority provides concessionaire with a capital grant up to certain percentage of the project cost to increase the viability of projects and the quantum of such grant is determined on a case to case basis. For certain projects with high traffic volumes, concessionaire also offers a negative grant (i.e., premium) to the NHAI.

(ii) Hybrid Annuity Mode (HAM) – In this model, the NHAI or the relevant governmental authority invests forty percent of the construction cost of the project in five equal instalments and the balance amount is infused by the private developer. The private developer recovers his investment in the form of annuity payments received by it over a period of fifteen years. Additionally, there is no revenue risk for the private developer under HAM model because the toll is collected by the NHAI or relevant governmental authorities unlike the BOT model where the private developer collects it.

(iii) Toll, Operate and Transfer (TOT) – In this model, the road projects which are in operational phase are awarded by the NHAI or relevant governmental authorities to the concessionaire. The NHAI passes on the toll collection rights and operation and maintenance obligations to the concessionaire against payment of upfront concession fees quoted by the concessionaire as a part of the bidding process.

The bidding for the projects takes place in two stages as per the process provided below:

1. in the pre-qualification (Request for Quotations or the "RFQ") stage, the NHAI selects certain applicants on the basis of technical and financial expertise, prior experience in implementing similar projects and previous track record; and

2. in the bidding (Request for Proposal or the "RFP") stage, the NHAI invites financial bids from the pre-qualified applicants at the RFQ-stage on the basis of which the concession is awarded to the successful bidder by the NHAI for implementation of the project.

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 sources of finance available to the NHAI also include fund assistance from external funding agencies like the International Bank of Reconstruction and Development and the Asian Development Bank. NHAI's role encompasses involving the private sector in provision, maintenance, and operation of the national highways.

In accordance with the MCAs 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 MoRTH in 2009, in order to increase the viability of projects, a capital grant of up to forty percent 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 MCAs 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. In pursuance thereto, NHAI, *vide* Circular No. NHAI/1103/CGM(FA)/4/2015 dated June 9, 2015 permitted divestment of 100% equity by concessionaires/developers after two years of completion of construction to facilitate unlocking of funds for new infrastructure projects. The equity divested is required to be invested by promoters in 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 line with the spirit of quoted circular, the NHAI issued another circular dated September 9, 2015 followed by the circular dated November 19, 2015, on the same subject, allowing the promoter to use the proceeds from the sale of divested equity of the concessionaire in one or more of the following:

(i). to reinvest in incomplete NHAI projects;

(ii). to reinvest any other highway projects;

(iii). any other power sector projects; or

(iv). to retire their debt to financial institutions in any other infrastructure projects.

Relaxation in the 'change in ownership' clause in HAM projects

The MoRTH, *vide* circular dated November 10, 2020 and November 27, 2020, read along with the NHAI circular dated December 31, 2020, amended the MCAs in respect of project implemented under the HAM model, and permitted the selected bidder/consortium members, for the new as well as subsisting national highways project under the HAM-model, to dilute their equity six months after COD is achieved for the respective project.

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 Scheme

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 network, 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.

Applicable Rules

As per the NH Act and the NHAI Act, the Central Government is empowered to make rules in order to further the objects of NH Act and NHAI Act. In exercise of such power, the Central Government has framed certain rules which are, amongst others, as follows:

- The National Highways Rules, 1957, as amended;
- National Highways Authority of India (Budget, Accounts Audit, Investment of Funds and Powers to enter Premises) Rules, 1990, as amended;
- The National Highways (Manner of Depositing the Amount by the Central Government with Competent Authority for Acquisition of Land) Rules, 1998;
- The National Highways Tribunal (Procedure for Appointment as Presiding Officer of the Tribunal) Rules, 2003, as amended;
- The National Highways Tribunal (Procedure) Rules 2003;
- National Highways Authority of India (The Term of Office and Other Conditions of Service of Members) Rules, 2003, as amended;
- The Central Road Fund (State Roads) Rules, 2007;
- The National Highways Tribunal (Financial and Administrative Powers) Rules, 2004;
- The National Highways Tribunal (Procedure for Investigation of Misbehaviour or Incapacity of Presiding Officer) Rules, 2003;
- The National Highways Fee (Determination of Rates and Collection) Rules, 2008, as amended;

- The Highways Administration Rules, 2004;
- The National Highways (Collection of Fees by any person for the use of Section of National Highways/Permanent Bridges/Temporary bridge on National Highways) Rules, 1997
- The National Highways (Fee for the use of National Highways and Permanent Bridge public Funded Project) Rules, 1997;
- The National Highways (Rate of Fee) Rules, 1997;
- Construction Workers (Regulation of Employment and Conditions of Services) Act, 1996 and Central Rule, 1998;
- C.E.A. (Measures Relating to Safety and Electric Supply) Regulations, 2010;
- Central Electronical Authority (Measures Relating to Safety and Electric Supply) Regulations, 2020; and
- Indian Electricity Rules, 1956

Environmental Compliances and Regulations

Infrastructure projects must also ensure compliance with environmental legislations 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, as amended ("**Environment Act**", together with the Water Pollution Act and the Air Pollution Act, the "**Environment Protection Acts**"). The Water Pollution Act aims to prevent and control water pollution. This legislation provides for the constitution of a central pollution control board ("**Central Pollution Control Board**" or "**CPCB**") at the Central level and state pollution control boards ("**State Pollution Control Boards**" or "**SPCBs**", together with the Central Pollution Control Board, the "**PCBs**") at the State levels. The functions of the CPCB includes, among other things, coordination of activities of the SPCBs, 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 SPCBs are responsible for, among other things, 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. These authorities issue consent to establish and consent to operate which are to be required to be renewed periodically. These authorities also have the power of search, seizure and investigation if the authorities are aware of or suspect violation of such regulations. 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 SPCBs.

In context of the environmental compliances and regulations, the National Green Tribunal Act, 2010 (the "**NGT Act**") is an important legislation which provides for the establishment of a National Green Tribunal ("**NGT**") for the effective and expeditious disposal of cases relating to environmental protection and conservation of forests and other natural resources including enforcement of any legal right relating to environment and giving relief and compensation for damages to persons and property and for matters connected therewith or incidental thereto.

In accordance with the Forest (Conservation) Act, 1980, state governments are not permitted to make any order de-reserving any reserved forest or directing the use of forest land for a non-forest purpose, or assignment of any forest land through lease or otherwise to any private person or corporation without the approval of the GoI. The Ministry of Environment, Forest and Climate Change ("**MoEF**") mandates the Environment Impact Assessment ("**EIA**") must be conducted for specified projects. In the process, the MoEF receives proposals or 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**") as amended and amended from time to time, under the provisions of the Environment Protection Act, prescribes that new construction of specified projects require prior environmental clearance from the MoEF. The environment clearance must be obtained from 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.

Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016

The Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016, as amended, impose an obligation and duty on the owners and operators of any facility or industry with a capability to create hazardous materials to safely dispose of such material in transport and other means of collecting and storing. Each occupier and operator of any facility generating hazardous waste is required to obtain an approval from the relevant state pollution control board for collecting, storing and treating the hazardous waste.

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 1% of a project's total cost for planting of trees and shrubs along 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.

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 GoI 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.

Labour Laws and Other Regulations

The laws and regulations to employment that may be applicable to the Trust, the Investment Manager, the Sponsors, and the Project SPVs include the following:

- Factories Act, 1948;
- Contract Labour (Regulation and Abolition) Act, 1970;
- Payment of Bonus Act, 1965;
- Employees' State Insurance Act, 1948;
- Employees' Provident Funds and Miscellaneous Provisions Act, 1952;
- Payment of Gratuity Act, 1972;
- Shops and Commercial Establishments Acts, where applicable;
- Minimum Wages Act, 1948;
- Industrial Disputes Act, 1947;
- Employees' Compensation Act, 1923;
- Sexual Harassment of Women at Workplace (Prevention, Prohibition and Redressal) Act, 2013;
- Child Labour (Prohibition and Regulation) Act, 1986; and
- Maternity Benefit Act, 1961.

The Occupational Safety, Health and Working Conditions Code, 2020 (enacted by the Parliament of India and assented to by the President of India on September 28, 2020) will come into force on such date as may be notified in the official gazette by the Central Government and different dates may be appointed for different provisions of the Occupational Safety, Health and Working Conditions Code, 2020. Once effective, it will subsume, amongst others, the Factories Act, 1948 and the Contract Labour (Regulation and Abolition) Act, 1970.

The Code on Social Security, 2020 (enacted by the Parliament of India and assented to by the President of India on September 28, 2020) has been notified to the extent of Section 142 of the Code on Social Security, 2020 and will come into force in its entirety on such date as may be notified in the official gazette by the Central Government. Different dates may be appointed for different provisions of the Code on Social Security, 2020. Once effective, it will subsume, amongst others, the Employees'

Compensation Act, 1923, the Employees' State Insurance Act, 1948, the Employee's Provident Fund and Miscellaneous Provisions Act, 1952, the Maternity Benefit Act, 1961 and the Payment of Gratuity Act, 1972.

The Code on Wages, 2019 (enacted by the parliament of India and assented to by the President of India on August 8, 2019) was notified in the official gazette by the Central Government on September 18, 2020 to the extent of the rules governing the constitution and functions of the central advisory board under the Code on Wages. Once notified and effective in its entirety, 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. Further, multiple states have been issuing draft rules in relation to the same.

In addition to the above, various state shops and commercial establishments acts are also applicable to the Initial Portfolio Assets.

Other applicable law

The Motor Vehicles Act, 1988

The development, maintenance and management as well as control of the National Highways are regulated by the NH Act and the NHAI Act. Under the Motor Vehicles Act, 1988, some powers have been delegated to the Transport Department of the State Governments.

Section 138 of the Motor Vehicles Act, 1988 further empowers the State Governments to make rules for the control of traffic, including for the purpose of the removal and the safe custody of vehicles including their loads which have broken down or which have been left standing or have been abandoned on roads; the installation and use of weighing devices; the maintenance and management of wayside amenities complexes; the exemption from all or any of the provisions of relating to fire brigade vehicles, ambulances and other special classes or descriptions of vehicle, subject to such conditions as may be prescribed; the maintenance and management of parking places and stands and the fee, if any, which may be charged for their use; prohibiting the taking hold of or mounting of a motor vehicle in motion; prohibiting the use of foot-paths or pavements by motor vehicles, generally, the prevention of danger, injury or annoyance to the public or any person, or of danger or injury to property or of obstruction to traffic.

Motor Vehicles (Amendment) Act, 2019

The Motor Vehicles (Amendment) Act, 2019, is targeted towards bringing changes in the transport sector to encourage safer driving practices among Indian motor vehicle drivers. It proposes to create a National Road Safety Board, which has been notified by the MoRTH in September 2021. The National Road Safety Board shall be responsible for promoting road safety, innovation and adoption of new technology and for regulating traffic and motor vehicles.

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.

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 Central Government has established Highway Administrations. Under the Control of NH Act, all land that forms part of a highway which vests in the Central Government, or that which does not already vest in the Central Government but has been acquired for the purpose of highways shall be deemed to be the property of the Central Government. The Control of NH Act prohibits any person from occupying any highway land or discharging any material through 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.

Indian Tolls Act, 1851

In accordance with the Indian Tolls Act, 1851 (the "**Tolls Act**"), the 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 Central 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 any person the State governments' deem fit. Such persons are enjoined 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.

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 fee for the use of national highways. In accordance with the NH Fee Rules, the GoI may, by a notification, levy 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 fee 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 for the base rate of fee 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 "NH Rules")

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.

National Monetisation Pipeline (NMP)

NITI Aayog has developed the pipeline, in consultation with infrastructure line ministries, based on the mandate for 'Asset Monetisation' for roads and highways, amongst others, under Union Budget 2021-22. The framework for monetisation of core asset monetisation has three key imperatives: (i) monetization of 'rights' not 'ownership' i.e. assets will be handed back to the government at the end of transaction life; (ii) brownfield de-risked assets and stable revenue streams; and (iii) structured partnerships under defined contractual frameworks with strict performance standards. This shall include selection of de-risked and brownfield assets with stable revenue generation profile with the overall transaction structured around revenue rights. The primary ownership of the assets under these structures shall be with the government.

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.

Foreign Investment Regulations

Foreign investment in Indian securities is governed by the provisions of the FEMA, as amended, 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 SEBI InvIT Regulations, being an 'investment vehicle', is permitted to receive foreign investment from a person resident outside India (subject to Press Note 3 (2020 series)), including an FPI or an NRI subject to the terms and conditions specified in the FEMA Rules.

Downstream investment by an infrastructure investment trust shall be regarded as indirect foreign investment if neither the sponsor nor the investment manager of such an infrastructure investment trust is Indian 'owned and controlled' as defined in FEMA Rules.

Downstream investment by an 'investment vehicle' shall have 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 by an inward remittance from abroad through banking channels or by way of swap of shares of an SPV, or out of funds held in a Non-resident External ("**NRE**") or Foreign Currency Non-resident Bank ("**FCNR(B)**") account maintained in accordance with the Foreign Exchange Management (Deposit) Regulations, 2016.

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 favour of a bank in India to secure the credit facilities being extended to the Indian company for bona fide purposes; (ii) in favour 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 favour 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.

In addition to the above, compliance with the provisions of various tax-related legislations, intellectual-property related legislations and other applicable law for our day-to-day operations is also required.

RELATED PARTY TRANSACTIONS

In terms of Regulation 2(1)(zv) of the SEBI InvIT Regulations, related party shall be as defined as under the Companies Act, 2013 or under the applicable accounting standards and shall also include: (i) Parties to the Trust; and (ii) promoters, directors and partners of the Parties to the Trust. Further, related parties also include such persons and entities as defined in terms of the applicable accounting standards, being Ind AS 24 on "*Related Party Disclosures*" in relation to related party transactions (collectively, "**Related Parties**"). For further details in relation to the related party transactions for the six months period ended September 30, 2024 and the Financial Years ended March 31, 2024, 2023 and 2022 as per Ind AS 24 read with the SEBI InvIT Regulations, see "***Special Purpose Combined Financial Statements***" on page 227. The Parties to the Trust, may, from time to time, enter into related party transactions, in accordance with applicable law.

Procedure for dealing with Related Party Transactions

The IM Board has adopted the RPT Policy pursuant to its resolution dated August 20, 2024. Further, pursuant to the change in name of the Trust, the Board took note in its meeting dated December 5, 2024, that the policies for corporate governance adopted for the erstwhile entity shall apply *mutatis mutandis* to the Trust.

The key terms of the RPT Policy are provided below:

(i) The Investment Manager will ensure that all future related party transactions shall be:

  (a) on an arm's length basis;

  (b) in accordance with the relevant accounting standards;

  (c) in the best interest of the Unitholders;

  (d) consistent with the strategy and investment objectives of the Trust; and

  (e) compliant with applicable law.

(ii) Review and approval of related party transactions:

  (a) Each transaction which is identified as a related party transactions shall be pre-approved by the Audit Committee prior to entering into such transaction; and

  (b) The Audit Committee shall grant omnibus approval for Related Party Transactions. Each such omnibus approval shall be valid for a period not exceeding one year from the date of such approval, and related party transactions undertaken after the expiry of such period shall require fresh approval of the Audit Committee.

  (c) The Audit Committee shall review, on a quarterly basis, the details of related party transactions entered into by the Trust pursuant to the omnibus approval.

(iii) The Investment Manager will establish an internal control system so as to ensure that all future related party transactions are compliant with the SEBI InvIT Regulations and applicable accounting standards. Further, the Investment Manager shall convene meetings of the Unitholders in accordance with Regulation 22 of the SEBI InvIT Regulations and maintain records pertaining to such meetings in the manner prescribed. The Investment Manager shall also ensure compliance with any additional guidelines issued in this regard by SEBI and other relevant regulatory, statutory or governmental authorities from time to time.

(iv) In addition to any other requirement that may be prescribed in terms of the SEBI InvIT Regulations or other applicable laws, all related party transactions to be entered into in the future will be decided by the IM Board after the examination of the nature of the transaction and its supporting documents, as available, or such other data as may be deemed necessary by the IM Board.

(v) The Investment Manager will ensure that if the (i) value of funds borrowed from Related Parties in a financial year exceeds 5% of the total consolidated borrowings of the Trust, any holding company and the Project SPVs, or any other threshold prescribed by the SEBI InvIT Regulations, or (ii) total value of all the related party transactions in a financial year pertaining to acquisition or sale of assets, whether directly or through a holding company or the Project SPV, or investments into securities, exceeds 5% of the value of the assets of the Trust or any other threshold prescribed by the SEBI InvIT Regulations, approval from the Unitholders shall be obtained prior to entering into any such subsequent transaction with any Related Party, in accordance with Regulation 22 of the SEBI InvIT Regulations.

(vi) As a general rule, the Investment Manager must demonstrate to the IM Board that future related party transactions satisfy the criteria set out in the RPT Policy at the time of recommending the same for the approval of the IM Board.

(vii) The Investment Manager will maintain a register to record all related party transactions entered into by the Trust and the basis on which they are entered into.

(viii) The review of related party transactions by the IM Board will include the examination of the nature of the transaction and its supporting documents or such other data as may be deemed necessary by the IM Board.

(ix) The Investment Manager shall ensure that all the incomes and expenses from related party transactions have arisen from legitimate business transactions.

(x) While considering a related party transaction, any director on the IM Board who has a potential interest in any related party transaction will recuse himself or herself and abstain from discussion, review and voting on the related party transaction.

Potential Conflict of Interest

(i) Subject to applicable law and the RPT Policy, all resolutions in writing of the IM Board in relation to matters concerning related party transactions of the Trust must be approved by a majority of the Directors.

(ii) Where matters concerning the Trust relate to transactions entered into or to be entered into by the Investment Manager for and on behalf of Trust with a Related Party, the IM Board is required to consider the terms of the transactions to satisfy itself that the transactions are conducted in accordance with the parameters set out in the RPT Policy.

Disclosure and Reporting

Related Party Transactions shall be disclosed to the Stock Exchanges and the Unitholders periodically, in accordance with the SEBI InvIT Regulations and the agreements to be entered into with the Stock Exchanges in relation to the listing of the Units.

Notwithstanding the above, the RPT Policy will stand amended to the extent of any change in the applicable law, including any amendment to the SEBI InvIT Regulations, without any action from the Investment Manager or approval of the Unitholders of the Trust.

Present and On-going Related Party Transactions

Related Party Transactions of the Trust in relation to the setting up of the Trust and this Offer

A number of present and on-going transactions with certain Related Parties have been, or will be, entered into in relation to the setting up of the Trust. The Trustee and the Investment Manager confirm that the following related party transactions have been, or shall be, entered into by the Trust, on an arm's length basis in accordance with the relevant accounting standards, in the best interest of the Unitholders, consistent with the strategy and investment conditions of the Trust:

(i) ***Trust Deed***

For details, see "***Parties to the Trust – Key terms of the Trust Deed***" on page 116.

(ii) ***Investment Management Agreement***

For details, see "***Parties to the Trust – Key terms of the Investment Management Agreement***" on page 130.

(iii) ***Project Management Agreement***

For details, see "***Parties to the Trust – Key terms of the Project Management Agreement***" on page 141.

(iv) ***Trust Loans and On-Lending Agreement***

For details, see "***Use of Proceeds – Details of utilization of the proceeds***" on page 81.

(v) ***Share Purchase Agreements***

For details of the Share Purchase Agreements proposed entered between the Sponsor, Trustee, Investment Manager and Project SPVs, see "***Formation Transactions in relation to the Trust−Acquisition of the Project SPVs by the Trust***" on page 109.

(vi) ***Lease agreement between the Sponsor and the Investment Manager***

The Investment Manager has entered into a lease agreement dated June 1, 2024 to May 31, 2033, for a term of nine years with the Sponsor in relation to its corporate office. The Investment Manager shall pay a monthly rent of ₹ 450,000

every month excluding applicable taxes and ancillary expenses like maintenance, electricity and water charges, which is paid back to back by the Investment Manager to the Sponsor with an escalation of 15% in every three years.

For details of risks involved with respect to such related party transactions, see "***Risk Factors – The Trust and the Project SPVs have entered into certain related party transactions and expect to continue to enter into related party transactions and there can be no assurance that such transactions will not have an adverse effect on our results of operations, cash flows and financial condition.***" on page 30.

Potential Conflicts of Interest

The Investment Manager has established certain procedures to deal with conflict-of-interest issues. For further details on management of potential conflicts of interest, see "– ***Procedure for dealing with Related Party Transactions***" on page 214.

Future Related Party Transactions

Certain transactions may be entered with Related Parties in the future and the Trustee and the Investment Manager confirm that such related party transactions shall be entered into in compliance with the SEBI InvIT Regulations and the RPT Policy.

ROFO Agreement

For details, see "***Formation Transactions in relation to the Trust−Acquisition of future assets by the Trust***" on page 112.

Declaration by the Sponsor in relation to related party transactions

Other than as stated below, the Sponsor does not have any ownership interest in business which competes or is likely to compete, either directly or indirectly with the activities of the Trust:

The Sponsor is authorized by its memorandum of association to, among other things, (i) to purchase, acquire, erect, construct, build, demolish, re-erect, alter, repair, furnish and maintain buildings, houses, farm houses, residential fiats, commercial complexes, colonies, markets, shops, factories, mills, godowns and building for hotels, houses; restaurants and cinema houses, roads, bridges, dams, canals etc. and currently offers/carries out testing services in the field of transportation engineering and has expertise in NSV survey, FWD survey, pavement design of roads and airports, physical and chemical testing of soil, lime, cement, road roughness testing, concrete and bituminous mix design of road projects. For further details on the Sponsor, see "***Parties to the Trust – The Sponsor***" on page 114. Further, the Sponsor holds 100% of the issued, subscribed and paid-up capital of Investment Manager, which is a road engineering, procurement, and construction company, with experience in design and construction of various road/highway projects.

The Sponsor has declared that it shall perform its duties in relation to the Trust independent of the related business as stated above. Further, as on the date of this Offer Document, , except as disclosed in this Offer Document, there are no assets of the Sponsor which are proposed to be acquired by the Trust.

DISTRIBUTIONS

*Statements contained in this section that are not historical facts are forward-looking statements. Such statements are subject to certain risks and uncertainties that could cause actual results to differ materially from those that may be projected. Under no circumstances should the inclusion of such information herein be regarded as a representation, warranty or prediction with respect to the accuracy of the underlying assumptions by the Trust, Parties to the Trust, the Sponsor Selling Unitholder, Lead Managers or any other person. Bidders are cautioned not to place undue reliance on these forward-looking statements that are stated only as at the date of this Offer Document. For details in relation to such forward-looking statements, see "**Forward Looking Statements and Financial Projections**" on page 15.*

The net distributable cash flows of the Trust (the "**Distributable Income**") are based on the cash flows generated by it from the underlying operations undertaken by the Project SPVs. For details of the business and operations presently undertaken by the Project SPVs, see "***Business***" on page 150.

Distribution may be made from the monies received by the Trust, in accordance with the provisions of the Trust documents and applicable law.

In terms of the SEBI InvIT Regulations, the Project SPVs shall distribute not less than 90% of the net distributable cash flows to the Trust, proportionate to the Trust's holding in the Project SPVs, subject to applicable provisions of the Companies Act, 2013, as amended.

The Trust shall declare and distribute at least 90% of the Distributable Income to the Unitholders. Such distribution shall be declared and made not less than once every six months in every financial year. In accordance with the SEBI InvIT Regulations, distributions by the Trust shall be made no later than 15 days from the date of such declarations.

All distributions to the Unitholders shall be made in compliance with the SEBI InvIT Regulations, IT Act and other applicable laws.

Distribution Policy

The Distribution Policy aims to outline the process and procedure for distribution in relation to the Trust.

Method of calculation of Distributable Income

The Distributable Income of the Trust shall be calculated in accordance with the SEBI InvIT Regulations, any circular, notification or guidance issued thereunder and the Trust Documents. The Trust proposes to calculate the Distributable Income in the manner provided below:

Computation of net distributable cash flows ("NDCF") at Project SPV level:

Particulars
Cash flow from operating activities as per cash flow statement of Project SPV
(+) Cash flows received from Project SPV's which represent distributions of NDCF computed as per relevant framework
(+) Treasury income / income from investing activities (interest income received from FD, tax refund, any other income in the nature of interest, profit on sale of mutual funds, investments, assets etc., dividend income etc., excluding any Ind AS adjustments. Further, it is clarified that these amounts will be considered on a cash receipt basis)
(+) Proceeds from sale of infrastructure investments, infrastructure assets or shares of Project SPVs or investment entity adjusted for the following: • Applicable capital gains and other taxes; • Related debts settled or due to be settled from sale proceeds; • Directly attributable transaction costs; • Proceeds reinvested or planned to be reinvested as per Regulation 18(7) of the SEBI InvIT Regulations or any other relevant provisions of the SEBI InvIT Regulations.
(+) Proceeds from sale of infrastructure investments, infrastructure assets or sale of shares of SPVs or investment entity not distributed pursuant to an earlier plan to reinvest as per Regulation 18(7) of the SEBI InvIT Regulations or any other relevant provisions of the SEBI InvIT Regulations, if such proceeds are not intended to be invested subsequently
(-) Finance cost on borrowings, excluding amortization of any transaction costs as per profit and loss account and any shareholder debt / loan from Trust
(-) Debt repayment (to include principal repayments as per scheduled EMIs except if refinanced through new debt including overdraft facilities and to exclude any debt repayments / debt refinanced through new debt, in any form or equity raise as well as repayment of any shareholder debt / loan from Trust)
(-) any reserve required to be created under the terms of, or pursuant to the obligations arising in accordance with, any: (i) loan agreement entered with banks / financial institution from whom the Trust or any of its Project SPVs have availed debt, or (ii) terms and conditions, covenants or any other stipulations applicable to debt securities issued by the Trust or any of its Project SPVs; or

Particulars
(iii) terms and conditions, covenants or any other stipulations applicable to external commercial borrowings availed by the Trust or any of its Project SPVs;
(iv) agreement pursuant to which the Project SPV operates or owns the infrastructure asset, or generates revenue or cashflows from such asset (such as, concession agreement, transmission services agreement, power purchase agreement, lease agreement, and any other agreement of a like nature, by whatever name called); or
(v) statutory, judicial, regulatory, or governmental stipulations (r*efer to note 2 below*)
(-) any capital expenditure on existing assets owned / leased by the Project SPV to the extent not funded by debt / equity or from reserves created in the earlier years (*refer to note 10 below*)
NDCF for Project SPVs

Computation of net distributable cash flow ("NDCF") at Trust level:

Particulars
Cashflows from operating activities of the Trust
(+) Cash flows received from Project SPV's / investment entities which represent distributions of NDCF computed as per relevant framework **(***refer to note 1 and 9 below***)**
(+) Treasury income / income from investing activities of the Trust (interest income received from FD, any investment entities as defined in Regulation 18(5) of the SEBI InvIT Regulations, tax refund, any other income in the nature of interest, profit on sale of mutual funds, investments, assets etc., dividend income etc., excluding any Ind AS adjustments. Further, it is clarified that these amounts will be considered on a cash receipt basis)
(+) Proceeds from sale of infrastructure investments, infrastructure assets or shares of Project SPVs or investment entity adjusted for the following • Applicable capital gains and other taxes • Related debts settled or due to be settled from sale proceeds • Directly attributable transaction costs • Proceeds reinvested or planned to be reinvested as per Regulation 18(7) of the SEBI InvIT Regulations or any other relevant provisions of the SEBI InvIT Regulations
(+) Proceeds from sale of infrastructure investments, infrastructure assets or sale of shares of Project SPVs or investment entity not distributed pursuant to an earlier plan to re-invest as per Regulation 18(7) of the SEBI InvIT Regulations or any other relevant provisions of the SEBI InvIT Regulations, if such proceeds are not intended to be invested subsequently
(-) Finance cost on borrowings, excluding amortisation of any transaction costs as per profit and loss account of the Trust
(-) Debt repayment at Trust level (to include principal repayments as per scheduled EMI's except if refinanced through new debt including overdraft facilities and to exclude any debt repayments / debt refinanced through new debt in any form or funds raised through issuance of units)
(-) any reserve required to be created under the terms of, or pursuant to the obligations arising in accordance with, any: (i) loan agreement entered with financial institution; or (ii) terms and conditions, covenants or any other stipulations applicable to debt securities issued by the Trust or any of its Project SPVs; or (iii) terms and conditions, covenants or any other stipulations applicable to external commercial borrowings availed by the Trust or any of its Project SPVs; or (iv) agreement pursuant to which the Trust operates or owns the infrastructure asset, or generates revenue or cashflows from such asset (such as, concession agreement, transmission services agreement, power purchase agreement, lease agreement, and any other agreement of a like nature, by whatever name called); or (v) statutory, judicial, regulatory, or governmental stipulations (*refer to note 2 below*)
(-) any capital expenditure on existing assets owned / leased by the Trust, to the extent not funded by debt / equity or from contractual reserves created in the earlier years (*refer to note 10 below*)
NDCF at Trust level

Notes:

1. *NDCF computed at Project SPV level for a particular period to be added under this line item, even if the actual cashflows from Project SPV to Trust has taken place post that particular period, but before finalization and adoption of accounts of the Trust.*
2. *The specified agreements could be for either PPP or non- PPP projects. The Trust retains the option to distribute any surplus amounts, unless such surplus is required to create reserves for any subsequent period.*
3. *The option to retain 10% distribution under Regulation 18(6) of the SEBI InvIT Regulations needs to be computed by taking together the retention done at the Project SPV level and the Trust level.*
4. *Further, Trust along with its Project SPVs needs to ensure that minimum 90% distribution of NDCF be met for a given financial year on a cumulative periodic basis as specified for mandatory distributions in the SEBI InvIT Regulations (subject to provisions of note 1 above).*
5. *Surplus cash available in Project SPVs due to:*
   (i) *10% of NDCF withheld in line with the SEBI InvIT Regulations in any earlier year or half year; or*
   (ii) *Such surplus being available in a new Project SPV on acquisition of such Project SPV by Trust.*
   (iii) *Any other reason, excluding if such surplus cash is available due to any debt raise could be considered for distribution by the Project SPV to the Trust, or by the Trust to its Unitholders in part or in full, but needs to be disclosed separately in the NDCF computation and distribution.*
6. *Similarly, any restricted cash (disclosed as such) should not be considered for NDCF computation by the Project SPV or Trust (e.g. unspent CSR balance for any year deposited in a separate account as per Companies Act, 2013 which will be utilized in subsequent years, DSRA reserve, major maintenance reserve etc.).*
7. *Further, it is expressly provided that no Trust or Project SPV can distribute any cashflows by obtaining external debt, except to the extent clarified in note 2 above (this will exclude any working capital / OD facilities obtained by Trust/ Project SPVs as part of treasury management / working capital purposes as long as they are squared off within the quarter).*
8. *Further, it is also clarified that proceeds from sale of infrastructure investments, infrastructure assets or shares of Project SPVs or investment entity adjusted for transaction costs or repayment of debt taken for such assets or other items as mentioned above which is intended to be reinvested or planned to be reinvested as per Regulation 18(7) of the SEBI InvIT Regulations, could be temporarily parked in overdraft accounts or used to repay any additional/ unrelated debt. Further if such proceeds are not intended to be reinvested as per the timeline provided in the SEBI InvIT Regulations and such net*

proceeds are to be distributed back to Unitholders, then redrawing such temporarily parked funds to distribute such net proceeds will not be considered as a contravention of note 7 above.

9. *Cash flows received from Project SPVs / investment entities which represent distributions of NDCF computed as per relevant framework at the Trust level for further distribution to Unitholders shall exclude any such cash flows used by the Trust for onward lending to any other Project SPVs / investment entities to meet operational / interest expenses or debt servicing of such other Project SPVs / investment entities.*
10. *Capital expenditure include amounts incurred and paid towards asset enhancement and are capitalized to asset value in the financial statements including lease payments. It is further clarified that existing assets as referred to in this line item includes any new structure / building / other infrastructure constructed on an existing infrastructure asset which is already a part of the Trust.*

For the purposes of the IT Act, any income distributed by the Trust to the Unitholders 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 Trust. Accordingly, the Trust may follow either the receipt approach or the accrual approach subject to the provisions of the IT Act and applicable accounting standards, however, the same shall be followed since the beginning and on a consistent basis.

The Trustee shall subject to advice of the Investment Manager may make deduction of any taxes, cess, fees, charges, assessments and duties, as may be required to be deducted or withheld under the applicable law before making any payment of Distributable Income to any Unitholder.

In terms of the SEBI InvIT Regulations, if the distribution is not made within 15 days from the date of declaration, or within such amended timelines as prescribed from time to time, the Investment Manager shall be liable to pay interest to the Unitholders at the rate of 15% per annum or such other rate as may be specified under applicable law, until the distribution is made. Such interest shall not be recovered by the Investment Manager in the form of fee or any other form payable to the Investment Manager by the Trust. For risks in relation to distribution, see "***Risk Factors***" on page 21.

RIGHTS OF UNITHOLDERS

The rights and interests of Unitholders are included in this Offer Document and the SEBI InvIT Regulations. Under the Trust Deed 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 Offer Document would stand qualified by and deemed to be amended to the extent of any amendment to the SEBI InvIT Regulations.

Beneficial Interest

Each Unit represents an undivided beneficial interest in the Trust. A Unitholder has no equitable or proprietary interest in the Initial Portfolio Assets and is not entitled to transfer of the Initial Portfolio Assets (or any part thereof) or any interest in the Initial Portfolio Assets (or any part thereof). A Unitholder's right is limited to the right to receive Distributable Income in accordance with Distribution Policy and require due administration of the Trust in accordance with the provisions of the Trust Deed and the Investment Management Agreement.

Ranking

No Unitholder of the Trust shall enjoy superior voting or any other rights over another Unitholder. Further, there shall not be multiple classes of Units, except as permitted by applicable laws.

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. For details, see "***Corporate Governance***" on page 196.

Distribution

The Unitholders shall have the right to receive distribution in accordance with the SEBI InvIT Regulations and in the manner provided in this Offer Document. For details, see "***Distributions***" on page 217.

Meeting of Unitholders

Meetings of Unitholders including the frequency and manner in which such meetings shall be conducted will be in accordance with the SEBI InvIT Regulations.

Passing of resolutions

1. With respect to any matter requiring approval of the Unitholders:

    (i) a resolution shall be considered as passed when the votes cast by Unitholders, so entitled and voting, in favour of the resolution exceed a certain percentage as specified in the SEBI InvIT Regulations, of total votes cast;

    (ii) the voting may be done by postal ballot or electronic mode;

    (iii) a notice of not less than 21 days shall be provided to the Unitholders;

    (iv) voting by any Unitholder (including, the Sponsor in its capacity as a Unitholder), who is a related party in such transaction, as well as associates of such Unitholder(s) shall not be considered on the specific issue; and

    (v) the Investment Manager shall be responsible for all the activities pertaining to conducting of meeting of the Unitholder, subject to oversight by the Trustee. However, for issues pertaining to the Investment Manager, including a change in the Investment Manager, removal of Investment Manager or change in control of Investment Manager; the Trustee shall convene and handle all activities pertaining to conduct of the meetings. Additionally, for issues pertaining to the Trustee, including change in Trustee, the Trustee shall not be involved in any manner in the conduct of the meeting.

2. For the Trust:

    (i) an annual meeting of all Unitholders shall be held not less than once a year within 120 days from the end of each financial year and the time between two meetings shall not exceed 15 months;

    (ii) with respect to the annual meeting of Unitholders,

a) any information that is required to be disclosed to the Unitholders and any issue that, in the ordinary course of business, may require approval of the Unitholders may be taken up in the meeting including:

- latest annual accounts and performance of the Trust;
- approval of auditors and fee of such auditors, as may be required;
- latest valuation reports;
- appointment of valuer, as may be required; and
- any other issue; and

b) for any issue taken up in such meetings which require approval from the Unitholders, votes cast in favour of the resolution shall be more than 50% of the total votes cast for the resolution unless otherwise specified under the SEBI InvIT Regulations.

3. Notwithstanding the foregoing, in case of the following, approval from the Unitholders shall be required where the votes cast in favour of the resolution shall be more than 50% of the total votes cast for the resolution:

(i) 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 SEBI InvIT Regulations to the extent applicable;

(ii) any transaction, other than any borrowing, the value of which is equal to or greater than 25% of the InvIT Assets;

(iii) any borrowing in excess of specified limit as required under Regulation 20(3)(a) of the SEBI InvIT Regulations;

(iv) any issue of Units after the initial public offer by the Trust, in whatever form, other than any issue of Units which may be considered by SEBI, under Regulation 22(5) of the SEBI InvIT Regulations;

(v) increasing period for compliance with investment conditions to one year in accordance with Regulation 18(5)(c) of the SEBI InvIT Regulations;

(vi) any issue, in the ordinary course of business, which in the opinion of the Sponsor or Trustee or the Investment Manager, is material and requires approval of the Unitholders, if any; and

(vii) any issue for which SEBI or the designated stock exchanges requires approval.

4. In case of the following, approval from the Unitholders shall be required where the votes cast in favour of the resolution shall not be at least 60% of total votes case for the resolution:

(i) any change in the Investment Manager, including removal of the Investment Manager or change in control of the Investment Manager;

(ii) any material change in investment strategy or any change in the management fee of the Trust;

(iii) the trustee and Investment Manager proposing to seek delisting of units of the Trust;

(iv) any issue, not in the ordinary course of business, which in the opinion of the Sponsor or Investment Manager or Trustee requires approval of the Unitholders;

(v) any issue for which SEBI or the designated stock exchanges requires approval; and

(vi) any issue taken up on request of the Unitholders including:

(a) removal of the Investment Manager and appointment of another investment manager to the Trust;

(b) removal of the Auditors and appointment of another auditor to the Trust;

(c) removal of the Valuer and appointment of another valuer to the Trust;

(d) delisting of the Trust, if the Unitholders have sufficient reason to believe that such delisting would act in the interest of the Unitholders;

(e) any issue which the Unitholders have sufficient reason to believe that is detrimental to the interest of the Unitholders; and

(f) change in the Trustee, if the Unitholders have sufficient reason to believe that acts of the Trustee are detrimental to the interest of the Unitholders.

With respect to the rights of the Unitholders under clause 4(vi) above:

(i) save as set out in (iii) below, not less than 25% of the Unitholders by value, other than any party related to the transactions and its associates, shall apply, in writing, to the Trustee for the purpose;

(ii) on receipt of such application, the Trustee shall require, with the Investment Manager to place the issue for voting in the manner as specified in the SEBI InvIT Regulations; and

(iii) with respect to clause 4(vi)(f) above, not less than 60% of the Unitholders by value shall apply, in writing, to the Trustee for the purpose.

5. In case of any borrowing by the Trust in terms of the limit specified in Regulation 20(3)(b) of the SEBI InvIT Regulations, approval from 75% of the Unitholders by value shall be obtained.

6. In case any person, other than Sponsor, its related parties and its associates, wants to acquire Units which taken together with Units held by such person and by persons acting in concert with such person, in the Trust, exceeds 25% of the value of the outstanding Units, approval shall be obtained from 75% of the Unitholders by value excluding the value of the Units held by the parties related to the transaction. If the required approval is not received, the person acquiring the Units shall provide an exit option to the dissenting Unitholders to the extent and in the manner as may be specified by SEBI.

7. In case of any change in the Sponsor or induction of a new sponsor or change in control of the Sponsor or inducted sponsor or conversion to self-sponsored Investment Manager, approval shall be obtained from 75% of the Unitholders by value excluding the value of the Units held by the parties related to the transaction, prior to such changes. If the required approval is not received, the dissenting Unitholders are required to be provided an exit option in the manner specified under the SEBI InvIT Regulations.

For further details in relation to meetings of Unitholders, see "***Parties to the Trust –Key Terms of the Investment Management Agreement –Duties of the Investment Manager –Meeting of Unitholders***" on page 220.

Information rights

The Investment Manager, on behalf of the Trust, shall also submit such information to the Stock Exchanges and Unitholders, on a periodical basis, as may be required under the SEBI InvIT Regulations and the Listing Agreement. The Investment Manager (on behalf of the Trust) shall disclose to the Stock Exchanges, Unitholders and SEBI, all such information and in such manner as specified under the SEBI InvIT Regulations. The Investment Manager, on behalf of the Trust, shall also provide disclosures or reports specific to the sector or sub- sector in which the Trust has invested or proposes to invest, in the manner as may be specified by SEBI.

For further details about the rights of the Unitholders, see "***Parties to the Trust –Key Terms of the Trust Deed***" and "***Corporate Governance –Policies Adopted in relation to the Trust"*** on pages 116 and 201, respectively.

Buyback and Delisting of Units

Any buyback and delisting of Units shall be in accordance with the SEBI InvIT Regulations.

For additional details in relation to rights of Unitholders, see "***Parties to the Trust***" on page 114.

OTHER PARTIES INVOLVED IN THE TRUST

The Auditor

The Investment Manager, in consultation with the Trustee, pursuant to a resolution passed by its board of directors dated July 23, 2024, has appointed Walker Chandiok & Co. LLP, Chartered Accountants (Firm Registration No. 001076N/N500013) as the Trust's auditor for a period of five Financial Years until March 31, 2028, subject to approval of Unitholders. The Auditor has audited the Special Purpose Combined Financial Statements, and their report in relation to such Special Purpose Combined Financial Statements dated November 8, 2024, and Projections of Revenue from Operations and Cash Flow from Operating Activities dated December 5, 2024, have been included in this Offer Document.

Functions, Duties and Responsibilities of the Auditor

The Investment Manager shall appoint an individual or a firm as the Auditor, who shall hold office from the date of conclusion of the annual meeting in which the Auditor has been appointed till the date of conclusion of the sixth annual meeting of the Unitholders in accordance with the procedure for selection of auditors, as may be specified by the SEBI. Further, the Investment Manager shall not appoint or re-appoint: (a) individual as the Auditor for more than one term of five consecutive years, provided that an individual Auditor who has completed such term shall not be eligible for reappointment as the Auditor for a period of five years from the date of completion of the term; and (b) an audit firm as the Auditor for more than two terms of five consecutive years, provided that an audit firm which has completed such term shall not be eligible for re-appointment as the Auditor for a period of five years from the date of completion of the term.

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 SEBI InvIT Regulations.

The Investment Manager shall ensure that the auditor carries out an audit of the accounts of the Trust, not less than once a year and such report is submitted to the Unitholders and the Trustee, either electronically or through physical copies.

In accordance with the SEBI 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 by it, and after taking into account the relevant accounting and auditing standards, as may be specified by SEBI;

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 an auditor from the employees of Trust or Parties to the Trust or the Initial Portfolio Assets 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 pursuant to applicable Indian Accounting Standards (Ind AS) and any addenda 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.

The Valuer

The Investment Manager, in consultation with the Trustee, pursuant to a resolution passed by its board of directors dated August 20, 2024, has appointed S Sundararaman (Registration Number: IBBI/RV/06/2018/10238) as the Valuer of the Trust. In accordance with the SEBI InvIT Regulations, the Valuer has undertaken a full valuation of the Initial Portfolio Assets which are proposed to be acquired by the Trust pursuant to the Formation Transactions and their report in relation to such valuation dated November 8, 2024, has been included in this Offer Document. For details in relation to the Valuation Report, see page 406.

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.

Functions, Duties and Responsibilities of the Valuer

The functions, duties and responsibilities of the Valuer will be in accordance with the SEBI InvIT Regulations. Presently, in terms of the SEBI InvIT Regulations, the Valuer is required to comply with the following conditions at all times:

a. the Valuer shall ensure that the valuation of the Trust assets is impartial, true and fair and is in accordance with Regulation 21 of the SEBI InvIT Regulations;

b. the Valuer shall ensure adequate and robust internal controls to ensure the integrity of its valuation reports;

c. the Valuer shall ensure that it has sufficient key personnel with adequate experience and qualification to perform valuations;

d. the Valuer shall ensure that it has sufficient financial resources to enable it to conduct its business effectively and meet its liabilities;

e. the Valuer and any of its employees involved in valuing of the assets of the Trust, shall not, (i) invest in Units of the Trust or in the assets being valued; and (ii) sell the assets or Units of Trust held prior to being appointed as the Valuer, till the time such person is designated as Valuer of the Trust and not less than six months after ceasing to be valuer of the Trust;

f. the Valuer shall conduct valuation of the Trust assets with transparency and fairness and shall render, at all times, high standards of service, exercise due diligence, ensure proper care and exercise independent professional judgment;

g. the Valuer shall act with independence, objectivity and impartiality in performing the valuation;

h. the Valuer shall discharge its duties towards the Trust in an efficient and competent manner, utilising its knowledge, skills and experience in best possible way to complete given assignment;

i. the Valuer shall not accept remuneration, in any form, for performing a valuation of the Trust's assets from any person other than the Trust or its authorised representative;

j. the Valuer shall before accepting any assignment, from any related party of the Trust, disclose to the Trust any direct or indirect consideration which the Valuer may have in respect of such assignment;

k. the Valuer shall disclose to the Trust any pending business transactions, contracts under negotiation and other arrangements with the Investment Manager or any other party whom the Trust is contracting with and any other factors that may interfere with the Valuer's ability to give an independent and professional valuation of the assets;

l. the Valuer shall not make false, misleading or exaggerated claims in order to secure assignments;

m. the Valuer shall not provide misleading valuation, either by providing incorrect information or by withholding relevant information;

n. the Valuer shall not accept an assignment which interferes with its ability to do fair valuation; and

o. the Valuer shall, prior to performing a valuation, acquaint itself with all laws or regulations relevant to such valuation.

Appointment of Auditor and Valuer Policy

The key terms of the Appointment of Auditor and Valuer Policy are set out below:

1. **Appointment and role of Auditor of the Trust**

(i) The Investment Manager, in consultation with the Trustee, shall appoint the Auditor, in a timely manner and in accordance with the SEBI InvIT Regulations.

(ii) The Investment Manager shall ensure that the appointment of the Auditor and the fees payable to the Auditor is approved by the Unitholders in accordance with the SEBI InvIT Regulations.

(iii) The Investment Manager shall ensure that the audit of the accounts of the Trust by the Auditor is carried out in accordance with the SEBI InvIT Regulations.

(iv) The Investment Manager shall appoint an individual or a firm as the Auditor, who shall hold office from the date of conclusion of the annual meeting in which the Auditor has been appointed till the date of conclusion of the sixth annual meeting of the Unitholders in accordance with the procedure for selection of auditors, as may be specified by the SEBI.

(v) The Investment Manager shall not appoint or re-appoint:

a) An individual as the Auditor for more than one term of five consecutive years, provided that an individual Auditor who has completed such term shall not be eligible for reappointment as the Auditor for a period of five years from the date of completion of the term; and

b) An audit firm as the Auditor for more than two terms of five consecutive years, provided that an audit firm which has completed such term shall not be eligible for re-appointment as the Auditor for a period of five years from the date of completion of the term.

(vi) The Investment Manager, in consultation with the Trustee, shall have the right to take all necessary steps to remove the Auditor who ceases to comply with the eligibility criteria required under the SEBI InvIT Regulations and applicable law.

(vii) The Auditor shall conduct the audit of the accounts of the Trust and draft the audit report based on the accounts examined by it after taking into account the relevant accounting and auditing standards under applicable law, including the SEBI InvIT Regulations and any guidelines, circulars, notifications and clarifications framed or issued by the SEBI, as may be specified from time to time.

(viii) The Auditor shall comply with the conditions prescribed under the SEBI InvIT Regulations at all times, including the following:

a) The accounts of the Trust shall be subjected to audit by the Auditors and shall be accompanied by a report of the Auditors which shall be submitted with the stock exchanges, in such manner and at such intervals as may be prescribed under applicable law, including SEBI InvIT Regulations;

b) The Auditor shall, 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 relevant period and such other matters as may be specified by SEBI;

c) The Auditor shall have a right of access at all times to the books of accounts and vouchers pertaining to activities of the Trust;

d) 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 pursuant to applicable Indian Accounting Standards (Ind AS) and any addenda 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;

e) The Auditor shall have a right to obtain 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 the Trust, parties to the Trust, the special purpose vehicle(s) or any other person in possession of such information; and

f) The Auditor should have subjected itself to the peer review process of ICAI and hold such a valid certificate.

2. **Appointment and role of Valuer of The Trust**

(i) with the following conditions at all times:

(ii) The Investment Manager, in consultation with Trustee, shall appoint the Valuer in a timely manner and shall determine the remuneration of such Valuer, in accordance with the SEBI InvIT Regulations. A 'Valuer' shall have the meaning provided under the SEBI InvIT Regulations.

(iii) The Investment Manager shall ensure that the appointment of the Valuer is approved by the Unitholders in accordance with the SEBI InvIT Regulations.

(iv) The Investment Manager shall ensure that the valuation of the Trust Assets is conducted by the Valuer in accordance with the SEBI InvIT Regulations.

(v) The Investment Manager in consultation with the Trustee shall have the right to take all necessary steps to remove the Valuer who ceases to comply with the eligibility criteria required under the SEBI InvIT Regulations and applicable law. If the removal of the Valuer and appointment of another valuer to the Trust is taken up at a meeting of the Unitholders at the request of the Unitholders, such removal of the Valuer shall be approved by the Unitholders in accordance with the SEBI InvIT Regulations.

(vi) The remuneration of the Valuer shall not be linked to or based on the value of the assets being valued.

(vii) The Valuer shall not be an Associate of the Sponsor or the Investment Manager or Trustee. The Valuer shall have the minimum number of years of experience in valuation of infrastructure assets as may be required under the SEBI InvIT Regulations.

(viii) The Valuer shall be eligible to act as a valuer in terms of the SEBI InvIT Regulations or any clarifications, guidelines, notifications or exemptions issued by SEBI.

(ix) The Valuer shall not undertake valuation of the same project for more than four years consecutively, provided that the Valuer may be reappointed after a period of not less than two years from the date it ceases to be the Valuer of the Trust.

(x) The Valuer shall not undertake valuation of any assets in which it has either been involved with the acquisition or disposal within the last twelve months other than such cases where the Valuer was engaged by the Trust for such acquisition or disposal.

a) The Valuer shall comply The Valuer shall ensure that the valuation of the Trust assets is impartial, true and fair and is in accordance with the SEBI InvIT Regulations;

b) The Valuer shall ensure adequate and robust internal controls to ensure the integrity of its valuation reports;

c) The Valuer shall ensure that it has sufficient key personnel with adequate experience and qualification to perform valuations;

d) The Valuer shall ensure that it has sufficient financial resources to enable it to conduct its business effectively and meet its liabilities;

e) The Valuer and any of its employees involved in valuing of the assets of the Trust, shall not:

- invest in units of the Trust or in the assets being valued; and
- sell the assets or units of the Trust held prior to being appointed as the Valuer, until the time such person is designated as Valuer of the Trust and not less than six months after ceasing to be Valuer of the Trust;

f) The Valuer shall conduct valuation of the Trust assets with transparency and fairness and shall render, at all times, high standards of service, exercise due diligence, ensure proper care and exercise independent professional judgment;

g) The Valuer shall act with independence, objectivity and impartiality in performing the valuation;

h) The Valuer shall discharge its duties towards the Trust in an efficient and competent manner, utilizing its knowledge, skills and experience in best possible way to complete given assignment;

i) The Valuer shall not accept remuneration, in any form, for performing a valuation of the Trust Assets from any person other than the Trust or its authorized representative;

j) The Valuer shall before accepting any assignment, from any related party of the Trust, disclose to the Trust through the Investment Manager or the Trustee, any direct or indirect consideration which the Valuer may have in respect of such assignment;

k) The Valuer shall disclose to the Trust, through the Investment Manager or the Trustee, any pending business transactions, contracts under negotiation and other arrangements with the Investment Manager or any other party whom the Trust is contracting with and any other factors that may interfere with the Valuer's ability to give an independent and professional valuation of the assets, and other necessary disclosures required under the SEBI InvIT Regulations;

l) The Valuer shall not make false, misleading or exaggerated claims in order to secure assignments;

m) The Valuer shall not provide misleading valuation, either by providing incorrect information or by withholding relevant information;

n) The Valuer shall not accept an assignment which interferes with its ability to do fair valuation; and

o) The Valuer shall, prior to performing a valuation, acquaint itself with all laws or regulations relevant to such valuation.

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Independent Auditor's Report on Special Purpose Combined Financial Statements of the Project SPVs to be transferred to Capital Infra Trust (formerly known as National Infrastructure Trust)

To

The Board of Directors of Gawar Investment Manager Private Limited (the 'Investment Manager') in its capacity as Investment Manager of Capital Infra Trust (formerly known as National Infrastructure Trust)

Report on the Audit of the Special Purpose Combined Financial Statements

Opinion

1. We have audited the accompanying special purpose combined financial statements of the following nine subsidiaries of Gawar Construction Limited ('Sponsor'):

   a) Gawar Rohna Jhajjar Highway Private Limited
   b) Gawar Khajuwala BAP Highway Private Limited
   c) Gawar Narnaul Highway Private Limited
   d) Gawar Rohna Sonepat Highways Private Limited
   e) Hardiya Hasanpur Highway Private Limited
   f) Gawar Kiratpur Nerchowk Highway Private Limited
   g) Dewas Ujjain Highway Private Limited
   h) Gawar Bangalore Highways Private Limited (w.e.f. 28 November 2022)
   i) Gawar Nainital Highways Private Limited (w.e.f. 9 April 2023)

   (together referred as 'Project SPVs' or 'Project SPV Group' and individually 'Project SPV') which are proposed to be transferred from the Sponsor to Capital Infra Trust (formerly known as National Infrastructure Trust) (the 'Trust') pursuant to the proposed public issue of Units of the Trust ('Public Issue'), and which comprises the:

   a. Special Purpose Combined Balance Sheets as at 30 September 2024, 31 March 2024, 31 March 2023 and 31 March 2022;
   b. Special Purpose Combined Statements of Profit and Loss (including Other comprehensive income) for the six-month period ended 30 September 2024, and for the financial years ended 31 March 2024, 31 March 2023 and 31 March 2022;
   c. Special Purpose Combined Statements of Cash Flows for the six-month period ended 30 September 2024, and for the financial years ended 31 March 2024, 31 March 2023 and 31 March 2022;
   d. Special Purpose Combined Statements of Changes in Equity for the six-month period ended 30 September 2024, and for the financial years ended 31 March 2024, 31 March 2023 and 31 March 2022;
   e. Special Purpose Combined Statements of Net Assets at Fair Value as at 30 September 2024;

Walker Chandiok & Co LLP is registered with limited liability with identification number AAC-2085 and its registered office at L-41 Connaught Circus, New Delhi, 110001, India

Independent Auditor's Report on Special Purpose Combined Financial Statements of the Project SPVs to be transferred to Capital Infra Trust (formerly known as National Infrastructure Trust) (Cont'd)

f. Special Purpose Combined Statements of Total Returns at Fair Value for the six-month period ended 30 September 2024 and for the financial year ended 31 March 2024; and
g. Notes to the Special Purpose Combined Financial Statements, including material accounting policy information and other explanatory information.

(together hereinafter referred to as '**Special Purpose Combined Financial Statements**').

2. In our opinion and to the best of our information and according to the explanations given to us and based on the consideration of the reports of the other auditors on the special purpose financial statements of certain proposed subsidiaries referred to in paragraph 10 below, the aforesaid Special Purpose Combined Financial Statements give a true and fair view of the combined state of affairs (financial position) of the Project SPV Group as at 30 September 2024, 31 March 2024, 31 March 2023 and 31 March 2022 and its combined profit (including other comprehensive income), its combined cash flows and the combined changes in equity for the six-month period ended 30 September 2024, and for the financial years ended 31 March 2024, 31 March 2023 and 31 March 2022 , the combined net assets at fair value as at 30 September 2024 and the combined total returns at fair value for the six-month period ended 30 September 2024 and for the financial year ended 31 March 2024 in accordance with the basis of preparation as described in note 2.1 to the accompanying Special Purpose Combined Financial Statements.

Basis for Opinion

3. We conducted our audit of the Special Purpose Combined Financial Statements in accordance with the Standards on Auditing ('SAs') and other pronouncements issued by the Institute of Chartered Accountants of India ('the ICAI'). Our responsibilities under those standards are further described in the Auditor's Responsibilities for the Audit of the Special Purpose Combined Financial Statements' section of our report. We are independent of the Trust and Project SPV Group in accordance with the Code of Ethics issued by the ICAI, and we have fulfilled our ethical responsibilities in accordance with the Code of Ethics. We believe that the audit evidence we have obtained together with the audit evidence obtained by the other auditors in terms of their reports referred to in paragraph 10 of the Other Matter section below, is sufficient and appropriate to provide a basis for our opinion.

Emphasis of matter - Basis of Preparation and Restriction on Distribution or Use

4. Without modifying our opinion, we draw attention to Note 2.1 to the accompanying Special Purpose Combined Financial Statements, which describes the basis of its preparation. The Special Purpose Combined Financial Statements have been prepared by the Investment Manager of the Trust solely to comply with the requirements of Securities and Exchange Board of India (Infrastructure Investment Trust) Regulations, 2014 (as amended) including any guidelines and circulars issued thereunder (the "InvIT Regulations"), for the inclusion in the offer document and final offer document (collectively, 'the offer documents') in connection with the proposed public issue of units of the Trust and therefore, may not be suitable for any other purpose. Consequently, these Special Purpose Combined Financial Statements may not necessarily be indicative of combined financial performance, combined financial position and combined cash flows of the Project SPV Group that would have occurred if it had operated as a single group of entities during the periods presented. Our report is issued solely for the aforementioned purpose, and accordingly, should not be used, referred to or distributed for any other purpose or to any other party without our prior written consent. Further, we do not accept or assume any liability or any duty of care for any other purpose for which or to any other person to whom this report is shown or into whose hands it may come without our prior consent in writing.

Responsibilities of Management for the Special Purpose Combined Financial Statements

5. The accompanying Special Purpose Combined Financial Statements have been approved by the Board of Directors of Investment Manager of the Trust. The Board of Directors of Investment Manager of the Trust is responsible for preparation of these Special Purpose Combined Financial Statements that give a true and fair view of the combined financial position, combined financial performance including other comprehensive income, combined changes in equity and combined cash flows, the combined statement of net assets at fair value and the combined statement of total returns at fair value of the Project SPV Group in accordance with the basis of preparation described in note 2.1 to the Special Purpose Combined

Independent Auditor's Report on Special Purpose Combined Financial Statements of the Project SPVs to be transferred to Capital Infra Trust (formerly known as National Infrastructure Trust) (Cont'd)

Financial Statements. The respective Board of Directors of the Project SPV Group and the Board of Directors of Investment Manager of the Trust are responsible for design, implementation and maintenance of adequate internal financial controls, that were relevant to the preparation and presentation of the financial statements, that give a true and fair view, in accordance with the basis of preparation specified in aforementioned note 2.1, that are free from material misstatement, whether due to fraud or error, which have been used for the purpose of preparation of the Special Purpose Combined Financial Statements by the Board of Directors of Investment Manager of the Trust, as aforesaid.

6. In preparing the Special Purpose Combined Financial Statements, the respective Board of Directors of the Project SPV Group and the Board of Directors of the Investment Manager of the Trust are responsible for assessing the ability of the Project SPV 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 respective Board of directors either intends to liquidate the Project SPV Group or to cease operations, or has no realistic alternative but to do so.

Auditor's Responsibilities for the Audit of the Special Purpose Combined Financial Statements

7. Our objectives are to obtain reasonable assurance about whether the Special Purpose Combined 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 Standards on Auditing 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 Special Purpose Combined Financial Statements.

8. As part of an audit in accordance with Standards on Auditing issued by the ICAI, we exercise professional judgment and maintain professional skepticism throughout the audit. We also:

   - Identify and assess the risks of material misstatement of the 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 controls;

   - Obtain an understanding of internal controls 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 whether the Project SPV Group have in place adequate internal financial controls with reference to financial statements and the operating effectiveness of such controls;

   - Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by Investment Manager of the Trust;

   - Conclude on the appropriateness of Board of Directors of the Investment Manager of the Trust's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Project SPV 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 Special Purpose Combined 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 Project SPV Group to cease to continue as a going concern;

   - Evaluate the overall presentation, structure and content of the Special Purpose Combined Financial Statements, including the disclosures, and whether the Special Purpose Combined Financial Statements represent the underlying transactions and events in a manner that achieves fair presentation; and

Independent Auditor's Report on Special Purpose Combined Financial Statements of the Project SPVs to be transferred to Capital Infra Trust (formerly known as National Infrastructure Trust) (Cont'd)

- Obtain sufficient appropriate audit evidence regarding the financial statements of the entities or business activities within the Project SPV Group, to express an opinion on the Special Purpose Combined Financial Statements. We are responsible for the direction, supervision and performance of the audit of financial statements of such entities included in the Special Purpose Combined Financial Statements, of which we are the independent auditors. For the other entities included in the Special Purpose Combined Financial Statements, which have been audited by the 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.

9. 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 controls that we identify during our audit.

Other Matter

10. The special purpose financial statements of each of the Project SPV (as mentioned below) for the six-month period ended 30 September 2024 and for the financial years ended 31 March 2024, 31 March 2023 and 31 March 2022 have been audited by the respective auditors of the Project SPV Group, which have been used for the purpose of preparation of the Special Purpose Combined Financial Statements by the Investment Manager of the Trust and have been relied upon by us for our audit of these Special Purpose Combined Financial Statements.

The Projects SPVs and the periods which were audited by other auditors are as follows:

S. No.	Project SPV	Period (s)	Revenue (in ₹ millions)	Total Assets (in ₹ millions)	Cash flows (in ₹ millions)
1	Gawar Rohna Jhajjar Highway Private Limited	Six-month period ended 30 September 2024	276.96	3,193.44	(4.88)
		Financial Year ended 31 March 2024	461.82	3,219.04	1.39
		Financial Year ended 31 March 2023	803.35	3,614.68	9.33
		Financial Year ended 31 March 2022	268.98	3,560.69	(32.82)
2	Gawar Khajuwala BAP Highway Private Limited	Six-month period ended 30 September 2024	388.11	3,982.90	(374.73)
		Financial Year ended 31 March 2024	542.81	3,802.60	362.98
		Financial Year ended 31 March 2023	1,122.74	3,781.76	32.67
		Financial Year ended 31 March 2022	796.45	3,472.26	2.96
3	Hardiya Hasanpur Highway Private Limited	Six-month period ended 30 September 2024	446.51	5,625.52	11.00
		Financial Year ended 31 March 2024	1,682.17	5,727.21	15.25
		Financial Year ended 31 March 2023	5,292.22	5,166.28	(75.10)
		Financial Year ended 31 March 2022	3,106.53	1,501.01	80.36
4	Gawar Nainital Highways Private Limited*	Six-month period ended 30 September 2024	1,240.23	3,523.08	109.86
		Financial Year ended 31 March 2024	1,634.66	2,887.06	11.60

** The Company has been incorporated during financial year ended 31 March 2024.*

Independent Auditor's Report on Special Purpose Combined Financial Statements of the Project SPVs to be transferred to Capital Infra Trust (formerly known as National Infrastructure Trust) (Cont'd)

Our opinion above on the Special Purpose Combined Financial Statements and our report on other legal and regulatory requirements below, are not modified in respect of 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

11. Based on our audit and on the consideration of the reports of the other auditors referred to in paragraph 10 above on the separate financial statements of the Project SPV Group and as required by the InvIT Regulations issued by Securities and Exchange Board of India; we report that:

    i. we have sought and obtained all information and explanations which, to the best of our knowledge and belief, were necessary for the purpose of our audit of the aforesaid Special Purpose Combined Financial Statements;

    ii. the Special Purpose Combined Financial Statements are in agreement with the books of account of the respective Project SPV Group;

    iii. In our opinion, the Special Purpose Combined Financial Statements comply with the basis of preparation as specified in note 2.1 to these Special Purpose Combined Financial Statements.

For **Walker Chandiok & Co LLP**
Chartered Accountants
Firm's Registration No.: 001076N/N500013

Manish Agrawal
Partner
Membership No.: 507000

UDIN: 24507000BKDHRW3260

Place: New Delhi
Date: 08 November 2024

Capital Infra Trust (formerly known as National Infrastructure Trust)
Special Purpose Combined Balance Sheet
(All amounts in ₹ millions unless otherwise stated)

	Note	As at 30 September 2024	As at 31 March 2024	As at 31 March 2023	As at 31 March 2022
ASSETS					
Non-current assets					
Financial assets					
Other financial assets	3	34,170.39	32,532.13	29,119.07	13,644.71
Deferred tax assets (net)	17	9.36	4.32	0.47	-
Non-current tax assets (net)	4	333.58	301.34	362.34	465.04
Other non-current assets	5	962.62	1,092.36	1,994.20	1,152.10
Total non-current assets		**35,475.95**	**33,930.15**	**31,476.08**	**15,261.85**
Current assets					
Financial assets					
Investments	6	-	-	-	142.09
Trade receivables	7	684.67	669.69	1,098.10	195.42
Cash and cash equivalents	8	428.38	975.03	177.29	345.12
Bank balances other than cash and cash equivalents above	9	1,296.02	332.73	214.21	257.09
Loans	10	389.10	-	-	-
Other financial assets	11	9,470.47	9,888.53	8,566.33	7,618.58
Other current assets	12	1,308.04	1,444.53	1,301.29	1,207.80
Total current assets		**13,576.68**	**13,310.51**	**11,357.22**	**9,766.10**
Total assets		**49,052.63**	**47,240.66**	**42,833.30**	**25,027.95**
EQUITY AND LIABILITIES					
EQUITY					
Equity share capital	13	3,468.10	3,468.10	3,370.10	3,131.00
Other equity	14	8,876.23	7,721.97	6,465.16	1,842.49
Total equity		**12,344.33**	**11,190.07**	**9,835.26**	**4,973.49**
LIABILITIES					
Non-current liabilities					
Financial liabilities					
Borrowings	15 A	31,418.27	29,967.92	23,687.09	14,773.66
Other financial liabilities	16	-	-	-	217.63
Deferred tax liabilities (net)	17	1,462.02	1,596.32	1,710.79	396.26
Total non-current liabilities		**32,880.29**	**31,564.24**	**25,397.88**	**15,387.55**
Current liabilities					
Financial liabilities					
Borrowings	15 B	2,134.63	2,071.71	2,879.54	1,544.30
Trade payables					
(a) Total outstanding dues of micro enterprises and small enterprises	18	-	-	-	-
(b) Total outstanding dues of creditors other than micro enterprises and small enterprises	18	1,006.13	1,586.73	3,496.90	2,854.09
Other financial liabilities	19	420.33	563.84	958.83	129.86
Other current liabilities	20	69.10	264.07	250.52	138.66
Current tax liabilities (net)	21	197.82	-	14.37	-
Total current liabilities		**3,828.01**	**4,486.35**	**7,600.16**	**4,666.91**
Total liabilities		**36,708.30**	**36,050.59**	**32,998.04**	**20,054.46**
Total equity and liabilities		**49,052.63**	**47,240.66**	**42,833.30**	**25,027.95**
Summary of material accounting policy information	2				

The accompanying notes form an integral part of the Special Purpose Combined Financial Statements.

This is the Special Purpose Combined Balance Sheet referred to in our report of even date.

For Walker Chandiok & Co LLP
Chartered Accountants
Firm's Registration No.: 001076N/N500013

Manish Agrawal
Partner
Membership No.: 507000

Place: New Delhi
Date: 08 November 2024

For and on behalf of the Board of Directors of
Gawar Investment Manager Private Limited
(acting as Investment Manager to Capital Infra Trust (formerly known as National Infrastructure Trust)

Rakesh Kumar
Director
DIN:-02082036

Place: Gurugram
Date: 08 November 2024

Bant Singh Singla
Director
DIN:-08620341

Place: Gurugram
Date: 08 November 2024

Manish Satnaliwala
Chief Executive Officer

Place: Gurugram
Date: 08 November 2024

Amit Kumar
Chief Financial Officer

Place: Gurugram
Date: 08 November 2024

Shubham Jain
Company Secretary
ICSI M No. A57893

Place: Gurugram
Date: 08 November 2024

Capital Infra Trust (formerly known as National Infrastructure Trust)
Special Purpose Combined Statement of Profit and Loss
(All amounts in ₹ millions unless otherwise stated)

	Note	For the six month period ended 30 September 2024	For the year ended 31 March 2024	For the year ended 31 March 2023	For the year ended 31 March 2022
Incomes and gains					
Revenue from operations	22	7,054.55	14,850.91	20,330.90	19,081.51
Interest income on bank deposits		71.58	102.21	41.44	23.98
Profit on sale of investments	23	-	-	1.18	8.47
Other income	24	796.53	481.96	4,815.71	700.23
Total income		**7,922.66**	**15,435.08**	**25,189.23**	**19,814.19**
Expenses and losses					
Operating expenses	25	4,323.37	9,812.64	16,779.78	17,061.84
Audit fee (statutory auditors of respective project SPVs)		5.13	4.31	3.96	3.40
Insurance expenses		14.95	32.14	40.69	36.36
Employee benefits expense	26	9.52	15.74	4.76	1.80
Project management fees		363.87	301.09	146.82	53.55
Finance costs	27	1,556.58	2,853.16	1,519.34	951.82
Other expenses	28	86.23	667.32	43.05	24.67
Total expenses		**6,359.65**	**13,686.40**	**18,538.40**	**18,133.44**
Profit before tax		**1,563.01**	**1,748.68**	**6,650.83**	**1,680.75**
Tax expense	30				
Current tax		548.09	578.59	364.88	135.17
Current tax for earlier years		-	30.74	-	-
Deferred tax (credit) / charge		(139.34)	(118.32)	1,314.06	290.02
Total tax expense		**408.75**	**491.01**	**1,678.94**	**425.19**
Net profit for the period / year (A)		**1,154.26**	**1,257.67**	**4,971.89**	**1,255.56**
Other comprehensive income		-	-	-	-
Total other comprehensive income for the period / year (B)		**-**	**-**	**-**	**-**
Total comprehensive income for the period / year (A+B)		**1,154.26**	**1,257.67**	**4,971.89**	**1,255.56**
Earning per unit	41				
Summary of material accounting policy information	2				

The accompanying notes form an integral part of the Special Purpose Combined Financial Statements.

This is the Special Purpose Combined Statement of Profit and Loss referred to in our report of even date.

For Walker Chandiok & Co LLP
Chartered Accountants
Firm's Registration No.: 001076N/N500013

For and on behalf of the Board of Directors of
Gawar Investment Manager Private Limited
(acting as Investment Manager to Capital Infra Trust (formerly known as National Infrastructure Trust)

Manish Agrawal
Partner
Membership No.: 507000

Place: New Delhi
Date: 08 November 2024

Rakesh Kumar
Director
DIN:-02082036

Place: Gurugram
Date: 08 November 2024

Bant Singh Singla
Director
DIN:-08620341

Place: Gurugram
Date: 08 November 2024

Manish Satnaliwala
Chief Executive Officer

Place: Gurugram
Date: 08 November 2024

Amit Kumar
Chief Financial Officer

Place: Gurugram
Date: 08 November 2024

Shubham Jain
Company Secretary
ICSI M No. A57893

Place: Gurugram
Date: 08 November 2024

Capital Infra Trust (formerly known as National Infrastructure Trust)
Special Purpose Combined Statement of Cash Flows
(All amounts in ₹ millions unless otherwise stated)

	For the six month period ended 30 September 2024	For the year ended 31 March 2024	For the year ended 31 March 2023	For the year ended 31 March 2022
A Cash flows from operating activities				
Profit before tax	**1,563.01**	**1,748.68**	**6,650.83**	**1,680.75**
Adjustments for:				
Interest income on loans and advances	(25.92)	(25.16)	-	-
Interest income on bank deposits	(71.58)	(102.21)	(41.44)	(23.98)
Interest income on income tax refund	(5.77)	(15.06)	(15.16)	(0.45)
Gain on modification of financial assets	(764.84)	(441.74)	(4,800.55)	(699.78)
Loss on modification of financial assets	37.43	615.89	21.06	-
Non-recoverable GST on annuity from NHAI written off	(8.42)	195.63	64.16	-
Gain on sale of investments (net)	-	-	(1.18)	-
Gain on investments carried at fair value through profit or loss (net)	-	-	-	(8.47)
Finance cost	1,556.58	2,853.16	1,519.34	951.82
Operating profit before working capital changes and other adjustments	**2,280.49**	**4,829.19**	**3,397.06**	**1,899.89**
Working capital changes and other adjustments:				
Trade receivables	(6.56)	232.78	(966.84)	(184.18)
Other non-current and current financial assets	(251.36)	(1,838.88)	(7,534.87)	(6,121.80)
Other non-current and current assets	266.23	758.60	(935.60)	(1,855.84)
Trade payables	(580.60)	(1,910.17)	642.81	17.31
Other non-current and current financial liabilities	(2.32)	(420.92)	430.59	(25.84)
Other non-current and current liabilities	(194.97)	13.55	111.86	36.53
Cash flow from / (used in) operating activities post working capital changes and other adjustments	**1,510.91**	**1,664.15**	**(4,854.99)**	**(6,233.94)**
Income tax paid (net)	(376.75)	(547.64)	(232.65)	(432.59)
Net cash flow from / (used in) operating activities (A)	**1,134.16**	**1,116.51**	**(5,087.64)**	**(6,666.53)**
B Cash flows from investing activities				
Redemption of bank deposits	1,634.62	5,395.49	2,363.05	807.07
Investment in bank deposits	(2,839.33)	(5,915.56)	(2,497.92)	(1,348.93)
Acquisition of financial asset (receivables under service concession agreement) (refer note 3)	-	(2,668.98)	(3,930.00)	-
Proceeds from sale of current investments	-	-	143.27	-
Loans received	150.00	-	-	-
Loan given	(539.10)	-	-	-
Interest income on loans and advances	25.92	25.16	-	-
Interest income on bank deposits	71.58	102.21	41.44	23.98
Net cash used in investing activities (B)	**(1,496.31)**	**(3,061.68)**	**(3,880.16)**	**(517.88)**
C Cash flows from financing activities				
Repayment of term loans from banks	(5,590.56)	(890.28)	(2,982.03)	(8,157.15)
Proceeds from term loans from banks	8,405.40	5,066.59	12,511.65	9,044.83
Proceeds from non-convertible debentures	-	-	-	6,005.00
Repayment of non-convertible debentures	(216.13)	(408.75)	(389.01)	(148.50)
Loan taken from related parties	1,008.51	3,246.60	3,218.60	2,582.91
Loan repaid to related parties	(2,060.42)	(1,522.69)	(2,048.28)	(2,099.14)
Finance costs paid	(1,731.30)	(2,845.70)	(1,400.84)	(755.49)
Share issue expenses	-	(0.86)	(1.92)	(7.35)
Proceeds from issue of share capital	-	98.00	239.10	998.00
Dividend paid on equity shares	-	-	(347.30)	-
Net cash (used in) / flow from financing activities (C)	**(184.50)**	**2,742.91**	**8,799.97**	**7,463.11**
D Net (decrease) / increase in cash and cash equivalents (A+B+C)	**(546.65)**	**797.74**	**(167.83)**	**278.70**
E Cash and cash equivalents at the beginning of the period / year	975.03	177.29	345.12	66.42
Cash and cash equivalents at the end of the period / year (D+E) {refer note 8}	**428.38**	**975.03**	**177.29**	**345.12**

Note:
The above Special Purpose Combined Cash Flow Statement has been prepared under the 'Indirect Method' as set out in Ind AS 7, 'Statement of Cash Flows'.

The accompanying notes form an integral part of the Special Purpose Combined Financial Statements.

This is the Special Purpose Combined Statement of Cash Flows referred to in our report of even date.

For Walker Chandiok & Co LLP
Chartered Accountants
Firm's Registration No.: 001076N/N500013

Manish Agrawal
Partner
Membership No.: 507000

Place: New Delhi
Date: 08 November 2024

For and on behalf of the Board of Directors of
Gawar Investment Manager Private Limited
(acting as Investment Manager to Capital Infra Trust (formerly known as National Infrastructure Trust)

Rakesh Kumar
Director
DIN:-02082036

Place: Gurugram
Date: 08 November 2024

Bant Singh Singla
Director
DIN:-08620341

Place: Gurugram
Date: 08 November 2024

Manish Satnaliwala
Chief Executive Officer

Place: Gurugram
Date: 08 November 2024

Amit Kumar
Chief Financial Officer

Place: Gurugram
Date: 08 November 2024

Shubham Jain
Company Secretary
ICSI M No. A57893

Place: Gurugram
Date: 08 November 2024

A. Equity share capital*

Particulars	Number of shares	Amount
Balance as at 01 April 2021	21,33,00,000	2,133.00
Issued during the year	9,98,00,000	998.00
Balance as at 31 March 2022	**31,31,00,000**	**3,131.00**
Issued during the year	2,39,10,000	239.10
Balance as at 31 March 2023	**33,70,10,000**	**3,370.10**
Issued during the year	98,00,000	98.00
Balance as at 31 March 2024	**34,68,10,000**	**3,468.10**
Issued during the period	-	-
Balance as at 30 September 2024	**34,68,10,000**	**3,468.10**

B. Other equity**

Particulars	Reserves and Surplus		Total
	Debenture redemption reserve	Retained earnings	
Balance as at 01 April 2021	-	594.28	**594.28**
Net profit for the year	-	1,255.56	1,255.56
Total comprehensive income for the year	**-**	**1,255.56**	**1,255.56**
Share issue expenses	-	(7.35)	(7.35)
Transfer to Debenture Redemption Reserve	585.65	(585.65)	-
Balance as at 31 March 2022	**585.65**	**1,256.84**	**1,842.49**
Net profit for the year	-	4,971.89	4,971.89
Total comprehensive income for the year	**-**	**4,971.89**	**4,971.89**
Share issue expenses	-	(1.92)	(1.92)
Transfer from Debenture Redemption Reserve	(38.90)	38.90	-
Interim dividend paid (refer note 45)	-	(347.30)	(347.30)
Balance as at 31 March 2023	**546.75**	**5,918.41**	**6,465.16**
Net profit for the year	-	1,257.67	1,257.67
Total comprehensive income for the year	**-**	**1,257.67**	**1,257.67**
Share issue expenses	-	(0.86)	(0.86)
Transfer from Debenture Redemption Reserve	(40.88)	40.88	-
Balance as at 31 March 2024	**505.87**	**7,216.10**	**7,721.97**
Net profit for the period	-	1,154.26	1,154.26
Total comprehensive income for the period	**-**	**1,154.26**	**1,154.26**
Transfer from Debenture Redemption Reserve	(24.07)	24.07	-
Balance as at 30 September 2024	**481.80**	**8,394.43**	**8,876.23**

* Refer note 13 for details.
**Refer note 14 for details.

The accompanying notes form an integral part of the Special Purpose Combined Financial Statements.

This is the Special Purpose Combined Statement of Changes in Equity referred to in our report of even date.

For Walker Chandiok & Co LLP
Chartered Accountants
Firm's Registration No.: 001076N/N500013

Manish Agrawal
Partner
Membership No.: 507000

Place: New Delhi
Date: 08 November 2024

For and on behalf of the Board of Directors of
Gawar Investment Manager Private Limited
(acting as Investment Manager to Capital Infra Trust (formerly known as National Infrastructure Trust)

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DIN:-02082036

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Date: 08 November 2024

Shubham Jain
Company Secretary
ICSI M No. A57893

Place: Gurugram
Date: 08 November 2024

Special Purpose Combined Statement of net assets at fair value as at 30 September 2024: #

Particulars	Book value	Fair value #
A. Assets	49,052.63	49,197.00
B. Liabilities (at book value)	36,708.30	36,708.30
C. Net assets (A-B)	**12,344.33**	**12,488.70**

Project wise break up of fair value of assets as at 30 September 2024:

Particulars	Fair value* As at 30 September 2024
Gawar Rohna Jhajjar Highway Private Limited	3,096.00
Gawar Khajuwala BAP Highway Private Limited	4,322.00
Gawar Narnaul Highway Private Limited	5,120.00
Gawar Rohna Sonepat Highways Private Limited	4,997.00
Hardiya Hasanpur Highway Private Limited	5,932.00
Gawar Kiratpur Nerchowk Highway Private Limited	12,559.00
Dewas Ujjain Highway Private Limited	3,802.00
Gawar Bangalore Highways Private Limited	5,749.00
Gawar Nainital Highways Private Limited	3,620.00
(herein together referred to as "SPV Group")	
	49,197.00

Note: The number of units that Capital Infra Trust (formerly known as National Infrastructure Trust) will issue to investors in connection with the proposed initial public issue of units of the Trust in exchange of the shareholdings in the SPV Group is not presently ascertainable. Accordingly, disclosure in respect of Net Asset Value (NAV) per unit have not been given.

Fair values of total assets relating to the SPV Group as at 30 September 2024 as disclosed above are based on the fair valuation report (after performing senstivity analysis) of the independent valuer.

*Fair values of assets as disclosed above are the fair values of the total assets of the SPV Group which are included in the Special Purpose Combined Financial Statements.

Special Purpose Combined Statement of total return at fair value:

Particulars	For the six month period ended 30 September 2024	For the year ended 31 March 2024
Total comprehensive income for the period / year (As per the Combined Statement of Profit and Loss)	1,154.26	1,257.67
Add: Other changes in fair value for the period / year *	1,364.00	4,200.00
Total return	**2,518.26**	**5,457.67**

*In the above statement, other changes in fair value for the six month period ended 30 September 2024 has been computed based on the difference in fair values of total assets as at 30 September 2024 and as at 31 March 2024 and that for financial year ended 31 March 2024 has been computed based on the difference in fair values of total assets as at 31 March 2024 and as 31 March 2023 respectively which are based on the valuation report (after performing sensitivity analysis) of the independent valuer.

The accompanying notes form an integral part of the Special Purpose Combined Financial Statements.

This is the Special Purpose Combined Statement of Net Assets at Fair Value and Special Purpose Combined Statement of Total Return at Fair Value referred to in our report of even date.

For Walker Chandiok & Co LLP
Chartered Accountants
Firm's Registration No.: 001076N

Manish Agrawal
Partner
Membership No.: 507000

Place: New Delhi
Date: 08 November 2024

For and on behalf of the Board of Directors of
Gawar Investment Manager Private Limited
(acting as Investment Manager to Capital Infra Trust (formerly known as National Infrastructure Trust)

Rakesh Kumar
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Chief Financial Officer

Place: Gurugram
Date: 08 November 2024

Shubham Jain
Company Secretary
ICSI M No. A57893

Place: Gurugram
Date: 08 November 2024

1 (A) Corporate Information

The Special Purpose Combined Financial Statements comprise financial statements of Gawar Rohna Jhajjar Highway Private Limited ("GRJHPL"), Gawar Khajuwala BAP Highway Private Limited ("GKBHPL"), Gawar Narnaul Highway Private Limited ("GNHPL"), Gawar Rohna Sonepat Highways Private Limited ("GRSHPL"), Hardiya Hasanpur Highway Private Limited ("HHHPL"), Gawar Kiratpur Nerchowk Highway Private Limited ("GKNHPL"), Dewas Ujjain Highway Private Limited ("DUHPL"), Gawar Bangalore Highways Private Limited ("GBHPL") (w.e.f. 28 November 2022) and Gawar Nainital Highways Private Limited (GNHPL-II") (w.e.f. 9 April 2023) (individually referred to as "Project SPV" and together referred to as "SPV Group" or "Project SPV's") (hereinafter referred as Special Purpose Combined Financial Statements). The Project SPV's are companies domiciled in India which have their registered office at DSS-378 SECTOR 16-17, Hissar, Haryana, India, 125001. These SPV's have entered into concession agreements with National Highways Authorities of India (NHAI) to construct road projects under the Hybrid Annuity Model (HAM) in various locations in India.

Gawar Construction Limited (hereinafter referred as "Sponsor") constituted the Trust on 25 September 2023 as an irrevocable trust, pursuant to the Trust Deed, under the provisions of the Indian Trusts Act, 1882 and registered with Securities and Exchange Board of India ("SEBI") vide Certificate of Registration dated 07 March 2024 (as amended on 16 October 2024 with change of name from National Infrastructure Trust to Capital Infra Trust) as an Infrastructure Investment Trust under Regulation 3(1) of the Securities Exchange Board of India (Infrastructure Investment Trust) Regulations, 2014. The registered office of the Trust is located at Unit no 1401-1403, 14th floor, Tower B, SAS Tower, Medicity, Sector 38, Gurgaon, Sadar Bazar, Haryana, India, 122001. The Trustee to Trust is Axis Trustee Services Limited (the "Trustee") and the Investment Manager for Trust is Gawar Investment Manager Private Limited (the "Investment Manager"). Sponsor proposes to transfer their shareholding in GRJHPL, GKBHPL, GNHPL, GRSHPL, HHHPL, GKNHPL, DUHPL, GBHPL and GNHPL-II to Capital Infra Trust (formerly known as National Infrastructure Trust) (the "Trust"). As required by the Guidance Note on Combined and Carve-Out Financial Statements issued by the Institute of Chartered Accountants of India, the details of various entities comprised in the Special Purpose Combined Financial Statements is as given below:

Name of Project SPV	Proposed Shareholding by Trust	Nature of Proposed Investment	Status	Principal Activities	Country of incorporation	Date of incorporation	Date of provisional commercial operation
GRJHPL	100%	Subsidiary	Operating	Construction and operation of roads and bridges for annuity collection	India	20 April 2018	10 July 2020
GKBHPL	100%	Subsidiary	Operating		India	18 April 2018	20 January 2021
GNHPL	100%	Subsidiary	Operating		India	8 February 2019	9 January 2021
GRSHPL	100%	Subsidiary	Operating		India	1 April 2019	29 January 2022
HHHPL	100%	Subsidiary	Operating		India	22 September 2020	27 April 2023
GKNHPL	100%	Subsidiary	Operating		India	23 October 2020	07 June 2023
DUHPL	100%	Subsidiary	Operating		India	24 November 2020	05 July 2023
GBHPL*	100%	Subsidiary	Operating		India	28 November 2022	31 December 2020
GNHPL-II*	100%	Subsidiary	Operating		India	9 April 2023	27 October 2019

*Refer note 44

1 (B) Standard issued but not yet effective

Ministry of Corporate Affairs ("MCA") notifies new standard or amendments to the existing standards. There is no such notification which would have been applicable from 01 October 2024.

1 (C) Amendments to Indian Accounting Standards notified on 31 March 2023

The Ministry of Corporate Affairs has notified Companies (Indian Accounting Standards) Amendment Rules, 2023 dated 31 March 2023 to amend the following Ind AS which are effective for annual periods beginning on or after 01 April 2023.

• Ind AS 1: The amendments aim to help entities provide accounting policy disclosures that are more useful by replacing the requirement for entities to disclose their 'significant' accounting policies with a requirement to disclose their 'material' accounting policies and adding guidance on how entities apply the concept of materiality in making decisions about accounting policy disclosures.

• Ind AS 12: The amendments narrow the scope of the initial recognition exception under Ind AS 12, so that it no longer applies to transactions that give rise to equal taxable and deductible temporary differences such as leases.

• Ind AS 8: The amendments clarify the distinction between changes in accounting estimates and changes in accounting policies and the correction of errors. It has also been clarified how entities use measurement techniques and inputs to develop accounting estimates.

The SPV Group has applied these amendments wherever relevant.

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1 (D) Amendments to Indian Accounting Standards notified on 23 March 2022

Amendment to Ind AS 16, Property, Plant and Equipment
The Ministry of Corporate Affairs ("MCA") vide notification dated 23 March 2022, has issued an amendment to Ind AS 16 which specifies that an entity shall deduct from the cost of an item of property, plant and equipment any proceeds received from selling items produced while the entity is preparing the asset for its intended use (for example, the proceeds from selling samples produced when testing a machine to see if it is functioning properly).

Amendment to Ind AS 37, Provisions, Contingent Liabilities and Contingent Assets
The Ministry of Corporate Affairs ("MCA") vide notification dated 23 March 2022, has issued an amendment to Ind AS 37 which specifies that the cost of fulfilling a contract comprises: the incremental costs of fulfilling that contract and an allocation of other costs that relate directly to fulfilling contracts.

Amendment to Ind AS 103, Business Combinations
The Ministry of Corporate Affairs ("MCA") vide notification dated 23 March 2022, has issued an amendment to Ind AS 103 and has added a new exception in the standard for liabilities and contingent liabilities.

Amendment to Ind AS 109, Financial Instruments
The Ministry of Corporate Affairs ("MCA") vide notification dated 23 March 2022, has issued an amendment to Ind AS 109 which clarifies that which fees an entity should include when it applies the '10%' test in assessing whether to derecognise a financial liability. An entity includes only fees paid or received between the entity (the borrower) and the lender, including fees paid or received by either the entity or the lender on the other's behalf.
The SPV Group has applied these amendments wherever relevant.

1 (E) Amendments to Indian Accounting Standards and Schedule III of the Companies Act 2013 notified on 24 March 2021

On 24 March 2021, the Ministry of Corporate Affairs ("MCA") through a notification, amended Schedule III of the Companies Act, 2013. The amendments revise Division I, II and III of Schedule III and are applicable from 1 April 2021. Key amendments relating to Division II which relate to companies whose financial statements are required to comply with Companies (Indian Accounting Standards) Rules 2015 are:

Balance sheet:

a) Lease liabilities should be separately disclosed under the head 'financial liabilities', duly distinguished as current or non-current.
b) Certain additional disclosures in the statement of changes in equity such as changes in equity share capital due to prior period errors and restated balances at the beginning of the current reporting period.
c) Specified format for disclosure of shareholding of promoters.
d) Specified format for ageing schedule of trade receivables, trade payables, capital work-in-progress and intangible asset under development.
e) If the Company has not used funds for the specific purpose for which it was borrowed from banks and financial institutions, then disclosure of details of where it has been used.
f) Specific disclosure under 'additional regulatory requirement' such as compliance with approved schemes of arrangements, compliance with number of layers of companies, title deeds of immovable property not held in name of Group, loans and advances to promoters, directors, key managerial personnel (KMP) and related parties, details of benami property held etc

Statement of profit and loss:
Additional disclosures relating to Corporate Social Responsibility (CSR), undisclosed income and crypto or virtual currency specified under the head 'additional information' in the notes forming part of the special purpose combined financial statements.

2 Summary of material accounting policy information

2.1 Basis of preparation and presentation
The Investment Manager of the Trust have prepared Special Purpose Combined Financial Statements of the SPV Group which comprise of the Special Purpose Combined Balance Sheets as at 30 September 2024, 31 March 2024, 31 March 2023, 31 March 2022; the Special Purpose Combined Statements of Profit and Loss (including Other Comprehensive Income); the Special Purpose Combined Cash Flow Statements; and the Special Purpose Combined Statements of Changes in Equity for the six month period ended 30 September 2024 and for the financial years ended 31 March 2024, 31 March 2023 and 31 March 2022; the Special Purpose Combined Statements of Net Assets at Fair Value as at 30 September 2024; the Special Purpose Combined Statements of Total Returns at Fair Value for the six month period ended 30 September 2024 and year ended 31 March 2024, and notes to the Special Purpose Combined Financial Statements including material accounting policy information and other explanatory information (together hereinafter referred to as "the Special Purpose Combined Financial Statements").

These Special Purpose Combined Financial Statements were authorized for issue in accordance with resolutions passed by the Board of Directors of the Investment Manager on 08 November 2024.

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These Special Purpose Combined Financial Statements have been prepared by the Investment Manager of the Trust to comply with the requirements of Securities and Exchange Board of India (Infrastructure Investment Trust) Regulations, 2014 (the 'InvIT Regulations' or the 'SEBI Regulations') as amended including any guidelines and circulars issued thereunder and for inclusion in the offer document and final offer document prepared by the Investment Manager in connection with the proposed Initial Public Issue of units of the Trust.

These Special Purpose Combined Financial Statements have been prepared in accordance with Indian Accounting Standards (Ind AS) including Ind AS 34 "Interim Financial Reporting" and/or any addendum thereto as defined in the Rule 2(1)(a) of the Companies (Indian Accounting Standards) Rule, 2015, as amended ('Ind AS') and the Guidance Note on Combined and Carve-Out Financial Statements issued by the Institute of Chartered Accountants of India ("Guidance Note") including disclosures specified in the InvIT Regulations.

In accordance with the requirements of the InvIT Regulations, since the Trust is set up on 25 September 2023 and has been in existence for a period lesser than three completed financial years and the historical financial statements of Trust are not available for the entire portion of the reporting period of three years and interim period, these Special Purpose Combined Financial Statements have been prepared for the periods when such historical financial statements were not available. Further, as required by the InvIT regulations, the Special Purpose Combined Financial Statements are prepared, based on an assumption that all Project SPVs were part of Trust for such period when Trust was not in existence. However, the Special Purpose Combined Financial Statements may not be representative of the position which may prevail after the SPV Group is transferred to Trust.

Further, in accordance with section 3.3.4 of SEBI Circular no. SEBI/HO/DDHS-PoD-2/P/CIR/2024/44 dated 15 May 2024 the Special Purpose Combined Financial Statements have been presented after making necessary adjustments and accordingly, these may be different from the general purpose audited financial statements of the SPV's. Refer Note 42 for details of adjustments made in these Special Purpose Combined Financial Statements.

These Special Purpose Combined Financial Statements are presented in India Rupees which is also the functional currency of the SPV Group. All values are rounded to the nearest millions, unless otherwise indicated. Certain amounts that are required to be disclosed and do not appear due to rounding-off are expressed as 0.00.

These Special Purpose Combined Financial Statements correspond to the classification provisions contained in Ind AS 1 'Presentation of Financial Statements'. For clarity purposes, various items are aggregated in the Combined Statement of Profit and Loss and Combined Balance Sheet. These items are disaggregated separately in the notes to the Special Purpose Combined Financial Statements, where applicable or required.

These Special Purpose Combined Financial Statements have been prepared on a historical cost convention and on an accrual basis except for certain financial assets and liabilities measured at fair value (refer to material accounting policy information- financial instruments).

2.2 Basis of Combination

These Special Purpose Combined Financial Statements have been prepared using uniform accounting policies for like transactions and other events in similar circumstances. The financial statements of all the Project SPVs used for the purpose of combination are drawn up to the same reporting date i.e. six month period ended 30 September 2024 and financial years ended on 31 March 2024, 31 March 2023 and 31 March 2022. The financial statements of the SPVs have been prepared in accordance 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) Rule, 2015 and other relevant provisions of the Act.

The procedure for preparing Special Purpose Combined Financial Statements of the SPV Group are stated below –

- Combine like items of assets, liabilities, equity, income, expenses and cash flows of the SPVs; and
- Eliminate in full intragroup assets and liabilities, equity, income, expenses and cash flows relating to transactions between entities of the SPV Group (profits or losses resulting from intragroup transactions that are recognized in assets are eliminated in full). Ind AS 12 Income Taxes applies to temporary differences that arise from the elimination of profits and losses resulting from intragroup transactions.

2.3 The following is the summary of material accounting policy information applied by the SPV Group in preparing its Special Purpose Combined Financial Statements:

a) Business combination

Business combinations have been accounted for using the acquisition method under the provisions of Ind AS 103, Business Combinations. The purchase price in an acquisition is measured at the fair value of the assets transferred and liabilities incurred or assumed at the date of acquisition, which is the date on which control is transferred to the Project SPV. The purchase price also includes the fair value of any contingent consideration. Identifiable assets acquired and liabilities and contingent liabilities assumed in a business combination are measured initially at their fair value on the date of acquisition. Contingent consideration is remeasured at fair value at each reporting date and changes in the fair value of the contingent consideration are recognized in the Combined Statement of Profit and Loss.

Goodwill is measured as 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 resulting gain on bargain purchase is recognised in other comprehensive income and accumulated in equity as capital reserve. However, if there is no clear evidence of bargain purchase, the entity transfers the gain directly in equity as capital reserve, without routing the same through other comprehensive income.

b) Basis of classification as current and non-current

The SPV Group presents assets and liabilities in the combined balance sheet based on current/non-current classification.

An asset is current when it is:

- Expected to be realized or intended to be sold or consumed in the normal operating cycle;
- Held primarily for the purpose of trading;
- Expected to be realized 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 have been classified as non-current.

A liability is current when:

- It is expected to be settled in the 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 SPV Group classifies all other liabilities as non-current.

Deferred tax assets and liabilities are classified as non-current assets and liabilities.

Operating cycle of the SPV Group is the time between the acquisition of assets for processing and their realization in cash or cash equivalents. As the SPV Group's normal operating cycle is not clearly identifiable, it is assumed to be twelve months.

c) Fair value measurement

The SPV Group measures financial instruments 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 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. Refer Note 35 for fair value hierarchy.

All assets and liabilities for which fair value is measured or disclosed in the Special Purpose Combined Financial Statements are categorized 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 recognized in the Special Purpose Combined Financial Statements on a recurring basis, the SPV Group determines whether transfers have occurred between levels in the hierarchy by re-assessing categorization (based on the lowest level input that is significant to the fair value measurement as a whole) at the end of each reporting period.

External valuers are involved for valuation of significant assets such as annuity receivable, where required. Involvement of external valuers is decided by each Project SPV management on a need basis and relevant approvals. The valuers involved are selected based on criteria like market knowledge, reputation, independence and professional standards. The management of each Project SPV decides after discussion with the external valuers, which valuation techniques and inputs to use for each case.

At each reporting date, the management of each Project SPV analysis the movement of assets and liabilities which are required to be re-measured or reassessed as per the Project SPV accounting policy. For this analysis, the management of each Project SPV 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 in conjunction with each Project SPV external valuers also compares the change in fair value of each asset and liability with relevant external sources to determine whether the change is reasonable.

For the purpose of fair value disclosures, the 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 summarizes accounting policy for fair value. Other fair value related disclosures are given in the relevant notes:

- Disclosures of Statement of Net Assets at fair value and Statement of total returns at fair value
- Quantitative disclosures of fair value measurement hierarchy (note 35)
- Investment in quoted mutual fund (note 6)
- Financial instruments (including those carried at amortized cost) (note 35)

d) Revenue Recognition

To determine whether to recognize revenue, the Project SPV Group follows a 5-step process:
•Identifying the contract with a customer
•Identifying the performance obligations
•Determining the transaction price
•Allocating the transaction price to the performance obligations
•Recognizing revenue when/as performance obligation(s) are satisfied.

In all cases, the total transaction price is allocated amongst the various performance obligations based on their relative standalone selling price. The transaction price excludes amounts collected on behalf of third parties. The consideration promised include fixed amounts, variable amounts, or both. The specific recognition criteria described below must also be met before revenue is recognized.

Contract revenue (Construction contracts)
Contract revenue associated with the construction of roads is recognized at cost of work performed on the contract plus proportionate margin, where required, using the percentage of completion method.

Percentage of completion is the proportion of cost of work performed to-date, to the total estimated contract costs. Percentage of completion is determined based on the proportion of actual cost incurred to the total estimated cost of the project. The percentage of completion method is applied in each accounting period to the current estimates of contract revenue and contract costs. The effect of a change in the estimate of contract revenue or contract costs, or the effect of a change in the estimate of the outcome of a contract, is accounted for as a change in accounting estimate and the effect of which are recognized in the statement of profit or loss in the period in which the change is made and in subsequent periods.

Contract cost include costs that relate directly to the specific contract and allocated cost that are attributable to the construction of the road.
For the purposes of recognising revenue, contract revenue comprises the initial amount of revenue agreed in the contract, the variations in contract work, claims and incentive payments to the extent that it is probable that they will result in revenue, and they are capable of being reliably measured.
When it is probable that total contract costs will exceed total contract revenue, the expected loss is recognized as an expense in the Combined Statement of Profit and Loss in the period in which such probability occurs.

Operation and maintenance Income

SPV group is required to carry out operations and maintenance on the road annually with an obligation to carry out periodic maintenance in terms of the concession at regular intervals. Revenue is recognized when services are performed and contractually billable.

Income from Service Concession Arrangement (Finance Income)
SPV Group recognizes the considerations given by the grantor i.e. National Highway Authority of India ('NHAI') in accordance with the Appendix D to Ind AS 115 – Service Concession Arrangements under financial assets model. Under financial assets model, SPV group has an unconditional contractual right to receive cash i.e. fixed annuity after concession period including interest thereon. The finance income is calculated on the basis of the effective interest rate in accordance with the Ind AS 109.

Variable consideration
SPV Group's claim for bonus, change in law and other claims in rates relating to execution of contracts are recognized when it becomes probable that such claims will be received and which can be measured reliably. Claims under arbitration/disputes are accounted as income based on final award. Expenses on arbitration are accounted as incurred.

Interest income
Interest income from a financial asset is recognized when it is probable that the economic benefits will flow to the SPV Group and the amount of income can be measured reliably. Interest is accrued on time proportion basis, by reference to the principle outstanding at the effective interest rate.

Other operating income/ other income
All other operating income/ income is recognised on accrual basis when no significant uncertainty exists on their receipt.

e) Taxation
Current income tax
Current income tax assets and liabilities are measured at the amount expected to be recovered from or paid to the tax authorities. The tax rates and tax laws used to compute the amount are those that are enacted or substantively enacted at the reporting date.

Current income tax relating to items recognized outside statement of profit or loss is recognized outside statement of profit or loss (either in other comprehensive income or in equity). Current tax items are recognized 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 assets are recognized for all deductible temporary differences, the carry forward of unused tax credits and any unused tax losses. Deferred tax assets are recognized 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 utilized.

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 utilized. Unrecognized deferred tax assets are re-assessed at each reporting date and are recognized 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 realized 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 recognized outside statement of profit or loss is recognized outside statement of profit or loss. Deferred tax items are recognized 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 SPV Group and the same taxation authority.

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 SPV Group will pay normal income tax during the specified period. Minimum alternate tax ('MAT') credit entitlement is recognized as an asset only when and to the extent there is convincing evidence that normal income tax will be paid during the specified 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.

The deferred tax asset is recognised for MAT credit available only to the extent that it is probable that the concerned Project SPV will pay normal income tax during the specified period, i.e., the period for which MAT credit is allowed to be carried forward.

f) Financial asset under Service Concession Agreement

Under the arrangement, the SPV Group recognizes a financial asset arising from service concession agreement as it has an unconditional right to receive cash from grantor (NHAI/State authorities) for the construction service, major maintenance obligations and regular operation and maintenance services over the concession period. Such financial asset is measured at fair value on initial recognition and classified under the head "Other Financial Assets". Subsequent to initial recognition, the financial asset is measured at amortized cost. Under this model, the financial asset will be reduced as and when grant is received from Grantor (NHAI).

As per the salient feature of the arrangement, the operator has a two-fold activity based on which revenue is recognized in the financial statements in line with the requirement of Appendix C of Ind AS 115. The activities are given below:

a.construction activity in respect of its obligation to design, build, finance an asset that it makes available to the Grantor (NHAI)/ state authorities

b.Revenue from major maintenance obligation and operation and maintenance activity in respect of the assets during the concession period in accordance with Ind AS 115.

g) Provisions, contingent liabilities and contingent assets

Provisions are recognized when the SPV Group has a present obligation (legal or constructive) , as a result of past events and when a reliable estimate of the amount of obligation can be made at the reporting date. These estimates are reviewed at each reporting date and adjusted to reflect the current best estimates. Provisions are discounted to their present values, where the time value of money is material.

Contingent liability is disclosed for:
Possible obligations which will be confirmed only by future events not wholly within the control of the SPV Group; or
Present obligations arising from past events where it is not probable that an outflow of resources will be required to settle the obligation or a reliable estimate of the amount of the obligation cannot be made.

Contingent assets are disclosed only when inflow of economic benefits therefrom is probable and recognized only when realization of income is virtually certain.

h) Financial Instruments

Financial assets

Initial recognition and measurement

All financial assets are recognized initially at fair value, plus in the case of financial assets not recorded at fair value through profit or loss (FVTPL), transaction costs that are attributable to the acquisition of the financial asset. However, trade receivables that do not contain a significant financing component are measured at transaction price determined under Ind AS 115.

Subsequent measurement

i. Financial assets at amortised cost- A financial instrument is measured at 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 method.

ii. Financial assets at fair value

Mutual funds – All mutual funds in scope of Ind-AS 109 are measured at fair value through profit and loss (FVTPL).

De-recognition of financial assets

A financial asset is primarily de-recognised when the rights to receive cash flows from the asset have expired or the SPV Group has transferred its rights to receive cash flows from the asset.

Financial liabilities

Initial recognition and measurement

All financial liabilities are recognised initially at fair value and transaction cost that is attributable to the acquisition of the financial liabilities is also adjusted

Subsequent measurement

After initial recognition, the financial liabilities are subsequently measured at amortised cost using effective interest method. Amortised cost is calculated after considering any discount or premium on acquisition and fees or costs that are an integral part of the EIR. The effect of EIR amortisation is included as finance costs in the combined statement of profit and loss.

De-recognition of financial liabilities

A financial liability is de-recognised 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 combined statement of profit and loss.

Offsetting of financial instruments

Financial assets and financial liabilities are offset and the net amount is reported in the 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.

i) Impairment of financial assets

All financial assets except for those at FVTPL are subject to review for impairment at least at each reporting date to identify whether there is any objective evidence that a financial asset or a SPV group of financial assets is impaired. Different criteria to determine impairment are applied for each category of financial assets.

In accordance with Ind-AS 109, the SPV Group applies expected credit loss (ECL) model for measurement and recognition of impairment loss for financial assets carried at amortised cost.

ECL is the weighted average of difference between all contractual cash flows that are due to the SPV Group in accordance with the contract and all the cash flows that the SPV Group expects to receive, discounted at the original effective interest rate, with the respective risks of default occurring as the weights. When estimating the cash flows, the SPV Group is required to consider:

- All contractual terms of the financial assets (including prepayment and extension) over the expected life of the assets; and
- Cash flows from the sale of collateral held or other credit enhancements that are integral to the contractual terms.

j) Trade receivables:

In respect of trade receivables, the SPV Group applies the simplified approach of Ind AS 109 'Financial Instruments', which requires measurement of loss allowance at an amount equal to lifetime expected credit losses. Lifetime expected credit losses are the expected credit losses that result from all possible default events over the expected life of a financial instrument.

k) Other financial assets:

In respect of its other financial assets, the SPV Group assesses if the credit risk on those financial assets has increased significantly since initial recognition. If the credit risk has not increased significantly since initial recognition, the SPV Group measures the loss allowance at an amount equal to 12-month expected credit losses, else at an amount equal to the lifetime expected credit losses.

When making this assessment, the SPV Group uses the change in the risk of a default occurring over the expected life of the financial asset. To make that assessment, the SPV Group compares the risk of a default occurring on the financial asset as at the balance sheet date with the risk of a default occurring on the financial asset as at the date of initial recognition and considers reasonable and supportable information, that is available without undue cost or effort, that is indicative of significant increases in credit risk since initial recognition. The SPV Group assumes that the credit risk on a financial asset has not increased significantly since initial recognition if the financial asset is determined to have low credit risk at the balance sheet date.

l) Impairment of non-financial assets

For impairment assessment purposes, assets are grouped at the lowest levels for which there are largely independent cash inflows (cash generating units). As a result, some assets are tested individually for impairment and some are tested at cash-generating unit level (CGU). The SPV Group assesses at each balance sheet date whether there is any indication that an asset may be impaired. If any such indication exists, the Group estimates the recoverable amount of the asset. An asset or CGU whose carrying value exceeds its recoverable amount is considered impaired and is written down to its recoverable amount. Impairment losses of continuing operations are recognized in the statement of profit and loss. Assessment is also done at each Balance Sheet date as to whether there is any indication that an impairment loss recognized for an asset in prior accounting periods may no longer exist or may have decreased. The impairment loss recognised in prior accounting periods is reversed if there has been an increase in the recoverable value due to a change in the estimate. 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.

To determine value-in-use, management estimates expected future cash flows from each cash generating unit and determines a suitable discount rate in order to calculate the present value of those cash flows. The data used for impairment testing procedures are directly linked to the Group's latest approved budget, adjusted as necessary to exclude the effects of future re-organisations and asset enhancements. Discount factors are determined individually for each cash-generating unit and reflect current market assessment of the time value of money and asset-specific risk factors.

m) Borrowing costs

Borrowing costs include interest calculated using the effective interest method, amortization of ancillary costs and other costs the SPV Group incurs in connection with the borrowing of funds. Borrowing costs directly attributable to the acquisition or construction of a qualifying asset are capitalized during the period of time that is necessary to complete and prepare the asset for its intended use or sale. A qualifying asset is one that necessarily takes substantial period of time to get ready for its intended use. Capitalisation of borrowing costs is suspended in the period during which the active development is delayed due to, other than temporary, interruption. All other borrowing costs are charged to the combined statement of profit and loss as incurred.

n) Cash and cash equivalents

Cash and cash equivalent 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.

o) Statements of net assets at fair value

The disclosure of Statement of Net Assets at Fair Value comprises of the fair values of the total assets and fair values of the total liabilities of Project SPV's. The fair value of the assets is reviewed by the management, derived based on the fair valuation reports issued by the independent valuer appointed under the InvIT Regulations. The independent valuers are leading valuers with a recognized and relevant professional qualification as per InvIT regulations and valuation assumptions used are reviewed by the management at each balance sheet date.

p) Statement of total returns at fair value

The disclosure of total returns at fair value comprises of the Total Comprehensive Income as per the Statement of Profit and Loss and Other Changes in Fair Value. (e.g., in property, plant & equipment (if cost model is followed)) not recognized in Total Comprehensive Income. Other changes in fair value is derived based on the fair valuation reports issued by the independent valuer appointed under the InvIT Regulations.

q) Use of estimates and judgements

The preparation of Special Purpose Combined Financial Statements requires management to make certain estimates and assumptions that affect the amounts reported in the Special Purpose Combined Financial Statements and notes thereto. The management believes that these estimates and assumptions are reasonable and prudent. However, actual results could differ from these estimates. Any revision to accounting estimates is recognized prospectively in the current and future period. An overview of the areas that involve a higher degree of judgement or complexity, and of items which are more likely to be materially adjusted due to estimates and assumptions turning out to be different than those originally assessed have been disclosed below. Detailed information about each of these estimates and judgments is included in the relevant notes together with information about the basis of calculation for each affected line item in the Special Purpose Combined Financial Statements.

Estimate and judgements are continually evaluated and are based on historical experience and other factors, including expectations of future events that may have a financial impact on the entity and that are believed to be reasonable under circumstances.

The SPV Group makes estimates and assumptions concerning the future. The resulting accounting estimates will, by definition, seldom be equal to the related actual results. The estimates and assumptions that have significant risk of causing a material adjustment to the carrying amount of assets and liabilities are disclosed below:

i. Service concession agreement

Appendix D "Service concession arrangements" applies to "public to private" service concession arrangements, which can be defined as contracts under which the grantor transfers to a concession holder the right to deliver public services that give access to main public facilities for a specified period of time in return of managing the infrastructure used to deliver those public services.
More specifically, it applies to public to private service concession arrangement if the grantor:
a) Controls or regulates what services the operators must provide with the infrastructure, to whom it must provide them, and at what price; and
b) Controls through ownership or otherwise –any significant residual interest in the infrastructure at the end of the term of the arrangement.

Refer Note 2.3 (f) which explains revenue recognition where the estimates are involved to determine the relative selling prices of performance obligations under service concessions arrangements. The HAM revenue model based on which the revenue and finance income are recognized under the service concessions arrangements assumes certain estimates and assumptions based which the project effective internal rate of return (IRR) is calculated for finance income recognition. The key inputs of the model comprise of annuity and interest on annuity inflows, estimations on cost to build and maintain the asset and other operational costs. These inputs are based on circumstances existing and management judgement / assumption on the future expectations based on current situations. Judgements include management view on expected earnings in future years, changes in interest rates, cost inflation, government policy changes, etc.

ii. Provisions and liabilities

Provisions and liabilities are recognized in the period when it becomes probable that there will be a future outflow of funds resulting from past operations or events and the amount of cash outflow can be reliably estimated. The timing of recognition and quantification of the liability requires the application of judgement to existing facts and circumstances, which can be subject to change.

iii. Fair value measurements

Management applies valuation techniques to determine the fair value of financial instruments (where active market quotes are not available). This involves developing estimates and assumptions consistent with how market participants would price the instrument. The SPV Group engages third party valuers, where required, to perform the valuation. Information about the valuation techniques and inputs used in determining the fair value of assets are disclosed in the notes to Special Purpose Combined Financial Statements.

iv. Impairment of financial assets

The impairment provision for financial assets is based on assumptions about risk of default and expected loss rates. The SPV Group uses judgement in making these assumptions and selecting the inputs to the impairment calculation, based on the SPV Group's history, existing market conditions as well as forward looking estimates at the end of each reporting period.

v. Fair valuation and disclosures

SEBI Master Circular issued under the SEBI Regulations requires disclosures 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 Investment Manager of the Trust works closely with the valuers to establish the appropriate valuation techniques and inputs to the model. 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 Weighted average cost of capital ('WACC'), tax rates, inflation rates etc. Changes in assumptions about these factors could affect the fair value.

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vi. Recognition of deferred tax assets

The extent to which deferred tax assets can be recognized is based on an assessment of the probability of the future taxable income against which the deferred tax assets can be utilized.

vii. Income taxes

Significant judgements are involved in estimating budgeted profits for the purpose of paying advance tax, determining the provision for income taxes, including amount expected to be paid / recovered for uncertain tax positions. The extent to which deferred tax assets/minimum alternate tax credit can be recognized is based on management's assessment of the probability of the future taxable income against which the deferred tax assets/minimum alternate tax credit can be utilized.

viii. Contingent liabilities

The SPV Group is subject to legal proceedings and tax issues covering a range of matters, which are pending in various jurisdictions. Due to the uncertainty inherent in such matters, it is difficult to predict the final outcome of such matters. The cases and claims against the SPV Group often raise difficult and complex factual and legal issues, which are subject to many uncertainties, including but not limited to the facts and circumstances of each particular case and claim, the jurisdiction and the differences in applicable law. In the normal course of business management of each Project SPV consults with legal counsel and certain other experts on matters related to litigation and taxes. The SPV Group accrues a liability when it is determined that an adverse outcome is probable and the amount of the loss can be reasonably estimated.

ix. Evaluation of indicators for impairment of assets

The evaluation of applicability of indicators of impairment of assets requires assessment of several external and internal factors which could result in deterioration of recoverable amount of the assets.

x. Recoverability of advances/ receivables

At each balance sheet date, based on historical default rates observed over expected life, the management assesses the expected credit losses on outstanding receivables and advances.

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	As at 30 September 2024	As at 31 March 2024	As at 31 March 2023	As at 31 March 2022
3 Other non-current financial assets				
(Unsecured, considered good)				
Receivables under service concession arrangements (refer note 3(ii) below)	33,554.17	32,089.99	28,962.24	13,260.08
Bank deposits with more than 12 months maturity*#	615.61	441.54	156.23	384.03
Security deposits	0.61	0.60	0.60	0.60
	34,170.39	**32,532.13**	**29,119.07**	**13,644.71**

*Includes interest accrued but not due

Includes deposits pledged against Debt Service Reserve Account ('DSRA'), Debenture Redemption Reserve ('DRR') and Major Maintenance Reserve ('MMR').

Notes:

(i) **Movement in receivables under service concession arrangements during the period / financial year :**				
Opening balance	41,386.78	37,070.93	20,825.21	12,914.72
Add: Asset acquired during the year (refer note 44)	-	2,668.98	3,930.00	-
Add: Interest income on financial assets receivable from NHAI (refer note 22)	2,323.10	4,497.97	2,691.61	1,649.06
Add: Revenue from operations and maintenance of road (refer note 22)	764.46	890.40	380.89	242.21
Add: Revenue from construction work (refer note 22)	2,596.74	7,028.62	14,389.88	15,593.48
Add: Gain on modification of financial assets (refer note 24)	764.84	441.74	4,800.55	699.78
Less: Loss on modification of financial assets (refer note 28)	(37.43)	(615.89)	(21.06)	-
Less: Amount received from NHAI during the period / year	(5,444.34)	(10,595.97)	(9,926.15)	(10,274.04)
Closing balance	**42,354.15**	**41,386.78**	**37,070.93**	**20,825.21**
(ii) **Details of receivables under service concession arrangements as at balance sheet date :**				
- Non-current (refer note 3)	33,554.17	32,089.99	28,962.24	13,260.08
- Current (refer note 11)	8,799.98	9,296.79	8,108.69	7,565.13
	42,354.15	**41,386.78**	**37,070.93**	**20,825.21**

(iii) Refer note 35- Fair value disclosures for disclosure of fair value in respect of financial assets measured at amortised cost and note 36- Financial risk management for assessment of expected credit losses.

(iv) For assets pledged as security, refer note 15 A, 15 B and 29.

4 Non-current tax assets (net)				
Advance income tax (net of provisions)	333.58	301.34	362.34	465.04
	333.58	**301.34**	**362.34**	**465.04**
5 Other non-current assets				
Balance with revenue authorities	962.62	1,092.36	1,994.20	1,152.10
	962.62	**1,092.36**	**1,994.20**	**1,152.10**
6 Current Investments				
Investment in mutual funds- quoted (fully paid)^				
HDFC medium term debt fund-growth option as at 30 September 2024: Nil units	-	-	-	142.09
(31 March 2024: Nil units; 31 March 2023: Nil units; 31 March 2022: 2,926,120.57 units)				
	-	**-**	**-**	**142.09**
Notes:				
Aggregate amount of quoted investments- at market value	-	-	-	142.09
Aggregate amount of quoted investments- at cost	-	-	-	133.00

For assets pledged as security, refer note 15 A, 15 B and 29.

^ These are measured at fair value through profit and loss ('FVTPL')

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	As at 30 September 2024	As at 31 March 2024	As at 31 March 2023	As at 31 March 2022
7 Trade receivables				
Trade receivables considered good- unsecured	684.67	669.69	1,098.10	195.42
	684.67	**669.69**	**1,098.10**	**195.42**

Notes:

(i) The SPV Group does not have any receivables which are either credit impaired or where there is significant increase in credit risk.
(ii) Refer note 36 Financial risk management for assessment of expected credit losses.
(iii) The carrying value are considered to be a reasonable approximation of fair value
(iv) For assets pledged as security, refer note 15 A, 15 B and 29.

(v) Trade receivables ageing schedule

As at 30 September 2024

Particulars	Outstanding for following periods from due date of payment				Total
	Less than 1 year	1-2 years	2-3 years	More than 3 years	
(i) Undisputed Trade receivables –considered good	457.64	226.36	0.67	-	684.67
(ii) Undisputed Trade receivables –which have significant increase in credit risk	-	-	-	-	-
(iii) Undisputed Trade receivables –credit impaired	-	-	-	-	-
(iv) Disputed Trade receivables–considered good	-	-	-	-	-
(v) Disputed Trade receivables – which have significant increase in credit risk	-	-	-	-	-
(vi) Disputed Trade receivables – credit impaired	-	-	-	-	-
Total	**457.64**	**226.36**	**0.67**	**-**	**684.67**

As at 31 March 2024

Particulars	Outstanding for following periods from due date of payment				Total
	Less than 1 year	1-2 years	2-3 years	More than 3 years	
(i) Undisputed Trade receivables –considered good	666.02	1.00	2.67	-	669.69
(ii) Undisputed Trade receivables –which have significant increase in credit risk	-	-	-	-	-
(iii) Undisputed Trade receivables –credit impaired	-	-	-	-	-
(iv) Disputed Trade receivables–considered good	-	-	-	-	-
(v) Disputed Trade receivables – which have significant increase in credit risk	-	-	-	-	-
(vi) Disputed Trade receivables – credit impaired	-	-	-	-	-
Total	**666.02**	**1.00**	**2.67**	**-**	**669.69**

As at 31 March 2023

Particulars	Outstanding for following periods from due date of payment				Total
	Less than 1 year	1-2 years	2-3 years	More than 3 years	
(i) Undisputed Trade receivables –considered good	1,095.43	2.67	-	-	1,098.10
(ii) Undisputed Trade receivables –which have significant increase in credit risk	-	-	-	-	-
(iii) Undisputed Trade receivables –credit impaired	-	-	-	-	-
(iv) Disputed Trade receivables–considered good	-	-	-	-	-
(v) Disputed Trade receivables – which have significant increase in credit risk	-	-	-	-	-
(vi) Disputed Trade receivables – credit impaired	-	-	-	-	-
Total	**1,095.43**	**2.67**	**-**	**-**	**1,098.10**

As at 31 March 2022

Particulars	Outstanding for following periods from due date of payment				Total
	Less than 1 year	1-2 years	2-3 years	More than 3 years	
(i) Undisputed Trade receivables –considered good	185.41	10.00	0.01	-	195.42
(ii) Undisputed Trade receivables –which have significant increase in credit risk	-	-	-	-	-
(iii) Undisputed Trade receivables –credit impaired	-	-	-	-	-
(iv) Disputed Trade receivables–considered good	-	-	-	-	-
(v) Disputed Trade receivables – which have significant increase in credit risk	-	-	-	-	-
(vi) Disputed Trade receivables – credit impaired	-	-	-	-	-
Total	**185.41**	**10.00**	**0.01**	**-**	**195.42**

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		As at 30 September 2024	As at 31 March 2024	As at 31 March 2023	As at 31 March 2022
8	**Cash and cash equivalents**				
	Balances with banks:				
	- in current accounts	141.84	276.71	123.78	344.67
	- deposits with original maturity less than three months*	286.02	697.79	52.97	-
	Cash on hand	0.52	0.53	0.54	0.45
		428.38	**975.03**	**177.29**	**345.12**

** Includes interest accrued but not due*

Notes:

(i) For assets pledged as security, refer note 15 A, 15 B and 29.

9	**Bank balances other than cash and cash equivalents above**				
	Fixed deposit with bank				
	Deposits with original maturity more than three months but less than twelve months*	1,259.00	296.26	116.39	3.01
	Margin money for DSRA/DRR/MMR * #	37.02	36.47	97.82	254.08
		1,296.02	**332.73**	**214.21**	**257.09**

** Includes interest accrued but not due*

 # Balance held as margin money/ security against borrowings, guarantee's and other commitments having less than 12 months maturity

Notes:

(i) For assets pledged as security, refer note 15 A, 15 B and 29.

10	**Loans**				
	(Unsecured, considered good unless otherwise stated)				
	Loan given to others	389.10	-	-	-
		389.10	**-**	**-**	**-**

11	**Other current financial assets**				
	(Unsecured, considered good)				
	Receivables under service concession arrangements (refer note 3 (ii) above)	8,799.98	9,296.79	8,108.69	7,565.13
	Bank deposits with original maturity more than 12 months but remaining maturity less than 12 months * #	641.09	573.75	457.51	51.96
	Other receivables:-				
	- Related party (refer note 38)	16.37	5.04	-	1.49
	- Others	13.03	12.95	0.13	-
		9,470.47	**9,888.53**	**8,566.33**	**7,618.58**

** Includes interest accrued but not due*

 # Balance held as margin money/ security against borrowings, guarantee's and other commitments having less than 12 months maturity

12	**Other current assets**				
	(Unsecured, considered good)				
	Balance with revenue authorities	1,274.60	1,375.64	1,198.57	1,089.64
	Other receivables	-	0.08	0.17	0.28
	Security deposit	0.04	0.04	0.04	-
	Prepaid expenses	33.40	68.77	102.51	117.88
		1,308.04	**1,444.53**	**1,301.29**	**1,207.80**

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13 Equity share capital

	As at 30 September 2024	As at 31 March 2024	As at 31 March 2023	As at 31 March 2022
Authorised share capital #				
348,710,000 (31 March 2024 : 348,710,000; 31 March 2023 : 338,910,000; 31 March 2022: 315,000,000) equity shares of ₹10 each	3,487.10	3,487.10	3,389.10	3,150.00
	3,487.10	**3,487.10**	**3,389.10**	**3,150.00**
Issued, subscribed and fully paid up #				
346,810,000 (31 March 2024 : 346,810,000; 31 March 2023 : 337,010,000; 31 March 2022: 313,100,000) equity shares of ₹10 each fully paid up	3,468.10	3,468.10	3,370.10	3,131.00
	3,468.10	**3,468.10**	**3,370.10**	**3,131.00**

Consist of equity share capital of the SPV Group which is line by line aggregate of the authorised share capital and paid-up share capital of each of the Project SPV's.

(i) Terms/rights attached to equity share capital :

The SPV Group has only one class of equity shares having a par value of ₹ 10 each. Each holder of equity shares is entitled to one vote per share. In the event of liquidation of the SPV Group, holders of equity shares will be entitled to receive the remaining assets of the SPVS, after distribution of all preferential amounts. The distribution will be in proportion to the number of equity shares held by the shareholders.

(ii) Reconciliation of equity shares outstanding at the beginning and at the end of the period / year :

Particulars	30 September 2024		31 March 2024		31 March 2023		31 March 2022	
	No. of shares	Amount	No. of shares	Amount	No. of shares	Amount	No. of shares	Amount
Equity share capital of ₹ 10 each fully paid up								
Balance at the beginning of the period/ year	34,68,10,000	3,468.10	33,70,10,000	3,370.10	31,31,00,000	3,131.00	21,33,00,000	2,133.00
Add: Shares issued during the period /year*	-	-	98,00,000	98.00	2,39,10,000	239.10	9,98,00,000	998.00
Balance at the end of the period / year	**34,68,10,000**	**3,468.10**	**34,68,10,000**	**3,468.10**	**33,70,10,000**	**3,370.10**	**31,31,00,000**	**3,131.00**

*During respective period/ year, Project SPVS mentioned below have issued shares to Gawar Construction Limited

Particulars	30 September 2024		31 March 2024		31 March 2023		31 March 2022	
	No. of shares	Amount	No. of shares	Amount	No. of shares	Amount	No. of shares	Amount
Equity share capital of ₹ 10 each fully paid up								
Dewas Ujjain Highway Private Limited ("DUHPL")	-	-	-	-	-	-	1,89,00,000	189.00
Hardiya Hasanpur Highway Private Limited. ("HHHPL")	-	-	-	-	-	-	2,40,00,000	240.00
Gawar Kiratpur Nerchowk Highway Private Limited ("GKNHPL")	-	-	-	-	-	-	5,69,00,000	569.00
Gawar Bangalore Highways Private Limited ("GBHPL")	-	-	-	-	2,39,10,000	239.10	-	-
Gawar Nainital Highways Private Limited (GNHPL-II")	-	-	98,00,000	98.00	-	-	-	-
Total	-	-	98,00,000	98.00	2,39,10,000	239.10	9,98,00,000	998.00

(iii) Shareholders holding more than 5% of shares of the group as at balance sheet date

Particulars	As on 30 September 2024		As on 31 March 2024		As on 31 March 2023		As on 31 March 2022	
	No. of shares	% of shareholding	No. of shares	% of shareholding	No. of shares	% of shareholding	No. of shares	% of shareholding
Gawar Construction Limited*	34,68,10,000	100.00%	34,68,10,000	100.00%	33,70,10,000	100.00%	31,31,00,000	100.00%

* includes shares held by nominee shareholder

(iv) No shares have been issued by the SPV Group for consideration other than cash, during the period of five years immediately preceding the reporting periods.

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		As at 30 September 2024	As at 31 March 2024	As at 31 March 2023	As at 31 March 2022
14	**Other equity**				
(i)	**Debenture redemption reserve**				
	Opening Balance	505.87	546.75	585.65	-
	Add: Transfer from retained earnings	-	-	-	585.65
	Less: Transfer to retained earnings	(24.07)	(40.88)	(38.90)	-
	Closing Balance	481.80	505.87	546.75	585.65
(ii)	**Retained earnings**				
	Opening Balance	7,216.10	5,918.41	1,256.84	594.28
	Add: Transfer from debenture redemption reserve	24.07	40.88	38.90	-
	Less: Transfer to debenture redemption reserve	-	-	-	(585.65)
	Add: Profit for the period / year	1,154.26	1,257.67	4,971.89	1,255.56
	Less: Share issue expense	-	(0.86)	(1.92)	(7.35)
	Less: Interim dividend paid (refer note 45)	-	-	(347.30)	-
	Closing Balance	8,394.43	7,216.10	5,918.41	1,256.84
	Total other equity	**8,876.23**	**7,721.97**	**6,465.16**	**1,842.49**

Nature and purpose of reserves

Debenture redemption reserve

In terms of Section 71 of the Companies Act, 2013 the issuer Project SPV is required to create Debenture Redemption Reserve out of profits of the SPV group available for payment of dividend and is required to be created for an amount which is equal to 10% of the outstanding value of debentures. The reserve can be utilised in accordance with the provisions of the Companies Act, 2013.

Retained earnings

Retained earnings are created from the profit / loss of the SPV Group, as adjusted for distributions to owners, transfers to other reserves, etc.

15 A	**Non current borrowings***				
	Secured				
	Non-convertible debentures	4,366.79	4,603.70	5,031.97	5,435.95
	Term loan from banks	22,179.47	19,440.31	16,198.72	7,154.30
	Unsecured				
	Loan from related parties (Refer note 38)	4,872.01	5,923.91	2,456.40	2,183.41
	Total Non-current borrowings (excluding current maturities) (A)	**31,418.27**	**29,967.92**	**23,687.09**	**14,773.66**
15 B	**Current borrowings**				
	Loan from related parties (Refer note 38)	-	-	1,743.60	846.28
	Current maturities of long-term borrowings				
	- Non-convertible debentures	451.24	427.92	403.55	383.48
	- Term loan from banks	1,683.39	1,643.79	732.39	314.54
	Total current borrowings (B)	**2,134.63**	**2,071.71**	**2,879.54**	**1,544.30**
	Total borrowing (A+B)	**33,552.90**	**32,039.63**	**26,566.63**	**16,317.96**

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15 C Reconciliation of liabilities arising from financing activities pursuant to Ind AS 7 - Cash flows:

Particulars	Non-current borrowings (including current maturities)	Current borrowings	Interest Accrued	Total
Balance as at 1 April 2021	**8,733.51**	**429.61**	**75.97**	**9,239.09**
Proceeds	16,429.17	1,203.57	-	17,632.74
Repayments	(10,354.79)	(50.00)	-	(10,404.79)
Interest expense	-	-	951.82	951.82
Interest paid	-	-	(646.66)	(646.66)
Processing fees for new loan taken during the year	(108.83)	-	-	(108.83)
Non cash adjustments	772.62	(736.90)	(35.72)	-
Balance as at 31 March 2022	**15,471.68**	**846.28**	**345.41**	**16,663.37**
Balance as at 1 April 2022	**15,471.68**	**846.28**	**345.41**	**16,663.37**
Proceeds	14,832.93	897.32	-	15,730.25
Repayments	(5,419.32)	-	-	(5,419.32)
Interest expense	-	-	1,519.34	1,519.34
Interest paid	-	-	(1,302.19)	(1,302.19)
Processing fees for new loan taken during the year	(98.66)	-	-	(98.66)
Non cash adjustments	36.40	-	(36.40)	-
Balance as at 31 March 2023	**24,823.03**	**1,743.60**	**526.16**	**27,092.79**
Balance as at 1 April 2023	**24,823.03**	**1,743.60**	**526.16**	**27,092.79**
Proceeds	8,313.19	1,046.31	-	9,359.50
Repayments	(3,868.03)	-	-	(3,868.03)
Interest expense	-	-	2,853.16	2,853.16
Interest paid	-	-	(2,806.77)	(2,806.77)
Processing fees for new loan taken during the year	(38.93)	-	-	(38.93)
Non cash adjustments	2,810.37	(2,789.91)	(20.46)	-
Balance as at 31 March 2024	**32,039.63**	**-**	**552.09**	**32,591.72**
Balance as at 1 April 2024	**32,039.63**	**-**	**552.09**	**32,591.72**
Proceeds	9,413.91	-	-	9,413.91
Repayments	(7,867.11)		-	(7,867.11)
Interest expense	-	-	1,556.58	1,556.58
Interest paid	-	-	(1,686.30)	(1,686.30)
Processing fees for new loan taken during the period	(45.00)	-	-	(45.00)
Non cash adjustments	11.47	-	(11.47)	-
Balance as at 30 September 2024	**33,552.90**	**-**	**410.90**	**33,963.80**

*refer note 15(ii) for repayment terms and security details of the outstanding non-current borrowings (including current maturities)

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15(ii)-Notes: For repayment terms and security details of the outstanding non-current borrowings (including current maturities) refer the table below:

Sl. No.	Nature of borrowing	Name of Project SPV	30 September 2024	31 March 2024	31 March 2023	31 March 2022	Repayment terms and security disclosure
1	Term loans from banks (secured)	Gawar Rohna Jhajjar Highway Private Limited	1,878.55	1,965.09	2,130.36	2,288.91	Term Loan of ₹ 2,560 million from HDFC Bank is secured by the following and are repayable in structured unequal 26 half yearly installments over the tenure of the loans after 7 months of Commercial Operation Date (COD) ranging from ₹ 76.8 million to ₹ 138.24 million commencing from February 2021 and ending on August 2033 bearing interest rate equal to 3M Repo Rate + Spread 1.70% (30 September 2024 - 8.20% p.a., 31 March 2024 - 8.20% p.a., 31 March 2023 - 8.40% p.a. and 31 March 2022 - 6.09% p.a.): 1. All of the Borrower's immovable / movable assets of the SPV (other than Project Assets; except those acquired out of free cash flows in operation period) and being informed to the Lenders. 2. All the project book debts, operating cash flows, receivables, commissions, revenue of whatsoever nature and wherever arising, present and future intangibles, goodwill, uncalled capital (present & future). 3. All the project bank accounts, including but not limited to the escrow account opened in a designated bank, where all cash inflows from the project shall be deposited and all proceeds shall be utilized in a manner and priority to be decided by the Lenders/Investors. 4. All the SPV's rights and interests under all the agreements related to the project, letter of credit (if any), and guarantee or performance guarantee bond provided by any party for any contract related to the project in favour of the Borrower. 5. Substitution Agreement executed by Authority on behalf of the lenders for the facility 6. Pledge of 51% equity shares (subject to Banking Regulation Act i.e. not more than 30% share for any single Lender) of the Borrower till the facility is entirely repaid. 7. All applicable insurance policies. 8. Security shall be on a first ranking pari-passu inter-se basis and shall be created in favour of lender.
2	Term loans from banks (secured)	Dewas Ujjain Highway Private Limited	898.71	926.20	599.98	146.77	Term loan of ₹ 950.40 million sanctioned by banks is secured by the following and are repayable in structured unequal half yearly installments over the tenure of the loans after Commercial Operation Date (COD) ranging from ₹ 16.63 million to ₹ 46.57 million commencing from February 2024 and ending on September 2036 bearing interest rate equal to SBI MCLR -3 Month + Spread 0.05% (30 September 2024 -8.25% p.a. ,31 March 2024 - 9.25% p.a. , 31 March 2023 - 9.05% p.a. and 31 March 2022 - 8.30% p.a.): 1. All of the Borrower's immovable properties, both present and future, save and except the Project Assets, if acquired by the Borrower. 2. All of the Borrower's tangible movable assets and all other movable assets, both present & future, save and except the project assets. 3. All of the Borrower's book debts, operating cash flows, receivables, commissions, revenues of whatsoever nature and wherever arising, present and future intangibles, goodwill, uncalled capital (present and future). 4. All the bank accounts pertaining to the Project. 5. All the Borrower's rights and interests under all the agreements related to project, letter of credit (if any), and guarantee or performance bond provided by any party for any contract related to the project in favour of the borrower. 6. Pledge of 51% equity shares (subject to Banking Regulation Act i.e. not more than 30% share for any single Lender) of the borrower till the facility is entirely repaid. 7. All the applicable insurance policies. 8. Security shall be on a first ranking pari-passu inter-se basis and shall be created in favour of lender.

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15(ii)-Notes: Repayment terms and security details of the outstanding non-current borrowings (including current maturities) (cont'd):

Sl. No.	Nature of borrowing	Name of Project SPV	30 September 2024	31 March 2024	31 March 2023	31 March 2022	Repayment terms and security disclosure
3	Term loans from banks (secured)	Dewas Ujjain Highway Private Limited	898.37	926.19	416.30	146.76	Term loan of ₹ 950.40 million sanctioned by banks is secured by the following and are repayable in structured unequal half yearly installments over the tenure of the loans after Commercial Operation Date (COD) ranging from ₹ 16.63 million to ₹ 46.57 million commencing from February 2024 and ending on September 2036 bearing interest rate equal to Punjab and Sind Bank Overnight MCLR + Spread 0.25% (30 September 2024 -8.35% p.a. ,31 March 2024 - 9.40% p.a. , 31 March 2023 - 9.05% p.a. and 31 March 2022 - 8.30% p.a.): 1. All of the Borrower's immovable properties, both present and future, save and except the Project Assets, if acquired by the Borrower. 2. All of the Borrower's tangible movable assets and all other movable assets, both present & future, save and except the project assets. 3. All of the Borrower's book debts, operating cash flows, receivables, commissions, revenues of whatsoever nature and wherever arising, present and future intangibles, goodwill, uncalled capital (present and future). 4. All the bank accounts pertaining to the Project. 5. All the Borrower's rights and interests under all the agreements related to project, letter of credit (if any), and guarantee or performance bond provided by any party for any contract related to the project in favour of the borrower. 6. Pledge of 51% equity shares (subject to Banking Regulation Act i.e. not more than 30% share for any single Lender) of the borrower till the facility is entirely repaid. 7. All the applicable insurance policies. 8. Security shall be on a first ranking pari-passu inter-se basis and shall be created in favour of lender.
4	Term loans from banks (secured)	Dewas Ujjain Highway Private Limited	386.91	398.64	258.15	63.23	Term loan of ₹ 409.20 million sanctioned by banks is secured by the following and are repayable in structured unequal half yearly installments over the tenure of the loans after Commercial Operation Date (COD) ranging from ₹ 7.16 million to ₹ 20.05 million commencing from February 2024 and ending on September 2036 bearing interest rate equal to Central Bank of India MCLR -1 Month + Spread (30 September 2024 -9.05% p.a. ,31 March 2024 - 9.35% p.a. , 31 March 2023 - 9.05% p.a. and 31 March 2022 - 8.30% p.a.): 1. All of the Borrower's immovable properties, both present and future, save and except the Project Assets, if acquired by the Borrower. 2. All of the Borrower's tangible movable assets and all other movable assets, both present & future, save and except the project assets. 3. All of the Borrower's book debts, operating cash flows, receivables, commissions, revenues of whatsoever nature and wherever arising, present and future intangibles, goodwill, uncalled capital (present and future). 4. All the bank accounts pertaining to the Project. 5. All the Borrower's rights and interests under all the agreements related to project, letter of credit (if any), and guarantee or performance bond provided by any party for any contract related to the project in favour of the borrower. 6. Pledge of 51% equity shares (subject to Banking Regulation Act i.e. not more than 30% share for any single Lender) of the borrower till the facility is entirely repaid. 7. All the applicable insurance policies. 8. Security shall be on a first ranking pari-passu inter-se basis and shall be created in favour of lender.
5	Term loans from banks (secured)	Gawar Kiratpur Nerchowk Highway Private Limited	-	2,133.84	1,690.49	602.52	Term Loan of ₹ 2,250 millions sanctioned by Banks/FIs is secured by the following and are repayable in structured unequal half yearly instalments over the tenure of the loans after Commercial Operation Date (COD) ranging from ₹ 33.75 million to ₹ 118.13 million commencing from January 2024 and ending July 2036 bearing interest rate equal to Assem Infrastructure Finance Ltd. MCLR -1 Year + Spread (30 September 2024 - Not applicable, 31 March 2024 - 9.31% p.a., 31 March 2023 - 9.20% p.a. and 31 March 2022 - 8.25% p.a.): 1. All of the Borrower's tangible fixed assets / movable assets including its movable plant and machinery, machinery spares, other equipment including its spares, tools and accessories, furniture, fixtures, vehicles and all other movable assets, both present & future, save & except Project Assets. 2. Project Book Debts, operating cash flows, receivables, commissions, revenues of whatsoever nature and wherever arising, present and future intangibles, goodwill, uncalled capital (present and future). 3. All the bank accounts pertaining to the Project. 4. All the SPV's rights and interests under all project documents, clearances and any other agreements related to the project, letter of credit (if any), and guarantee or performance bond provided by any party for any contract related to the project in favour of the borrower. 5. Pledge of 51% equity shares (subject to Banking Regulation Act i.e. not more than 30% share for any single Lender) of the borrower till the facility is entirely repaid. 6. All the applicable insurance policies. 7. Security shall be on a first ranking pari-passu inter-se basis and shall be created in favour of lender.

15(ii)-Notes: Repayment terms and security details of the outstanding non-current borrowings (including current maturities) (cont'd):

Sl. No.	Nature of borrowing	Name of Project SPV	30 September 2024	31 March 2024	31 March 2023	31 March 2022	Repayment terms and security disclosure
6	Term loans from banks (secured)	Gawar Kiratpur Nerchowk Highway Private Limited	-	2,133.78	1,690.49	444.48	Term Loan of ₹ 2,250 millions sanctioned by Banks/FIs is secured by the following and are repayable in structured unequal half yearly instalments over the tenure of the loans after Commercial Operation Date (COD) ranging from ₹ 33.75 million to ₹ 118.13 million commencing from January 2024 and ending July 2036 bearing interest rate equal to Axis Bank MCLR -1 Year + Spread (30 September 2024 - Not Applicable, 31 March 2024 - 9.60% p.a., 31 March 2023 - 9.20% p.a. and 31 March 2022 - 8.25% p.a.): 1. All of the Borrower's tangible fixed assets / movable assets including its movable plant and machinery, machinery spares, other equipment including its spares, tools and accessories, furniture, fixtures, vehicles and all other movable assets, both present & future, save & except Project Assets. 2. Project Book Debts, operating cash flows, receivables, commissions, revenues of whatsoever nature and wherever arising, present and future intangibles, goodwill, uncalled capital (present and future). 3. All the bank accounts pertaining to the Project. 4. All the SPV's rights and interests under all project documents, clearances and any other agreements related to the project, letter of credit (if any), and guarantee or performance bond provided by any party for any contract related to the project in favour of the borrower. 5. Pledge of 51% equity shares (subject to Banking Regulation Act i.e. not more than 30% share for any single Lender) of the borrower till the facility is entirely repaid. 6. All the applicable insurance policies. 7. Security shall be on a first ranking pari-passu inter-se basis and shall be created in favour of lender.
7	Term loans from banks (secured)	Gawar Kiratpur Nerchowk Highway Private Limited	2,102.36	2,133.84	1,690.49	602.52	Term Loan of ₹ 2,250 millions sanctioned by Banks/FIs is secured by the following and are repayable in structured unequal half yearly instalments over the tenure of the loans after Commercial Operation Date (COD) ranging from ₹ 33.75 million to ₹ 118.13 million commencing from January 2024 and ending July 2036 bearing interest rate equal to Standard Chartered Bank MCLR -1 Year + Spread (30 September 2024 - 8.50% p.a., 31 March 2024 - 9.31% p.a., 31 March 2023 - 9.20% p.a. and 31 March 2022 - 8.25% p.a.): 1. All of the Borrower's tangible fixed assets / movable assets including its movable plant and machinery, machinery spares, other equipment including its spares, tools and accessories, furniture, fixtures, vehicles and all other movable assets, both present & future, save & except Project Assets. 2. Project Book Debts, operating cash flows, receivables, commissions, revenues of whatsoever nature and wherever arising, present and future intangibles, goodwill, uncalled capital (present and future). 3. All the bank accounts pertaining to the Project. 4. All the SPV's rights and interests under all project documents, clearances and any other agreements related to the project, letter of credit (if any), and guarantee or performance bond provided by any party for any contract related to the project in favour of the borrower. 5. Pledge of 51% equity shares (subject to Banking Regulation Act i.e. not more than 30% share for any single Lender) of the borrower till the facility is entirely repaid. 6. All the applicable insurance policies. 7. Security shall be on a first ranking pari-passu inter-se basis and shall be created in favour of lender.
8	Term loans from banks (secured)	Gawar Kiratpur Nerchowk Highway Private Limited	4,204.62	-	-	-	Term Loan of ₹ 4,314.40 millions sanctioned by Banks/FIs is secured by the following and are repayable in structured unequal half yearly instalments over the tenure of the loans after Commercial Operation Date (COD) ranging from ₹ 65.70 million to ₹ 229.90 million commencing from January 2024 and ending July 2036 bearing interest rate equal to Indian Bank MCLR -1 Month + Spread 0.10% (30 September 2024 - 8.45% p.a., 31 March 2024 - Not Applicable, 31 March 2023 - Not Applicable and 31 March 2022 - Not Applicable): 1. All of the Borrower's tangible fixed assets / movable assets including its movable plant and machinery, machinery spares, other equipment including its spares, tools and accessories, furniture, fixtures, vehicles and all other movable assets, both present & future, save & except Project Assets. 2. Project Book Debts, operating cash flows, receivables, commissions, revenues of whatsoever nature and wherever arising, present and future intangibles, goodwill, uncalled capital (present and future). 3. All the bank accounts pertaining to the Project. 4. All the SPV's rights and interests under all project documents, clearances and any other agreements related to the project, letter of credit (if any), and guarantee or performance bond provided by any party for any contract related to the project in favour of the borrower. 5. Pledge of 51% equity shares (subject to Banking Regulation Act i.e. not more than 30% share for any single Lender) of the borrower till the facility is entirely repaid. 6. All the applicable insurance policies. 7. Security shall be on a first ranking pari-passu inter-se basis and shall be created in favour of lender.

15(ii)-Notes: Repayment terms and security details of the outstanding non-current borrowings (including current maturities) (cont'd):

Sl. No.	Nature of borrowing	Name of Project SPV	30 September 2024	31 March 2024	31 March 2023	31 March 2022	Repayment terms and security disclosure
9	Term loans from banks (secured)	Hardiya Hasanpur Highway Private Limited	3,068.58	1,331.39	1,012.58	-	Term borrowing of ₹ 3,465 million (31 March 2024-₹ 1,500 million, 31 March 2023- ₹ 1,500 million, 31 March 2022-₹ Nil) sanctioned by Banks is secured by the following and are repayable in structured unequal 26 half yearly installments over the tenure of the borrowings after Commercial Operation Date (COD) ranging from ₹ 45.00 million to ₹ 74.25 million commencing from November 2023 and ending on May 2036 bearing interest rate equal to HDFC Bank Repo rate -3 Month + Spread 1.65%(30 September 2024- 8.15%, 31 March 2024 - 8.15% p.a., 31 March 2023 - 8.25% p.a. and 31 March 2022 - Not applicable): 1. First mortgage and charge on all Borrower's immovable properties, whether owned or leased, both present and future, save and except the Project Assets, if acquired by the Borrower; 2. First charge by way of hypothecation on all the Borrower's tangible movable assets and all other movable assets both present and future save and except the Project Assets; 3. First charge on the Project's book debts, operating cash flows, receivables, commissions, revenues of whatsoever nature and wherever arising, present and future intangibles, goodwill, uncalled capital (present and future); 4. First charge on Project's bank accounts, including but not limited to the escrow account opened in a designated bank, where all cash inflows from the Project shall be deposited and all proceeds shall be utilized in a manner and priority to be decided by the Lenders/Investors; 5. Hypothecation of all the SPV's rights and interests under all the agreements related to the Project, letter of credit (if any), and guarantee or performance bond provided by any party for any contract related to the Project in favour of the Borrower; 6. Pledge of 51% equity shares and preference shares (subject to Banking Regulation Act i.e. not more than 30% share for any single Lender) of the Borrower till the Facility is entirely repaid; 7. Hypothecation of all applicable insurance policies; 8. Security shall be on a first ranking pari-passu inter-se basis and shall be created in favour of lender.
10	Term loans from banks (secured)	Hardiya Hasanpur Highway Private Limited	-	1,168.75	887.80	268.16	Term borrowing of ₹ 1,300 million sanctioned by Banks is secured by the following and are repayable in structured unequal 26 half yearly installments over the tenure of the borrowings after Commercial Operation Date (COD) ranging from ₹ 39.00 million to ₹ 64.35 million commencing from November 2023 and ending on May 2036 bearing interest rate equal to ICICI Bank MCLR -1 Year + Spread (30 September 2024 - Not Applicable, 31 March 2024 - 9.45% p.a., 31 March 2023 - 9.10% p.a. and 31 March 2022 - 8.25% p.a.)(Loan prepaid): 1. First mortgage and charge on all Borrower's immovable properties, whether owned or leased, both present and future, save and except the Project Assets, if acquired by the Borrower; 2. First charge by way of hypothecation on all the Borrower's tangible movable assets and all other movable assets both present and future save and except the Project Assets; 3. First charge on the Project's book debts, operating cash flows, receivables, commissions, revenues of whatsoever nature and wherever arising, present and future intangibles, goodwill, uncalled capital (present and future); 4. First charge on Project's bank accounts, including but not limited to the escrow account opened in a designated bank, where all cash inflows from the Project shall be deposited and all proceeds shall be utilized in a manner and priority to be decided by the Lenders/Investors; 5. Hypothecation of all the SPV's rights and interests under all the agreements related to the Project, letter of credit (if any), and guarantee or performance bond provided by any party for any contract related to the Project in favour of the Borrower; 6. Pledge of 51% equity shares and preference shares (subject to Banking Regulation Act i.e. not more than 30% share for any single Lender) of the Borrower till the Facility is entirely repaid; 7. Hypothecation of all applicable insurance policies; 8. Security shall be on a first ranking pari-passu inter-se basis and shall be created in favour of lender.

15(ii)-Notes: Repayment terms and security details of the outstanding non-current borrowings (including current maturities) (cont'd):

Sl. No.	Nature of borrowing	Name of Project SPV	30 September 2024	31 March 2024	31 March 2023	31 March 2022	Repayment terms and security disclosure
11	Term loans from banks (secured)	Hardiya Hasanpur Highway Private Limited	1,237.52	-	-	-	Term borrowing of ₹ 1,250.00 million sanctioned by Banks is secured by the following and are repayable in structured unequal 26 half yearly installments over the tenure of the borrowings after Commercial Operation Date (COD) ranging from ₹ 66.80 million to ₹ 81.10 million commencing from November 2023 and ending on May 2036 bearing interest rate equal to Indian Bank Overnight MCLR + Spread 0.20% (30 September 2024 - 8.65%., 31 March 2024 - Not Applicable., 31 March 2023 - Not Applicable. and 31 March 2022 - Not Applicable.) 1. First mortgage and charge on all Borrower's immovable properties, whether owned or leased, both present and future, save and except the Project Assets, if acquired by the Borrower; 2. First charge by way of hypothecation on all the Borrower's tangible movable assets and all other movable assets both present and future save and except the Project Assets; 3. First charge on the Project's book debts, operating cash flows, receivables, commissions, revenues of whatsoever nature and wherever arising, present and future intangibles, goodwill, uncalled capital (present and future); 4. First charge on Project's bank accounts, including but not limited to the escrow account opened in a designated bank, where all cash inflows from the Project shall be deposited and all proceeds shall be utilized in a manner and priority to be decided by the Lenders/Investors; 5. Hypothecation of all the SPV's rights and interests under all the agreements related to the Project, letter of credit (if any), and guarantee or performance bond provided by any party for any contract related to the Project in favour of the Borrower; 6. Pledge of 51% equity shares and preference shares (subject to Banking Regulation Act i.e. not more than 30% share for any single Lender) of the Borrower till the Facility is entirely repaid; 7. Hypothecation of all applicable insurance policies; 8. Security shall be on a first ranking pari-passu inter-se basis and shall be created in favour of lender.
12	Term loans from banks (secured)	Hardiya Hasanpur Highway Private Limited	-	1,168.73	745.09	268.15	Term borrowing of ₹ 1,300 million sanctioned by Banks is secured by the following and are repayable in structured unequal 26 half yearly installments over the tenure of the borrowings after Commercial Operation Date (COD) ranging from ₹ 39.00 million to ₹ 64.35 million commencing from November 2023 and ending on May 2036 bearing interest rate equal to PSB Bank MCLR -1 Year + Spread (30 September 2024 - Not Applicable., 31 March 2024 - 9.10% p.a., 31 March 2023 - 9.10% p.a. and 31 March 2022 - 8.25% p.a.) (Loan prepaid): 1. First mortgage and charge on all Borrower's immovable properties, whether owned or leased, both present and future, save and except the Project Assets, if acquired by the Borrower; 2. First charge by way of hypothecation on all the Borrower's tangible movable assets and all other movable assets both present and future save and except the Project Assets; 3. First charge on the Project's book debts, operating cash flows, receivables, commissions, revenues of whatsoever nature and wherever arising, present and future intangibles, goodwill, uncalled capital (present and future); 4. First charge on Project's bank accounts, including but not limited to the escrow account opened in a designated bank, where all cash inflows from the Project shall be deposited and all proceeds shall be utilized in a manner and priority to be decided by the Lenders/Investors; 5. Hypothecation of all the SPV's rights and interests under all the agreements related to the Project, letter of credit (if any), and guarantee or performance bond provided by any party for any contract related to the Project in favour of the Borrower; 6. Pledge of 51% equity shares and preference shares (subject to Banking Regulation Act i.e. not more than 30% share for any single Lender) of the Borrower till the Facility is entirely repaid; 7. Hypothecation of all applicable insurance policies; 8. Security shall be on a first ranking pari-passu inter-se basis and shall be created in favour of lender.

15(ii)-Notes: Repayment terms and security details of the outstanding non-current borrowings (including current maturities) (cont'd):

Sl. No.	Nature of borrowing	Name of Project SPV	30 September 2024	31 March 2024	31 March 2023	31 March 2022	Repayment terms and security disclosure
13	Term loans from banks (secured)	Gawar Rohna Sonepat Highways Private Limited	-	-	1,635.47	1,131.90	Term Loan of ₹ 1,990 million sanctioned by Banks is secured by the following and are repayable in structured unequal half yearly installments over the tenure of the loans after Commercial Operation Date (COD) commencing from August 2022 and ending on February 2035 bearing interest rate equal to Axis Bank MCLR -1 Year + Spread (30 September 2024 - Not Applicable, 31 March 2024 - Not Applicable, 31 March 2023 - 8.10% p.a. and 31 March 2022 - 8.45% p.a.) (Loan prepaid). Following are the security details precedent to the term loan; 1. a first charge by way of hypothecation of all of the tangible fixed assets / movable assets of the SPV, both present and future and the assets acquired our of free cash flow during the operational period (other than Project Assets) and being informed to the Lenders. 2. a first charge over receivables, all accounts of the SPV pertaining to the project, including the escrow account, DSRA and the Sub-Accounts (or any account in substitution thereof) that may be opened in accordance with this agreement and the Supplementary Escrow Agreement, or any other Project Documents and all the funds from time to time deposited therein and all permitted investments or other securities, provided that: a. the same being applied to the extent of waterfall of priority of payments; b. the charge over the receivables shall be enforceable but he lenders only for the purpose of being applied to the extent of waterfall of priority of payments 3. a first charge on all intangible assets including but not limited to goodwill, rights, undertaking, intellectual Property and uncalled capital, present and future, excluding the Project Assets (provided that all amounts received on account of any if these shall be subject to the extent permissible as per the priority of payments. 4. a first charge by way of hypothecation on: - all the right, title, interest, benefits, claims and demands whatsoever of the borrower in the Project Documents; - the right, title, interest of the Borrowing in, and under all the Clearances; - all the right, title, interest, benefits, claims and demands whatsoever of the Borrower in any letter if credit, guarantee including contractor guarantees and liquidated damages and performance bond provided by any party to the Project Documents; and - all the right, title, interest, benefits, claims and demands whatsoever of the Borrower under all Insurance Contracts 5. Pledge of 51% of the Equity extended by the Sponsor to the Borrower in favour of the Security Trustee for the benefit of the Lenders in form and substance satisfactory to the Security Trustee. 6. Security shall be on a first ranking pari-passu inter-se basis and shall be created in favour of lender.

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15(ii)-Notes: Repayment terms and security details of the outstanding non-current borrowings (including current maturities) (cont'd):

Sl. No.	Nature of borrowing	Name of Project SPV	30 September 2024	31 March 2024	31 March 2023	31 March 2022	Repayment terms and security disclosure
14	Term loans from banks (secured)	Gawar Rohna Sonepat Highways Private Limited	-	-	-	356.09	Term Loan of ₹ 1,990 million sanctioned by Banks is secured by the following and are repayable in structured unequal half yearly installments over the tenure of the loans after Commercial Operation Date (COD) commencing from August 2022 and ending on February 2035 Punjab National Bank MCLR -1 Year + Spread (30 September 2024 - Not Applicable, 31 March 2024 - Not Applicable., 31 March 2023 - Not Applicable and 31 March 2022 - 8.45% p.a.) (Loan prepaid). Following are the security details precedent to the term loan; 1. a first charge by way of hypothecation of all of the tangible fixed assets / movable assets of the SPV, both present and future and the assets acquired our of free cash flow during the operational period (other than Project Assets) and being informed to the Lenders. 2. a first charge over receivables, all accounts of the SPV pertaining to the project, including the escrow account, DSRA and the Sub-Accounts (or any account in substitution thereof) that may be opened in accordance with this agreement and the Supplementary Escrow Agreement, or any other Project Documents and all the funds from time to time deposited therein and all permitted investments or other securities, provided that: a. the same being applied to the extent of waterfall of priority of payments; b. the charge over the receivables shall be enforceable but he lenders only for the purpose of being applied to the extent of waterfall of priority of payments 3. a first charge on all intangible assets including but not limited to goodwill, rights, undertaking, intellectual Property and uncalled capital, present and future, excluding the Project Assets (provided that all amounts received on account of any if these shall be subject to the extent permissible as per the priority of payments. 4. a first charge by way of hypothecation on: - all the right, title, interest, benefits, claims and demands whatsoever of the borrower in the Project Documents; - the right, title, interest of the Borrowing in, and under all the Clearances; - all the right, title, interest, benefits, claims and demands whatsoever of the Borrower in any letter if credit, guarantee including contractor guarantees and liquidated damages and performance bond provided by any party to the Project Documents; and - all the right, title, interest, benefits, claims and demands whatsoever of the Borrower under all Insurance Contracts 5. Pledge of 51% of the Equity extended by the Sponsor to the Borrower in favour of the Security Trustee for the benefit of the Lenders in form and substance satisfactory to the Security Trustee. 6. Security shall be on a first ranking pari-passu inter-se basis and shall be created in favour of lender.
15	Term loans from banks (secured)	Gawar Rohna Sonepat Highways Private Limited	1,493.49	1,546.02	1,643.80	1,149.35	Term Loan of ₹ 2,000 million sanctioned by Banks is secured by the following and are repayable in structured unequal half yearly installments over the tenure of the loans after Commercial Operation Date (COD) commencing from August 2022 and ending on February 2035 HDFC Bank MCLR -3 Month + Spread 1.70% (30 September 2024 - 8.20% p.a., 31 March 2024 - 8.20% p.a., 31 March 2023 - 8.35% p.a. and 31 March 2022 - 8.45% p.a.). Following are the security details precedent to the term loan; 1. a first charge by way of hypothecation of all of the tangible fixed assets / movable assets of the SPV, both present and future and the assets acquired our of free cash flow during the operational period (other than Project Assets) and being informed to the Lenders. 2. a first charge over receivables, all accounts of the SPV pertaining to the project, including the escrow account, DSRA and the Sub-Accounts (or any account in substitution thereof) that may be opened in accordance with this agreement and the Supplementary Escrow Agreement, or any other Project Documents and all the funds from time to time deposited therein and all permitted investments or other securities, provided that: a. the same being applied to the extent of waterfall of priority of payments; b. the charge over the receivables shall be enforceable but he lenders only for the purpose of being applied to the extent of waterfall of priority of payments 3. a first charge on all intangible assets including but not limited to goodwill, rights, undertaking, intellectual Property and uncalled capital, present and future, excluding the Project Assets (provided that all amounts received on account of any if these shall be subject to the extent permissible as per the priority of payments. 4. a first charge by way of hypothecation on: - all the right, title, interest, benefits, claims and demands whatsoever of the borrower in the Project Documents; - the right, title, interest of the Borrowing in, and under all the Clearances; - all the right, title, interest, benefits, claims and demands whatsoever of the Borrower in any letter if credit, guarantee including contractor guarantees and liquidated damages and performance bond provided by any party to the Project Documents; and - all the right, title, interest, benefits, claims and demands whatsoever of the Borrower under all Insurance Contracts 5. Pledge of 51% of the Equity extended by the Sponsor to the Borrower in favour of the Security Trustee for the benefit of the Lenders in form and substance satisfactory to the Security Trustee. 6. Security shall be on a first ranking pari-passu inter-se basis and shall be created in favour of lender.

15(ii)-Notes: Repayment terms and security details of the outstanding non-current borrowings (including current maturities) (cont'd):

Sl. No.	Nature of borrowing	Name of Project SPV	30 September 2024	31 March 2024	31 March 2023	31 March 2022	Repayment terms and security disclosure
16	Term loans from banks (secured)	Gawar Rohna Sonepat Highways Private Limited	1,485.16	1,537.73	-	-	Term Loan of ₹ 1,543.9 million sanctioned by Banks is secured by the following and are repayable in structured unequal half yearly installments over the tenure of the loans after Commercial Operation Date (COD) commencing from August 2022 and ending on February 2035 Bank of Baroda MCLR -Overnight (30 September 2024 - 8.15% p.a., 31 March 2024 - 8.05% p.a., 31 March 2023 - Not Applicable and 31 March 2022 - Not Applicable). Following are the security details precedent to the term loan; 1. a first charge by way of hypothecation of all of the tangible fixed assets / movable assets of the SPV, both present and future and the assets acquired our of free cash flow during the operational period (other than Project Assets) and being informed to the Lenders. 2. a first charge over receivables, all accounts of the SPV pertaining to the project, including the escrow account, DSRA and the Sub-Accounts (or any account in substitution thereof) that may be opened in accordance with this agreement and the Supplementary Escrow Agreement, or any other Project Documents and all the funds from time to time deposited therein and all permitted investments or other securities, provided that: a. the same being applied to the extent of waterfall of priority of payments; b. the charge over the receivables shall be enforceable but he lenders only for the purpose of being applied to the extent of waterfall of priority of payments 3. a first charge on all intangible assets including but not limited to goodwill, rights, undertaking, intellectual Property and uncalled capital, present and future, excluding the Project Assets (provided that all amounts received on account of any if these shall be subject to the extent permissible as per the priority of payments. 4. a first charge by way of hypothecation on: - all the right, title, interest, benefits, claims and demands whatsoever of the borrower in the Project Documents; - the right, title, interest of the Borrowing in, and under all the Clearances; - all the right, title, interest, benefits, claims and demands whatsoever of the Borrower in any letter if credit, guarantee including contractor guarantees and liquidated damages and performance bond provided by any party to the Project Documents; and - all the right, title, interest, benefits, claims and demands whatsoever of the Borrower under all Insurance Contracts 5. Pledge of 51% of the Equity extended by the Sponsor to the Borrower in favour of the Security Trustee for the benefit of the Lenders in form and substance satisfactory to the Security Trustee. 6. Security shall be on a first ranking pari-passu inter-se basis and shall be created in favour of lender.
17	Term loans from banks (secured)	Gawar Bangalore Highways Private Limited	2,019.97	1,139.80	2,530.11	-	Term Loan of ₹ 2,489.10 millions (31 March 2024- ₹ 2,489.10 million, 31 March 2023- ₹ 5,289.10 million, 31 March 2022-₹ Nil) sanctioned by Banks is secured by the following and are repayable in structured unequal half yearly installments over the tenure of the loans after Commercial Operation Date (COD) ranging from ₹ 121.65 million to ₹ 401.97 million commencing from January 2024 and ending on January 2035 bearing interest rate equal to Axis Bank MCLR -1 Year + Spread Nil (30 September 2024 - 9.30% p.a., 31 March 2024 - 9.25% p.a., 31 March 2023 - 9.25% p.a. and 31 March 2022 - Not applicable): 1. All the fixed assets / movable assets of the SPV (other than Project Assets, except as may be acquired by the Borrower during the operation period out of its free cash flow) including its movable plant and machinery, machinery spares, other equipment including its spares, tools and accessories, furniture, fixtures, vehicles and all other movable assets, both present & future. 2. All the stocks of raw materials, semi-finished goods, consumables stores and other current assets of the Borrower, present and future. 3. The project book debts, operating cash flows, receivables, commissions, revenue of whatsoever nature and wherever arising, present and future intangibles, goodwill, uncalled capital (present & future). 4. All the project bank accounts, including but not limited to the escrow account opened in a designated bank, where all cash inflows from the project shall be deposited and all proceeds shall be utilized in a manner and priority to be decided by the Lenders/Investors. 5. All the SPV's rights and interests under all the agreements related to the project, letter of credit (if any), and guarantee or performance guarantee bond provided by any party for any contract related to the project in favour of the Borrower. 6. Substitution Agreement executed by Authority on behalf of the lenders for the facility. 7. Pledge of 51% equity shares and preference shares (subject to Banking Regulation Act i.e. not more than 30% share for any single Lender) of the Borrower till the Facility is entirely repaid. 8. All applicable insurance policies.

15(ii)-Notes: Repayment terms and security details of the outstanding non-current borrowings (including current maturities) (cont'd):

Sl. No.	Nature of borrowing	Name of Project SPV	30 September 2024	31 March 2024	31 March 2023	31 March 2022	Repayment terms and security disclosure
18	Term loans from banks (secured)	Gawar Bangalore Highways Private Limited	1,041.60	587.69	-	-	Term Loan of ₹ 1,300.00 million sanctioned by Banks is secured by the following and are repayable in structured unequal half yearly installments over the tenure of the loans after Commercial Operation Date (COD) ranging from ₹ 121.65 million to ₹ 401.97 million commencing from January 2024 and ending on January 2035 bearing interest rate equal to Federal Bank 3 months MCLR + Nil Spread (30 September 2024 - 9.30% p.a., 31 March 2024 - 9.25% p.a, 31 March 2023 - Not Applicable and 31 March 2022 - Not applicable): 1. All the fixed assets / movable assets of the SPV (other than Project Assets, except as may be acquired by the Borrower during the operation period out of its free cash flow) including its movable plant and machinery, machinery spares, other equipment including its spares, tools and accessories, furniture, fixtures, vehicles and all other movable assets, both present & future. 2. All the stocks of raw materials, semi-finished goods, consumables stores and other current assets of the Borrower, present and future. 3. The project book debts, operating cash flows, receivables, commissions, revenue of whatsoever nature and wherever arising, present and future intangibles, goodwill, uncalled capital (present & future). 4. All the project bank accounts, including but not limited to the escrow account opened in a designated bank, where all cash inflows from the project shall be deposited and all proceeds shall be utilized in a manner and priority to be decided by the Lenders/Investors. 5. All the SPV's rights and interests under all the agreements related to the project, letter of credit (if any), and guarantee or performance guarantee bond provided by any party for any contract related to the project in favour of the Borrower. 6. Substitution Agreement executed by Authority on behalf of the lenders for the facility. 7. Pledge of 51% equity shares and preference shares (subject to Banking Regulation Act i.e. not more than 30% share for any single Lender) of the Borrower till the Facility is entirely repaid. 8. All applicable insurance policies.
19	Term loans from banks (secured)	Gawar Bangalore Highways Private Limited	1,212.04	683.91	-	-	Term Loan of ₹ 1,500.00 million sanctioned by Banks is secured by the following and are repayable in structured unequal half yearly installments over the tenure of the loans after Commercial Operation Date (COD) ranging from ₹ 121.65 million to ₹ 401.97 million commencing from January 2024 and ending on January 2035 bearing interest rate equal to ICICI Bank MCLR -1 Year + Spread 0.10% (30 September 2024 - 9.30% p.a., 31 March 2024 - 9.25% p.a., 31 March 2023 - Not Applicable. and 31 March 2022 - Not applicable): 1. All the fixed assets / movable assets of the SPV (other than Project Assets, except as may be acquired by the Borrower during the operation period out of its free cash flow) including its movable plant and machinery, machinery spares, other equipment including its spares, tools and accessories, furniture, fixtures, vehicles and all other movable assets, both present & future. 2. All the stocks of raw materials, semi-finished goods, consumables stores and other current assets of the Borrower, present and future. 3. The project book debts, operating cash flows, receivables, commissions, revenue of whatsoever nature and wherever arising, present and future intangibles, goodwill, uncalled capital (present & future). 4. All the project bank accounts, including but not limited to the escrow account opened in a designated bank, where all cash inflows from the project shall be deposited and all proceeds shall be utilized in a manner and priority to be decided by the Lenders/Investors. 5. All the SPV's rights and interests under all the agreements related to the project, letter of credit (if any), and guarantee or performance guarantee bond provided by any party for any contract related to the project in favour of the Borrower. 6. Substitution Agreement executed by Authority on behalf of the lenders for the facility. 7. Pledge of 51% equity shares and preference shares (subject to Banking Regulation Act i.e. not more than 30% share for any single Lender) of the Borrower till the Facility is entirely repaid. 8. All applicable insurance policies.

15(ii)-Notes: Repayment terms and security details of the outstanding non-current borrowings (including current maturities) (cont'd):

Sl. No.	Nature of borrowing	Name of Project SPV	30 September 2024	31 March 2024	31 March 2023	31 March 2022	Repayment terms and security disclosure
20	Term loans from banks (secured)	Gawar Nainital Highways Private Limited	1,934.98	1,302.49	-	-	Term Loan of ₹ 2,763 millions sanctioned from Yes Bank is secured by the following and are repayable in structured unequal half yearly 21 installments over the tenure of the loans. First repayment was due at the end of fourth month from the date of Endorsement Agreement ranging from ₹ 6.91 million to ₹ 248.67 million commencing from November 2023 and ending on November 2033 bearing interest rate equal to Yes Bank 3M-T bill + Spread 2.40% (30 September 2024 - 9.01% p.a. ,31 March 2024 - 9.43% p.a. , 31 March 2023 - Not applicable. and 31 March 2022 - Not applicable.): 1 All the fixed assets / movable assets of the SPV (other than Project assets; except those acquired out of free flow of the SPV in operation phase) and being informed from time to time. 2. The project book debts, operating cash flows, receivables, commissions, revenue of whatsoever nature and wherever arising, present and future intangibles, goodwill, uncalled capital (present & future). 3. All the project bank accounts, including but not limited to the escrow account opened in a designated bank, where all cash inflows from the project shall be deposited and all proceeds shall be utilized in a manner and priority to be decided by the Lenders/Investors. 4. All the SPV's rights and interests under all the agreements related to the project, letter of credit (if any), and guarantee or performance guarantee bond provided by any party for any contract related to the project in favour of the Borrower. 5. Substitution Agreement executed by Authority on behalf of the lenders for the facility. 6. Pledge of 51% equity shares and preference shares (subject to Banking Regulation Act i.e. not more than 30% share for any single Lender) of the Borrower till the Facility is entirely repaid. 7. All applicable insurance policies. 8. Security shall be on a first ranking pari-passu inter-se basis and shall be created in favour of lender.
Total Term loans (secured) (A)			**23,862.86**	**21,084.09**	**16,931.11**	**7,468.84**	
21	Non-convertible debentures (Secured)	Gawar Narnaul Highway Private Limited	2,998.99	3,115.50	3,337.77	3,552.30	Non-Convertible Debentures of ₹ 3,650 million issued to Axis Bank is secured by the following and are repayable in structured unequal half yearly 26 installments over the tenure of the NCD ranging from ₹ 75 million - to ₹ 187.5 million commencing from January 2022 and ending on July 2034, bearing reset interest rate of 8% p.a. effective from 03 January 2024 as against of earlier coupon interest rate of 6% p.a.: (30 September 2024- 8% p.a. , 31 March 2024- 8% p.a. , 31 March 2023- 6% p.a. and 31 March 2022 -6% p.a.) i. First Charge by way of hypothecation of all the fixed assets /movable assets of the SPV (other than Project assets) and being informed from time to time to Lenders; ii. First charge on the Project's book debts, operating cash flows, receivables, commissions, revenues of whatsoever nature and wherever arising, present and future intangibles, goodwill, uncalled capital (present and future); iii. First charge on Project's bank accounts, including but not limited to the escrow account opened in a designated bank, where all cash inflows from the Project shall be deposited and all proceeds shall be utilized in a manner and priority to be decided by the Lenders/Investors. iv. Assignment of all the SPV's rights and interests under all the agreements related to the Project, letter of credit (if any), and guarantee or performance bond provided by any party for any contract related to the Project in favour of the Issuer; v. Assignment of all applicable insurance policies. vi. Pledge of 51% equity shares and preference shares (subject to Banking Regulation Act i.e. not more than 30% share for any single Lender) of the Borrower till the Facility is entirely repaid.
22	Non-convertible debentures (Secured)	Gawar Khajuwala Bap Highway Private Limited	1,819.04	1,916.12	2,097.75	2,267.13	Non-Convertible Debentures of ₹ 2,335 million issued to Axis Bank is secured by the following and are repayable in structured unequal half yearly 25 installments over the tenure of the NCD ranging from ₹ 52 million - to ₹ 110.25 million commencing from February 2022 and ending on February 2034, bearing reset interest rate of 8% p.a. effective from 03 January 2024 as against of earlier coupon interest rate of 6% p.a.: (30 September 2024- 8% p.a. , 31 March 2024- 8% p.a. , 31 March 2023- 6% p.a. and 31 March 2022 -6% p.a.) i. First Charge by way of hypothecation of all the fixed assets /movable assets of the SPV (other than project assets) and being informed from time to time to lenders; ii. First charge on the Project's book debts, operating cash flows, receivables, commissions, revenues of whatsoever nature and wherever arising, present and future intangibles, goodwill, uncalled capital (present and future); iii. First charge on Project's bank accounts, including but not limited to the escrow account opened in a designated bank, where all cash inflows from the Project shall be deposited and all proceeds shall be utilized in a manner and priority to be decided by the Lenders/Investors. iv. Assignment of all the SPV's rights and interests under all the agreements related to the project, letter of credit (if any), and guarantee or performance bond provided by any party for any contract related to the project in favour of the issuer; v. Assignment of all applicable insurance policies. vi. Pledge of 51% equity shares (subject to Banking Regulation Act i.e. not more than 30% share for any single Lender) of the Borrower till the Facility is entirely repaid.
Total Non-convertible debentures (secured) (B)			**4,818.03**	**5,031.62**	**5,435.52**	**5,819.43**	

15(ii)-Notes: Repayment terms of the outstanding non-current borrowings (including current maturities) (cont'd):

S.No.	Nature of borrowing	Name of Project SPV	30 September 2024	31 March 2024	31 March 2023	31 March 2022	Repayment terms
1	Loan from related parties	Gawar Rohna Jhajjar Highway Private Limited	56.00	121.56	277.94	589.64	Loan is having a rate of interest of 12% p.a. compounded annually (w.e.f achievement of PCOD/COD). The loan is to be repaid after repayment of senior debt or as per the parties' mutual understanding considering the conditions specified by the senior debt bank.
2	Loan from related parties	Dewas Ujjain Highway Private Limited	522.90	487.49	418.35	184.05	Loan is having rate of interest of 12% p.a. compounded semi-annually (w.e.f achievement of PCOD). The loan is to be repaid after repayment of senior debt or as per the parties' mutual understanding considering the conditions specified by the senior debt bank.
3	Loan from related parties	Gawar Kiratpur Nerchowk Highway Private Limited	1,978.64	1,857.59	1,325.25	662.23	Loan is having rate of interest of 12% p.a. compounded semi-annually (w.e.f achievement of PCOD). The loan is to be repaid after repayment of senior debt or as per the parties' mutual understanding considering the conditions specified by the senior debt bank.
4	Loan from related parties	Hardiya Hasanpur Highway Private Limited	76.71	936.14	743.87	250.76	Borrowing is having rate of interest of 12% p.a. compounded semi-annually (w.e.f achievement of PCOD). The loan is to be repaid after repayment of senior debt or as per the parties' mutual understanding considering the conditions specified by the senior debt bank.
5	Loan from related parties	Gawar Rohna Sonepat Highways Private Limited	-	109.57	521.21	736.90	Loan is having rate of interest of 12% p.a. compounded annually (w.e.f achievement of PCOD/COD). The loan is to be repaid after repayment of senior debt or as per the parties' mutual understanding considering the conditions specified by the senior debt bank.
6	Loan from related parties	Gawar Narnaul Highway Private Limited	-	-	100.18	495.61	Loan is having rate of interest of 12% p.a. compounded annually (w.e.f achievement of PCOD/COD).The loan is to be repaid after repayment of NCD facility considering the restricted payment conditions specified by the facility holder. Loan has been repaid during the financial year.
7	Loan from related parties	Gawar Khajuwala BAP Highway Private Limited	-	12.50	-	110.50	Loan is having rate of interest of 12% p.a. compounded annually (w.e.f achievement of PCOD/COD). The loan is to be repaid after repayment of NCD facility considering the restricted payment conditions specified by the facility holder.
8	Loan from related parties	Gawar Bangalore Highways Private Limited	1,268.78	1,487.66	813.20	-	Loan is having rate of interest of 12% p.a. compounded semi-annually (w.e.f achievement of PCOD). The loan is to be repaid after repayment of senior debt or as per the parties' mutual understanding considering the conditions specified by the senior debt bank.
9	Loan from related parties	Gawar Nainital Highways Private Limited	968.98	911.40	-	-	Loan is having rate of interest of 12% p.a. compounded Semi-annually (w.e.f achievement of PCOD/COD). The loan is to be repaid after repayment of senior debt or as per the parties' mutual understanding considering the conditions specified by the senior debt bank.
Total Loan from related parties (unsecured) (C)			**4,872.01**	**5,923.91**	**4,200.00**	**3,029.69**	
Total borrowings including current maturities (D= A+B+C)			**33,552.90**	**32,039.63**	**26,566.63**	**16,317.96**	

	As at 30 September 2024	As at 31 March 2024	As at 31 March 2023	As at 31 March 2022
16 Other non-current financial liabilities				
Interest accrued but not due (refer note 38)	-	-	-	217.63
	-	-	-	**217.63**

17 Deferred tax assets / (liabilities) (net)

Deferred tax assets / (liabilities) as at 30 September 2024	Assets	Liabilities	Net
Unclaimed preliminary expenditure	-	0.02	0.02
Unused business loss	-	-	0.00
MAT credit entitlement	-	5.02	5.02
Timing difference on receivable under service concession arrangement	9.36	(1,467.06)	(1,457.70)
Total	**9.36**	**(1,462.02)**	**(1,452.66)**

Deferred tax assets / (liabilities) as at 31 March 2024	Assets	Liabilities	Net
Unclaimed preliminary expenditure	0.00	0.04	0.04
Unused business loss	0.00	-	0.00
MAT credit entitlement	-	8.32	8.32
Timing difference on receivable under service concession arrangement	4.32	(1,604.68)	(1,600.36)
Total	**4.32**	**(1,596.32)**	**(1,592.00)**

Deferred tax assets / (liabilities) as at 31 March 2023	Assets	Liabilities	Net
Unclaimed preliminary expenditure	0.00	0.15	0.15
Timing difference on receivable under service concession arrangement	0.47	(1,710.94)	(1,710.47)
Total	**0.47**	**(1,710.79)**	**(1,710.32)**

Deferred tax assets / (liabilities) as at 31 March 2022	Assets	Liabilities	Net
Unclaimed preliminary expenditure	-	0.43	0.43
Unused business loss	-	6.34	6.34
Timing difference on receivable under service concession arrangement	-	(400.90)	(400.90)
Fair valuation of investments	-	(2.13)	(2.13)
Total	-	**(396.26)**	**(396.26)**

Component wise movement of Deferred tax asset/ (liabilities) for the six month period ended 30 September 2024

Particulars	01 April 2024	Recognised in the Statement of Profit and Loss during the period	30 September 2024
Assets			
Unclaimed preliminary expenditure	0.04	(0.02)	0.02
MAT credit entitlement	8.32	(3.30)	5.02
Sub-Total	**8.36**	**(3.32)**	**5.04**
Liabilities			
Timing difference on receivable under service concession arrangement	(1,600.36)	142.66	(1,457.70)
Sub-Total	**(1,600.36)**	**142.66**	**(1,457.70)**
	(1,592.00)	**139.34**	**(1,452.66)**

Component wise movement of Deferred tax asset/ (liabilities) for the year ended 31 March 2024

Particulars	01 April 2023	Recognised in the Statement of Profit and Loss during the year	31 March 2024
Assets			
Unclaimed preliminary expenditure	0.15	(0.11)	0.04
MAT credit entitlement	-	8.32	8.32
Sub-Total	**0.15**	**8.21**	**8.36**
Liabilities			
Timing difference on receivable under service concession arrangement	(1,710.47)	110.11	(1,600.36)
Sub-Total	**(1,710.47)**	**110.11**	**(1,600.36)**
	(1,710.32)	**118.32**	**(1,592.00)**

Component wise movement of Deferred tax asset/ (liabilities) for the year ended 31 March 2023

Particulars	01 April 2022	Recognised in the Statement of Profit and Loss during the year	31 March 2023
Assets			
Unclaimed preliminary expenditure	0.43	(0.28)	0.15
Unused business loss	6.34	(6.34)	-
Sub-Total	**6.77**	**(6.62)**	**0.15**
Liabilities			
Timing difference on receivable under service concession arrangement	(400.90)	(1,309.57)	(1,710.47)
Fair valuation of investments	(2.13)	2.13	-
Sub-Total	(403.03)	(1,307.44)	(1,710.47)
	(396.26)	**(1,314.06)**	**(1,710.32)**

Note 17 Deferred tax assets / (liabilities) (net) (Cont'd)

Component wise movement of Deferred tax asset/ (liabilities) for the year ended 31 March 2022

Particulars	01 April 2021	Recognised in the Statement of Profit and Loss during the year	31 March 2022
Assets			
Unclaimed preliminary expenditure	0.72	(0.29)	0.43
Unused business loss	0.41	5.93	6.34
Sub-Total	**1.13**	**5.64**	**6.77**
Liabilities			
Timing difference on receivable under service concession arrangement	(107.37)	(293.53)	(400.90)
Fair valuation of investments	-	(2.13)	(2.13)
Sub-Total	(107.37)	(295.66)	(403.03)
	(106.24)	**(290.02)**	**(396.26)**

The SPV Group has MAT credit entitlement amounting to ₹ 5.02 millions as at 30 September 2024 (31 March 2024: ₹ 8.32 millions; 31 March 2023: ₹ Nil ; 31 March 2022: ₹ Nil). Such tax credits have been recognised on the basis that recovery is probable in the foreseeable future.

	As at 30 September 2024	As at 31 March 2024	As at 31 March 2023	As at 31 March 2022
Pertaining to assessment year ending				
31 March 2024	5.02	8.32	-	-
	5.02	**8.32**	-	-

Deferred tax asset is recognized on carry forward losses to the extent it is probable that future taxable profits will be available against which the deductible temporary differences, carried forward tax losses can be utilised. The SPV Group has tax losses of ₹ Nil (31 March 2024: ₹ 0.00 millions; 31 March 2023: ₹ Nil ; 31 March 2022: ₹ 25.20 millions) that are available for offsetting against future taxable profit for eight years. The management of the SPV Group believes there is reasonable certainty that deferred tax asset will be recovered.

a) Unused business loss can be carried forward based on the year of origination as follows:

Assessment year/period of origination	Year of expiry	As at 30 September 2024	As at 31 March 2024	As at 31 March 2023	As at 31 March 2022
AY 2021-22	AY 29-30	-	-	-	1.64
AY 2022-23	AY 30-31	-	-	-	23.56
AY 2024-25	AY 32-33	-	0.00	-	-
		-	**0.00**	**-**	**25.20**

		As at 30 September 2024	As at 31 March 2024	As at 31 March 2023	As at 31 March 2022
18	**Trade payables**				
	Total outstanding dues of micro and small enterprises [refer note (i) below]	-	-	-	-
	Total outstanding, dues of creditors other than micro and small enterprises				
	Payables to related party (Refer note 38)	999.75	1,584.16	3,229.70	1,771.75
	Payable to others	6.38	2.57	267.20	1,082.34
		1,006.13	**1,586.73**	**3,496.90**	**2,854.09**

Note:

(i) **Dues to micro and small enterprises pursuant to section 22 of the Micro, Small and Medium Enterprises Development Act (MSMED), 2006**

On the basis of confirmation obtained from suppliers who have registered themselves under the Micro, Small and Medium Enterprises Development Act, 2006 (MSMED Act, 2006) and based on the information available with the group, the following are the details:

a)	the principal amount and the interest due thereon remaining unpaid to any supplier at the end of each accounting year	-	-	-	-
b)	the amount of interest paid by the buyer in terms of section 16 of the Micro, Small and Medium Enterprises Development Act, 2006 (27 of 2006), along with the amount of the payment made to the supplier beyond the appointed day during each accounting	-	-	-	-
c)	the amount of interest due and payable for the period of delay in making payment (which has been paid but beyond the appointed day during the year) but without adding the interest specified under the Micro, Small and Medium Enterprises Development	-	-	-	-
d)	the amount of interest accrued and remaining unpaid at the end of each accounting	-	-	-	-
e)	the amount of further interest remaining due and payable even in the succeeding years, until such date when the interest dues above are actually paid to the small enterprise, for the purpose of disallowance of a deductible expenditure under section 23 of the Micro, Small and Medium Enterprises Development Act, 2006.	-	-	-	-

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(ii) Trade payable ageing schedule

As at 30 September 2024	Outstanding from the due date of payment					Total
	Not Due	Less than 1 year	1-2 years	2-3 years	More than 3 years	
MSME	-	-	-	-	-	-
Others	282.78	723.35	-	-	-	1,006.13
Disputed dues - MSME	-	-	-	-	-	-
Disputed dues - Others	-	-	-	-	-	-
Total	**282.78**	**723.35**	**-**	**-**	**-**	**1,006.13**

As at 31 March 2024	Outstanding from the due date of payment					Total
	Not Due	Less than 1 year	1-2 years	2-3 years	More than 3 years	
MSME	-	-	-	-	-	-
Others	2.53	1,582.63	-	1.57	-	1,586.73
Disputed dues - MSME	-	-	-	-	-	-
Disputed dues - Others	-	-	-	-	-	-
Total	**2.53**	**1,582.63**	**-**	**1.57**	**-**	**1,586.73**

As at 31 March 2023	Outstanding from the due date of payment					Total
	Not Due	Less than 1 year	1-2 years	2-3 years	More than 3 years	
MSME	-	-	-	-	-	-
Others	262.92	3,232.41	1.57	-	-	3,496.90
Disputed dues - MSME	-	-	-	-	-	-
Disputed dues - Others	-	-	-	-	-	-
Total	**262.92**	**3,232.41**	**1.57**	**-**	**-**	**3,496.90**

As at 31 March 2022	Outstanding from the due date of payment					Total
	Not Due	Less than 1 year	1-2 years	2-3 years	More than 3 years	
MSME	-	-	-	-	-	-
Others	1,082.34	1,771.75	-	-	-	2,854.09
Disputed dues - MSME	-	-	-	-	-	-
Disputed dues - Others	-	-	-	-	-	-
Total	**1,082.34**	**1,771.75**	**-**	**-**	**-**	**2,854.09**

	As at 30 September 2024	As at 31 March 2024	As at 31 March 2023	As at 31 March 2022
19 Other current financial liabilities				
Interest payable:-				
non- convertible debentures	53.72	55.46	48.17	51.55
term loans	54.03	51.15	48.34	22.01
related party	303.15	445.48	429.65	54.22
Other payables	9.43	11.75	432.67	2.08
	420.33	**563.84**	**958.83**	**129.86**
20 Other current liabilities				
Amount payable to statutory authorities	69.10	97.07	221.88	138.66
Mobilisation advance received from NHAI	-	167.00	28.64	-
	69.10	**264.07**	**250.52**	**138.66**
21 Current tax liabilities (net)				
Provision for income tax (net of advances)	197.82	-	14.37	-
	197.82	**-**	**14.37**	**-**

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	For the six month period ended 30 September 2024	For the year ended 31 March 2024	For the year ended 31 March 2023	For the year ended 31 March 2022
22 Revenue from operations*				
Operating revenue				
Interest income on financial assets receivable from NHAI	2,323.10	4,497.97	2,691.61	1,649.06
Revenue from operations and maintenance of road	764.46	890.40	380.89	242.21
Revenue from construction services	2,596.74	7,028.62	14,389.88	15,593.48
Other operating revenue				
Bonus for early completion	513.00	-	30.99	688.49
Change of scope and utility income	857.25	2,433.92	2,837.53	908.27
	7,054.55	**14,850.91**	**20,330.90**	**19,081.51**
*refer note 39				
23 Profit on sale of investments				
Gain on investments carried at fair value through profit or loss (net)	-	-	-	8.47
Gain on sale of investments (net)	-	-	1.18	-
	-	**-**	**1.18**	**8.47**
24 Other income				
Interest income				
-loans and advances (measured at amortised cost)	25.92	25.16	-	-
- Income tax refund	5.77	15.06	15.16	0.45
Other non operating income				
Gain on modification of financial assets	764.84	441.74	4,800.55	699.78
	796.53	**481.96**	**4,815.71**	**700.23**
25 Operating expenses				
Construction expenses				
Engineering, procurement and construction expenses (refer note 38)	1,613.40	6,161.07	12,426.13	14,757.78
Technical consultancy charges	71.23	23.70	13.90	52.29
Escalation cost paid to contractor (refer note 38)	877.15	561.66	1,248.16	513.24
Operation and maintenance expenses	-			
Routine maintenance expenses (refer note 38)	373.25	289.41	118.89	111.47
Major maintenance expenses (refer note 38)	-	52.51	-	-
Non-recoverable GST on annuity from NHAI written off	(8.42)	195.63	64.16	-
Independent engineer's fees	26.51	94.74	40.02	30.30
Change of scope and utility shifting expenses (refer note 38)	857.25	2,433.92	2,837.53	908.27
Bonus paid for early completion of work (refer note 38)	513.00	-	30.99	688.49
	4,323.37	**9,812.64**	**16,779.78**	**17,061.84**
26 Employee benefits expense				
Salary, wages and bonus	9.52	15.74	4.76	1.80
	9.52	**15.74**	**4.76**	**1.80**
For disclosures related to provision for employee benefits, refer note 31				
27 Finance cost				
Interest expense				
- non convertible debentures	201.86	349.76	347.27	402.47
- term loans	999.24	1,805.06	930.21	310.16
- related party (refer note 38)	341.54	641.32	232.89	219.69
Interest on late payment of taxes	5.53	1.56	1.61	-
Finance and bank charges	8.41	55.46	7.36	19.50
	1,556.58	**2,853.16**	**1,519.34**	**951.82**
28 Other expenses				
Legal and professional expenses	14.14	20.67	7.57	10.74
Fees and subscription	0.57	3.12	0.35	0.63
Rent (refer note 32)	0.26	0.49	0.28	0.08
Corporate social responsibility expenses	33.56	26.47	13.35	12.69
Loss on modification of financial assets	37.43	615.89	21.06	-
Miscellaneous expenses	0.27	0.68	0.44	0.53
	86.23	**667.32**	**43.05**	**24.67**

29 Assets pledged as security

Particulars	As at 30 September 2024	As at 31 March 2024	As at 31 March 2023	As at 31 March 2022
Current				
Investments (refer note 6)	-	-	-	142.09
Trade receivables (refer note 7)	684.67	669.69	1,098.10	195.42
Cash and cash equivalents and other bank balances (refer note 8 and 9)	1,724.40	1,307.76	391.50	602.21
Loans (refer note 10)	389.10	-	-	-
Other current financial assets (refer note 11)	9,470.47	9,888.53	8,566.33	7,618.58
Other current assets (refer note 12)	1,308.04	1,444.53	1,301.29	1,207.80
Total current assets pledged as security	**13,576.68**	**13,310.51**	**11,357.22**	**9,766.10**
Non-current				
Other non-current financial assets (refer note 3)	34,170.39	32,532.13	29,119.07	13,644.71
Non-current tax assets (refer note 4)	333.58	301.34	362.34	465.04
Other Non-current assets (refer note 5)	962.62	1,092.36	1,994.20	1,152.10
Total non-currents assets pledged as security	**35,466.59**	**33,925.83**	**31,475.61**	**15,261.85**
Total assets pledged as security	**49,043.27**	**47,236.34**	**42,832.83**	**25,027.95**

	For the six month period ended 30 September 2024	For the year ended 31 March 2024	For the year ended 31 March 2023	For the year ended 31 March 2022
30 Tax expense				
(i) Income tax expense recognised in Combined Statement of Profit and Loss				
Current tax	548.09	578.59	364.88	135.17
Current tax for earlier years	-	30.74	-	-
Deferred tax (credit) / charge	(139.34)	(118.32)	1,314.06	290.02
	408.75	**491.01**	**1,678.94**	**425.19**

(ii) The major components of income tax expense and the reconciliation of expense based on the domestic effective tax rate and the reported tax expense in profit or loss are as follows :

Profit before tax	1,563.01	1,748.68	6,650.83	1,680.75
Income tax using the SPV Group's domestic tax rate *	25.17%	25.17%	25.17%	25.17%
Expected tax expense [A]	**393.38**	**440.11**	**1,673.88**	**423.01**
Tax effect of amount which are not deductible/ (taxable) in calculating taxable income				
Tax impact of expenses which will never be allowed	9.80	7.06	3.77	2.18
Tax adjustment for earlier years	-	30.74	-	-
Differential tax rate impact	5.57	13.10	1.29	-
Total adjustments [B]	**15.37**	**50.90**	**5.06**	**2.18**
Actual tax expense [C=A+B]	**408.75**	**491.01**	**1,678.94**	**425.19**

* Domestic tax rate applicable to the SPV Group has been computed as follows:

Base tax rate	22.00%
Surcharge (% of tax)	10.00%
Cess (% of tax)	4.00%
Applicable rate	25.17%

31 Disclosure relating to employee benefits pursuant to Ind AS 19 - Employee Benefits

Providing of retirement benefits in the form of Provident Fund, Pension Fund and Employees State Insurance Fund are not applicable to the SPV Group as number of employees are below the limit as specified in the respective act.

32 Information on Lease transactions pursuant to Ind AS 116-Leases

The SPV Group is a lessee under various short-term leases. Rental expenses on short- term or low- value leases for the six month period ended 30 September 2024 ₹ 0.26 millions and financial years ended 31 March 2024, 31 March 2023 and 31 March 2022 are ₹ 0.49 millions, ₹ 0.28 millions, ₹ 0.08 millions respectively.

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33 Capital and other commitments

Particulars	As at 30 September 2024	As at 31 March 2024	As at 31 March 2023	As at 31 March 2022
Estimated project cost for construction of highway committed to be executed	485.38	2,118.24	5,624.23	8,710.56
Total	**485.38**	**2,118.24**	**5,624.23**	**8,710.56**

34 A. Contingent liabilities and claims

Particulars	As at 30 September 2024	As at 31 March 2024	As at 31 March 2023	As at 31 March 2022
Contingent liabilities and claims				
- Income Tax demands*	2.10	2.10	-	-
- Indirect tax related demands**	108.33	109.68	-	-
Total	**110.43**	**111.78**	**-**	**-**

*Pertaining to income tax demands raised against the GKNHPL. The Project SPV has filed the requisite appeals and rectification with the department.
**Pertaining to indirect tax demands raised against the DUHPL, GKBHPL. The Project SPV has filed the requisite appeals and rectification with the department.

Further few of the Project SPVS have received official summons / inquiries from the GST Department to seek certain clarifications, for which responses have been submitted or those Project SPVS are in the process of filing appropriate responses. The management believes that the ultimate outcome of those proceedings will not have a material impact on the SPV Group's financial position and results of operations.

B. Contingent asset

The Project SPV's has filed claim with NHAI for change in law under Good and Services Tax. Pending the final decision, the afoersaid claim has been accounted for on prudence basis in the combined financial statements. The Project wise details of the contingent claim are given as under:-

(in millions)

Name of Project SPV	Claim filed with NHAI (A)	Claim accounted for (B)	Contingent assets (not accounted for) (C)=(A)-(B)
GNHPL	779.30	407.76	371.54
HHHPL	830.51	501.24	329.27
DUHPL	590.93	334.34	256.59
Total	**2,200.74**	**1,243.34**	**957.40**

35 Fair value disclosures

i) Fair values hierarchy

Financial assets and financial liabilities measured at fair value in the Balance Sheet are divided into three levels of a fair value hierarchy. The three levels are defined based on the observability of significant inputs to the measurement, as follows:

Level 1: Quoted prices (unadjusted) in active markets for financial instruments.

Level 2: The fair value of financial instruments that are not traded in an active market is determined using valuation techniques which maximise the use of observable market data rely as little as possible on SPV Group specific estimates.

Level 3: If one or more of the significant inputs is not based on observable market data, the instrument is included in level 3.

Financial assets measured at fair value - recurring fair value measurements:

As at 30 September 2024	Level 1	Level 2	Level 3	Total
Assets at fair value				
Financial assets				
Investments	-	-	-	-

As at 31 March 2024	Level 1	Level 2	Level 3	Total
Assets at fair value				
Financial assets				
Investments	-	-	-	-

As at 31 March 2023	Level 1	Level 2	Level 3	Total
Assets at fair value				
Financial assets				
Investments	-	-	-	-

As at 31 March 2022	Level 1	Level 2	Level 3	Total
Assets at fair value				
Financial assets				
Investments	142.09	-	-	142.09

Valuation process and technique used to determine fair value

The fair value of investments in mutual fund units is based on the net asset value ('NAV') as stated by the issuers of these mutual fund units in the published statements as at each reported balance sheet date. NAV represents the price at which the issuer will issue further units of mutual fund and the price at which issuers will redeem such units from the investor.

(ii) Fair value of instruments measured at amortised cost:

Fair value of instruments measured at amortised cost for which fair value is disclosed as follows using Level 3 inputs:

Particulars	Level	As at 30 September 2024		As at 31 March 2024		As at 31 March 2023		As at 31 March 2022	
		Carrying value	Fair value	Carrying value	Fair value	Carrying value	Fair value	Carrying value	Fair value
Financial assets									
Other current and non current financial assets	Level 3	43,640.86	43,640.86	42,420.66	42,420.66	37,685.40	37,685.40	21,263.29	21,263.29
Trade receivables	Level 3	684.67	684.67	669.69	669.69	1,098.10	1,098.10	195.42	195.42
Cash and cash equivalents	Level 3	428.38	428.38	975.03	975.03	177.29	177.29	345.12	345.12
Bank balances other than cash and cash equivalents above	Level 3	1,296.02	1,296.02	332.73	332.73	214.21	214.21	257.09	257.09
Loans	Level 3	389.10	389.10	-	-	-	-	-	-
Total financial assets		**46,439.03**	**46,439.03**	**44,398.11**	**44,398.11**	**39,175.00**	**39,175.00**	**22,060.92**	**22,060.92**
Financial liabilities									
Borrowings	Level 3	33,552.90	33,552.90	32,039.63	32,039.63	26,566.63	26,566.63	16,317.96	16,317.96
Trade payable	Level 3	1,006.13	1,006.13	1,586.73	1,586.73	3,496.90	3,496.90	2,854.09	2,854.09
Other financial liabilities	Level 3	420.33	420.33	563.84	563.84	958.83	958.83	347.49	347.49
Total financial liabilities		**34,979.36**	**34,979.36**	**34,190.20**	**34,190.20**	**31,022.36**	**31,022.36**	**19,519.54**	**19,519.54**

The carrying amount of financial assets and financial liabilities measured at amortised cost in these combined financial statements are a reasonable approximation of their fair values since the SPV Group does not anticipate that the carrying amounts would be significantly different from the values that would eventually be received or settled. 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 following methods and assumptions were used to estimate the fair values:

(i) Long-term fixed rate receivables are evaluated by the group based on parameters such as interest rates, individual credit worthiness of the customer and other market risk factors.

(ii) The fair values of the SPV Group's loans and receivables from/to related parties and others are determined by applying discounted cash flows ('DCF') method, using discount rate that reflects the issuer's borrowing rate as at the end of the reporting period. The own non-performance risk as at the reporting period end was assessed to be insignificant.

(iii) All the other long term borrowing facilities availed by the group are variable rate facilities which are subject to changes in underlying interest rate indices. The management believes that the current rate of interest on these loans are in close approximation from market rates applicable to the SPV Group. Therefore, the management estimates that the fair value of these borrowings are approximate to their respective carrying values.

36 Financial risk management

i) Financial instruments by category

Particulars	As at 30 September 2024			As at 31 March 2024			As at 31 March 2023			As at 31 March 2022		
	FVTPL	FVOCI	Amortised cost	FVTPL	FVOCI	Amortised cost	FVTPL	FVOCI	Amortised cost	FVTPL	FVOCI	Amortised cost
Financial assets												
Other current and non current financial assets	-	-	43,640.86	-	-	42,420.66	-	-	37,685.40	-	-	21,263.29
Investment	-	-	-	-	-	-	-	-	-	142.09	-	-
Trade receivables	-	-	684.67	-	-	669.69	-	-	1,098.10	-	-	195.42
Cash and cash equivalents	-	-	428.38	-	-	975.03	-	-	177.29	-	-	345.12
Bank balances other than cash and cash equivalents above	-	-	1,296.02	-	-	332.73	-	-	214.21	-	-	257.09
Loans	-	-	389.10	-	-	-	-	-	-	-	-	-
Total	**-**	**-**	**46,439.03**	**-**	**-**	**44,398.11**	**-**	**-**	**39,175.00**	**142.09**	**-**	**22,060.92**
Financial liabilities												
Borrowings	-	-	33,552.90	-	-	32,039.63	-	-	26,566.63	-	-	16,317.96
Trade payables	-	-	1,006.13	-	-	1,586.73	-	-	3,496.90	-	-	2,854.09
Other financial liabilities	-	-	420.33	-	-	563.84	-	-	958.83	-	-	347.49
Total	**-**	**-**	**34,979.36**	**-**	**-**	**34,190.20**	**-**	**-**	**31,022.36**	**-**	**-**	**19,519.54**

ii) Risk Management

The SPV Group activities expose it to market risk, liquidity risk and credit risk. The SPV group's Board of Directors has overall responsibility for the establishment and oversight of the group's risk management framework. This note explains the sources of risk which the entity is exposed to and how the entity manages the risk and the related impact in the Combined Financial Statements :

Risk	Exposure arising from	Measurement	Management of group manages risks by
Credit risk	Cash and cash equivalents, bank balances other than cash and cash equivalents above, trade receivables, financial assets measured at amortised cost, loans	Ageing analysis	Investing in bank deposits, diversification of asset base, credit limits and collateral.
Liquidity risk	Borrowings and other liabilities	Rolling cash flow forecasts	Availability of committed credit lines and borrowing facilities.
Market risk : interest rate risk	Borrowings at variable rates	Sensitivity analysis	Negotiation of terms that reflect the market factors.
Market risk : price risk	Investments at fair value through profit or loss	Sensitivity analysis	Diversification of its portfolio of assets.

The SPV Group's risk management is carried out by a project finance team and treasury team under policies approved by Board of Directors of respective SPVs. The management of the SPV group provides principles for overall risk management, as well as policies covering specific areas, such as, interest rate risk, credit risk and investment of excess liquidity.

A) Credit risk

Credit risk is the risk that a counterparty fails to discharge an obligation to the SPV group. The SPV group is exposed to this risk for various financial instruments, for example by granting loans and receivables to customers, placing deposits, etc. The SPV group's maximum exposure to credit risk is limited to the carrying amount of following types of financial assets:
- cash and cash equivalents,
- investments
- trade receivables,
- other non-current and current financial assets
- deposits with banks.

a) Credit risk management

The SPV group assesses and manages credit risk based on internal credit rating system, continuously monitoring defaults of customers and other counterparties, identified either individually or by the SPV group, and incorporates this information into its credit risk controls. Internal credit rating is performed for each class of financial instruments with different characteristics. The SPV group assigns the following credit ratings to each class of financial assets based on the assumptions, inputs and factors specific to the class of financial assets.

(i) Low credit risk
(ii) Medium credit risk
(iii) High credit risk

Assets under credit risk :

Credit rating	Particulars	As at 30 September 2024	As at 31 March 2024	As at 31 March 2023	As at 31 March 2022
A: Low	Other current and non-current financial assets	43,640.86	42,420.66	37,685.40	21,263.29
	Cash and cash equivalents	428.38	975.03	177.29	345.12
	Bank balances other than cash and cash equivalents above	1,296.02	332.73	214.21	257.09
	Loans	389.10	-	-	-
B: Medium	Trade receivables	684.67	669.69	1,098.10	195.42

Cash and cash equivalents and bank balances other than cash and cash equivalents

Credit risk related to cash and cash equivalents and bank deposits is managed by only accepting highly rated banks and diversifying bank deposits and accounts in different banks.

Trade receivables

The SPV Group has trade receivables primarily from various government authorities. Credit risk related to these receivables is expected to be medium. Such receivables are managed by monitoring the recoverability of amounts continuously.

Other financial assets measured at amortised cost

Other financial assets measured at amortised cost includes security deposits, annuity receivable and others. Credit risk related to these other financial assets is managed by monitoring the recoverability of such amounts continuously, while at the same time internal control system in place ensure the amounts are within defined limits.

b) Expected credit losses

Trade receivables

The Group is engaged in infrastructure development business under Hybrid Annuity Mode ("HAM") project. It currently derives its revenue primarily from hybrid annuity business. Since the receivables are from NHAI and various Government authorities, the credit risk with respect to such receivables from government institutions is expected to be very low and hence, no provision for expected credit loss is deemed necessary except in the case where individual receivables are known to be uncollectable.

Financial assets (other than trade receivables)

The Group provides for expected credit losses on loans and advances other than trade receivables by assessing individual financial instruments for expectation of any credit losses:
- For cash and cash equivalents and bank balances other than cash and cash equivalents - Since the group deals with only high-rated banks and financial institutions, credit risk in respect of cash and cash equivalents, other bank balances and bank deposits is evaluated as very low.
- For other financial assets - Credit risk is evaluated based on the SPV Group's knowledge of the credit worthiness of those parties and loss allowance is measured. Since, this category includes receivables of varied natures and purpose, there is no trend that the the SPV Group can draw to apply consistently to entire population.

B) Liquidity risk

Liquidity risk is the risk that the SPV Group may encounter difficulty in meeting its present and future obligations associated with financial liabilities that are required to be settled by delivering cash or another financial asset. The SPV Group's objective is to, at all times maintain optimum levels of liquidity to meet its cash and collateral obligations. The SPV Group requires funds both for short-term operational needs as well as for long-term investment programs mainly in growth projects. The SPV Group closely monitors its liquidity position and deploys a robust cash management system. It aims to minimise these risks by generating sufficient cash flows from its current operations, which in addition to the available cash and cash equivalents, liquid investments and sufficient committed fund facilities, will provide liquidity.

a) Financing arrangements

The SPV group had access to undrawn borrowing facilities under the term loan agreement amounting to ₹ 1,360.60 millions (31 March 2024 amounting to ₹ 5,282.03 millions, 31 March 2023 amounting to ₹ 4,694.90 millions and 31 March 2022 ₹ 12,046.30 millions).

b) Maturities of financial liabilities

The tables below analyse the SPV group's financial liabilities into relevant maturity categories based on their contractual maturities for all non-derivative financial liabilities. The amounts disclosed in the table are the contractual undiscounted cash flows.

Particulars	**Less than 1 year**	**1-2 year**	**2-5 year**	**More than 5 years**	**Total**
As at 30 September 2024					
Borrowings including current maturity	2,167.55	2,262.98	7,834.55	21,493.50	**33,758.58**
Trade payable	1,006.13	-	-	-	**1,006.13**
Other current financial liabilities and non-current financial liabilities	420.33	-	-	-	**420.33**
Total	**3,594.01**	**2,262.98**	**7,834.55**	**21,493.50**	**35,185.04**
Particulars	**Less than 1 year**	**1-3 year**	**3-5 year**	**More than 5 years**	**Total**
As at 31 March 2024					
Borrowings including current maturity	2,098.54	2,179.42	7,441.70	20,492.15	**32,211.81**
Trade payable	1,585.16	-	1.57	-	**1,586.73**
Other current financial liabilities and non-current financial liabilities	563.84	-	-	-	**563.84**
Total	**4,247.54**	**2,179.42**	**7,443.27**	**20,492.15**	**34,362.38**
Particulars	**Less than 1 year**	**1-3 year**	**3-5 year**	**More than 5 years**	**Total**
As at 31 March 2023					
Borrowings including current maturity	2,902.97	1,770.37	6,421.82	15,625.17	**26,720.33**
Trade payable	3,495.33	1.57	-	-	**3,496.90**
Other current financial liabilities and non-current financial liabilities	958.83	-	-	-	**958.83**
Total	**7,357.13**	**1,771.94**	**6,421.82**	**15,625.17**	**31,176.06**
Particulars	**Less than 1 year**	**1-3 year**	**3-5 year**	**More than 5 years**	**Total**
As at 31 March 2022					
Borrowings including current maturity	1,556.80	1,089.47	4,456.34	9,306.80	**16,409.41**
Trade payable	2,854.09	-	-	-	**2,854.09**
Other current financial liabilities and non-current financial liabilities	347.49	-	-	-	**347.49**
Total	**4,758.38**	**1,089.47**	**4,456.34**	**9,306.80**	**19,610.99**

C) Market risk

a) Interest rate risk

i) Liabilities

The SPV group's policy is to minimise interest rate cash flow risk exposures on long-term financing. At the reporting periods end, the SPV group is exposed to changes in market interest rates through bank borrowings at variable interest rates. The SPV group's investments in fixed deposits pay fixed interest rates.

Interest rate risk exposure

Below is the overall exposure of the SPV group to interest rate risk:

Particulars	As at 30 September 2024	As at 31 March 2024	As at 31 March 2023	As at 31 March 2022
Variable rate borrowing	23,862.87	21,084.10	16,931.11	7,468.85
Fixed rate borrowing	9,690.03	10,955.53	9,635.52	8,849.11
Amount disclosed under borrowings	**33,552.90**	**32,039.63**	**26,566.63**	**16,317.96**

Sensitivity

Below is the sensitivity of profit or loss and equity changes in interest rates.

Particulars	As at 30 September 2024	As at 31 March 2024	As at 31 March 2023	As at 31 March 2022
Interest sensitivity*				
Interest rates – increase by 100 bps*	238.63	210.84	169.31	74.69
Interest rates – decrease by 100 bps*	(238.63)	(210.84)	(169.31)	(74.69)

** Holding all other variables constant*

ii) Assets

The SPV group's fixed deposits are carried at amortised cost and are fixed rate deposits. They are therefore not subject to interest rate risk as defined in Ind AS 107 'Financial Instruments Disclosures', since neither the carrying amount nor the future cash flows will fluctuate because of a change in market interest rates.

b) Price risk

i) Exposure

The SPV group's exposure to price risk arises from investments held and classified in the Balance Sheet at fair value through profit or loss. To manage the price risk arising from investments, the SPV group diversifies its portfolio of assets.

ii) Sensitivity

The table below summarises the impact of increase/decrease of the index on the SPV group's profit for the period and equity:

Impact on profit before tax and equity

Particulars	As at 30 September 2024	As at 31 March 2024	As at 31 March 2023	As at 31 March 2022
Mutual Funds				
Net assets value – increase by 100 bps	-	-	-	1.42
Net assets value – decrease by 100 bps	-	-	-	(1.42)

37 Capital management

For the purpose of the SPV group's capital management, capital includes issued equity share capital and all other equity reserves attributable to the equity holders of the SPV group. The primary objective of the SPV group's capital management is to ensure that it maintains a strong credit rating and healthy capital ratios in order to support its business and maximise shareholder value.

The SPV group manages its capital structure and makes adjustments to it in light of changes in economic conditions and the requirements of the financial covenants. To maintain or adjust the capital structure, the SPV group may return capital to shareholders or issue new shares. The SPV group monitors capital using a gearing ratio, which is net debt divided by total equity. The SPV group has complied with any externally imposed capital requirements to which it is subject say any covenants specified in borrowing contracts which are required to met. The SPV group's policy is to keep the gearing ratio optimum.

Debt equity ratio

Particulars	As at 30 September 2024	As at 31 March 2024	As at 31 March 2023	As at 31 March 2022
Net debts*	31,209.21	30,710.21	26,243.78	16,009.20
'Total equity (refer note 13 and 14)	12,344.33	11,190.07	9,835.26	4,973.49
Net debt to equity ratio	**2.53**	**2.74**	**2.67**	**3.22**

***Net debts**

Particulars	As at 30 September 2024	As at 31 March 2024	As at 31 March 2023	As at 31 March 2022
Non current borrowings (refer note 15 A)	31,418.27	29,967.92	23,687.09	14,773.66
Current borrowings (refer note 15 B)	2,134.63	2,071.71	2,879.54	1,544.30
Other financial liabilities-interest acrrued (refer note 19 and 16)	410.90	552.09	526.16	345.41
Less: Cash and cash equivalents (refer note 8)	(428.38)	(975.03)	(177.29)	(345.12)
Less: Bank balances other than cash and cash equivalents above (refer note 9)	(1,296.02)	(332.73)	(214.21)	(257.09)
Less: Other financial assets (Bank deposits with original maturity more than 12 months but remaining maturity less than 12 months) (refer note 11)	(641.09)	(573.75)	(457.51)	(51.96)
Less: Loans (refer note 10)	(389.10)	-	-	-
Net debts	**31,209.21**	**30,710.21**	**26,243.78**	**16,009.20**

38 Related Party Disclosures

Information on related party transactions pursuant to Ind AS 24 - Related Party Disclosures and SEBI (Infrastructure Investment Trusts) Regulations, 2014 have been presented below. Following are the related parties and transactions entered with related parties for the six month period ended 30 September 2024 and financial year ended 31 March 2024, 31 March 2023 and 31 March 2022 :

a) List of related party as per requirement of IND AS-24 - Related Party Disclosures

Entity	Related Party	Relation
Gawar Kiratpur Nerchowk Highway Private Limited	Mr. Rakesh Kumar	Director
	Mr. Ravinder Kumar	Director
	Mr. Yogesh Mahajan	Director (till 20 November 2023)
	Mr. Yogesh Mahajan	Chief Executive Officer
	Mrs. Anjali K Mathur	Director (w.e.f. 23 September 2022)
	Mr. Vineet Goel	Chief Financial Officer
	Mr. Anoop Kumar	Company Secretary (w.e.f. 01 May 2022)
Gawar Rohna Jhajjar Highway Private Limited	Mr. Ravinder Kumar	Director (till 11 September 2023)
	Mr. Rakesh Kumar	Director (till 11 September 2023)
	Mr. Yogesh Mahajan	Director and Chief Executive Officer
	Ms. Ayushi Jain	Additional Director (w.e.f. 11 September 2023 and till 02 May 2024)
	Mr. Puneet Kalra	Additional Director (w.e.f. 11 September 2023 and till 22 September 2024)
	Mr. Puneet Kalra	Director (w.e.f. 23 September 2024)
	Ms. Himani	Additional Director (w.e.f. 02 May 2024 and till 22 September 2024)
	Ms. Himani	Director (w.e.f. 23 September 2024)
	Mr. Vineet Goel	Chief Financial Officer
	Mrs. Anjali K Mathur	Company Secretary
Dewas Ujjain Highway Private Limited	Mr. Yogesh Mahajan	Director
	Mr. Yogesh Mahajan	Chief Executive Officer (w.e.f. 13 March 2023)
	Mr. Ram Kishan	Director
	Mr. Bant Singh Singla	Director
	Mr. Vineet Goel	Chief Financial Officer (w.e.f. 13 March 2023)
	Ms. Himani	Company Secretary (w.e.f. 07 June 2022)
Gawar Narnaul Highway Private Limited	Mr. Rakesh Kumar	Director
	Mr. Ravinder Kumar	Director
	Mrs Anjali K Mathur	Director
	Mr. Yogesh Mahajan	Director and Chief Executive Officer
	Mr. Vineet Goel	Chief Financial Officer
	Mrs Ayushi Jain	Company Secretary (till 02 May 2024)
	Ms. Kirti Mehta	Company Secretary (w.e.f. 02 May 2024)
Gawar Khajuwala BAP Highway Private Limited	Mr. Rakesh Kumar	Director
	Mr. Ravinder Kumar	Director
	Mr. Yogesh Mahajan	Director and Chief Executive Officer
	Mr. Vineet Goel	Chief Financial Officer
	Mrs. Pooja Mittal	Company Secretary
Hardiya Hasanpur Highway Private Limited	Mr. Ravinder Kumar	Director
	Mr. Rakesh Kumar	Director
	Mrs. Anjali K Mathur	Director (w.e.f. 23 September, 2022)
	Mr. Yogesh Mahajan	Director (till 20 November 2023)
	Mr. Yogesh Mahajan	Chief Executive Officer (w.e.f. 12 June 2022)
	Mr. Vineet Goel	Chief Financial Officer (w.e.f. 12 June 2022)
	Mr. Ratnesh Mathur	Company Secretary (w.e.f. 10 June 2022 till 31 July 2022)
	Ms. Twinkle	Company Secretary (w.e.f. 01 August 2022 till 15 October 2024)
Gawar Rohna Sonepat Highways Private Limited	Mr. Rakesh Kumar	Director (till 11 September 2023)
	Mr. Ravinder Kumar	Director (till 11 September 2023)
	Mr. Yogesh Mahajan	Director and Chief Executive Officer
	Ms Ayushi Jain	Director (till 02 May 2024)
	Mr. Puneet Kalra	Additional Director (w.e.f. 11 September 2023 and till 22 September 2024)
	Mr. Puneet Kalra	Director (w.e.f. 23 September 2024)
	Ms. Himani	Additional Director (w.e.f. 02 May 2024 and till 22 September 2024)
	Ms. Himani	Director (w.e.f. 23 September 2024)
	Mr. Vineet Goel	Chief Financial Officer
	Ms Meenakshi Jindal	Company Secretary (till 10 October 2022)
	Mr. Bharat	Company Secretary (w.e.f. 01 April 2023)

38 Related Party Disclosures (Cont'd)

Entity	Related Party	Relation
Gawar Bangalore Highways Private Limited	Mr. Ram Kishan	Director (w.e.f. 28 November 2022)
	Mrs. Anjali K Mathur	Director (w.e.f. 28 November 2022)
	Mr. Sahil Kathuria	Director (w.e.f. 28 November 2022)
	Mr. Surender Kumar	Director (w.e.f. 11 June 2024)
	Mr. Yogesh Mahajan	Chief Executive Officer (w.e.f. 21 April 2023)
	Mr. Vineet Goel	Chief Financial Officer (w.e.f. 21 April 2023)
	Mr. Shubham Jain	Company Secretary (w.e.f. 01 August 2023 till 30 September 2023)
	Mr. Srijan Kumar Gupta	Company Secretary (w.e.f. 20 February 2024)
Gawar Nainital Highways Private Limited	Mr. Puneet Kalra	Director
	Mrs. Anjali K Mathur	Director
	Mr. Neeraj Sheoran	Director (till 12 June 2024)
	Mr. Manoj Kumar Gupta	Director (w.e.f. 11 June 2024)

Entities in which key management personnel and their close members* have significant influence
Gawar Foundation

*Close members of the family of a person are those family members who may be expected to influence, or be influenced by, that person in their dealings with the entity including:
(a) that person's children, spouse or domestic partner, brother, sister, father and mother;
(b) children of that person's spouse or domestic partner; and
(c) dependants of that person or that person's spouse or

b) List of additional related parties as per requirement of InvIT regulation

Parties to the InvIT

I Sponsor Group

(i) **The following entity forms part of the 'Sponsor Group' in accordance with Regulation 2(1)(zxc) of the InvIT Regulations read with the second proviso to Regulation (4)(2)(d)(i) of the InvIT Regulations**

Gawar Construction Limited (Sponsor of the Trust)

(ii) **Promoters of the parties forming part of the Sponsor Group**
Rakesh Kumar
Ravinder Kumar

Directors / Key Managerial Personnel ('KMP') of the parties forming part of the Sponsor Group
Rakesh Kumar
Ravinder Kumar
Ram Kishan
Bant Singh Singla
Yogesh Mahajan
Phoolwati
Bhupinder Singh
Sumedha Kataria
Vineet Goel
Seema Saharan

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II **Other parties to the InvIT and their respective Directors / KMP / Promoters**

Entity Name	Directors/ KMP	Designation
Gawar Investment Manager Private Limited (Investment Manager) (incorporated on 26 August 2023)	Yudhvir Singh Malik	Additional Director
	Vijayalakshmi Iyer	Additional Director
	Satish Chandra	Additional Director
	Rakesh Kumar	Additional Director
	Neeraj Sheoran	Director
	Bant Singh Singla	Director
	Manish Kumar Satnaliwala	Chief Executive Officer
	Arjun Vig	Chief Financial Officer (till 30 May 2024)
	Amit Kumar	Chief Financial Officer (w.e.f 01 June 2024)
	Shubham Jain	Company Secretary (w.e.f. 01 October 2023)
	Promoters	
	Gawar Construction Limited	

Entity Name	Directors/ KMP	Designation
Gawar Construction Limited (Project Manager)	Rakesh Kumar	Director
	Ravinder Kumar	Director
	Ram Kishan	Director
	Bant Singh Singla	Director
	Phoolwati	Non-Executive Director
	Bhupinder Singh	Independent Director
	Sumedha Kataria	Independent Director
	Yogesh Mahajan	Chief Executive Officer
	Vineet Goel	Chief Financial Officer
	Seema Saharan	Company Secreatary
	Promoters	
	Rakesh Kumar	
	Ravinder Kumar	

Entity Name	Directors	Designation
Axis Trustee Services Limited	Prashant Joshi	Director
	Deepa Rath	Director
	Arun Mehta	Director
	Parmod Kumar Nagpal	Director
	Promoters	
	Axis Bank Limited	

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38 Related Party Disclosures (Cont'd)

Particulars	For the six month period ended 30 September 2024	For the year ended 31 March 2024	For the year ended 31 March 2023	For the year ended 31 March 2022
Transaction during the period / year				
Engineering, procurement and construction expenses (excluding GST)				
Gawar Construction Limited	1,613.40	6,161.07	12,426.13	14,757.78
Operation and maintenance expenses (excluding GST)				
Gawar Construction Limited	373.25	289.41	118.89	111.47
Major maintenance expenses (excluding GST)				
Gawar Construction Limited	-	52.51	-	-
Change of scope and utility expenses (excluding GST)				
Gawar Construction Limited	857.25	2,433.92	2,837.53	908.27
Escalation cost paid to contractor (excluding GST)				
Gawar Construction Limited	877.15	561.66	1,248.16	513.24
Bonus paid for early completion of work (excluding GST)				
Gawar Construction Limited	513.00	-	30.99	688.49
Project management fees (excluding GST)				
Gawar Construction Limited	363.87	301.09	146.82	53.55
Proceeds from unsecured loan				
Gawar Construction Limited	1,008.51	3,246.60	3,218.60	2,582.91
Repayment of unsecured loan				
Gawar Construction Limited	2,060.42	1,522.69	2,048.28	2,099.14
Interest expenses on unsecured Loan				
Gawar Construction Limited	341.54	641.32	232.89	219.69
Payments made on our behalf				
Gawar Construction Limited	25.33	9.91	2.20	59.42
Payments made on their behalf				
Gawar Construction Limited	31.28	75.43	85.70	51.50
Dividend paid				
Gawar Construction Limited	-	-	347.30	-
Issue of equity share capital				
Gawar Construction Limited	-	98.00	239.10	998.00
Corporate Social Responsibility expenses				
Gawar Foundation	33.56	26.47	-	-
Proceeds from secured borrowings				
Axis Bank Limited	945.30	480.00	5,504.98	6,140.50
Repayment of secured borrowings				
Axis Bank Limited	2,215.86	1,732.71	1,192.04	40,320.80
Interest paid on borrowings				
Axis Bank Limited	141.67	473.02	217.52	275.62
Proceeds from Non-Convertible Debentures				
Axis Bank Limited	-	-	-	6,005.00
Repayment of Non-Convertible Debentures				
Axis Bank Limited	216.13	408.75	389.00	148.50
Interest on Non-Convertible Debentures				
Axis Bank Limited	199.32	344.91	342.16	85.78
Finance charges				
Axis Bank Limited	-	39.08	25.72	79.54
Interest income on bank deposits				
Axis Bank Limited	43.74	65.13	579.31	20.33

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Particulars	For the six month period ended 30 September 2024	For the year ended 31 March 2024	For the year ended 31 March 2023	For the year ended 31 March 2022
Bank deposits made during the period / year				
Axis Bank Limited	1,618.70	4,404.34	2,897.57	1,287.11
Redemption of Bank deposits				
Axis Bank Limited	1,273.35	3,479.21	2,183.77	698.65
Fees paid to Trustee				
Axis Trustee services limited	1.06	0.93	1.34	1.70
Balances outstanding at the end of the period / year				
Equity Share Capital				
Gawar Construction Limited	3,468.10	3,468.10	3,370.10	3,131.00
Unsecured Borrowing				
Gawar Construction Limited	4,872.01	5,923.91	4,200.00	3,029.69
Interest accrued on unsecured Loan				
Gawar Construction Limited	303.15	445.48	429.65	271.85
Trade Payable				
Gawar Construction Limited	999.75	1,584.16	3,229.70	1,771.75
Other receivables				
Gawar Construction Limited	16.37	5.04	-	1.49
Secured Borrowings				
Axis Bank Limited	2,034.32	3,304.89	5,902.36	1,589.62
Non-Convertible Debentures				
Axis Bank Limited	4,842.62	5,058.74	5,467.49	5,856.49
Interest payable				
Axis Bank Limited	53.72	55.46	48.17	51.55
Bank Deposits				
Axis Bank Limited	1,714.66	1,754.85	764.58	606.75
Other Key Management Personnel :				
Salary payable to Company Secretary of the respective Project SPV	0.48	-	-	-
Transactions during the period / year				
Short term remuneration paid to Company Secretary of the respective Project SPV	2.97	4.14	2.90	1.80

Note : All related party transactions entered during the period/ year were in ordinary course of business and on arms length basis.

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39 Revenue from contracts with customers

1 Disaggregation of revenue

Revenue recognised mainly comprises of revenue from Hybrid Annuity Mode "HAM" and contract revenue. Set out below is the disaggregation of the group's revenue from contracts with customers:

Description	For the six month period ended 30 September 2024	For the year ended 31 March 2024	For the year ended 31 March 2023	For the year ended 31 March 2022
Revenue from operations				
(a) Revenue from operations and maintenance of road	764.46	890.40	380.89	242.21
(b) Revenue from construction work	2,596.74	7,028.62	14,389.88	15,593.48
(c) Interest income on financial assets receivable from NHAI	2,323.10	4,497.97	2,691.61	1,649.06
(d) Bonus for early completion and change of scope and utility income	1,370.25	2,433.92	2,868.52	1,596.76
Total revenue	**7,054.55**	**14,850.91**	**20,330.90**	**19,081.51**

The table below presents disaggregated revenues from contracts with customers based on nature, amount and timing for the six month period ended 30 September 2024 and financial year ended 31 March 2024, 31 March 2023 and 31 March 2022:

S.No.	Types of Products by Nature	Types of Services by timing	For the six month period ended 30 September 2024	For the year ended 31 March 2024	For the year ended 31 March 2023	For the year ended 31 March 2022
1	Revenue from operations and maintenance of road	Over the period of time	764.46	890.40	380.89	242.21
2	Revenue from construction work	Over the period of time	2,596.74	7,028.62	14,389.88	15,593.48
3	Interest income on financial assets receivable from NHAI	Over the period of time	2,323.10	4,497.97	2,691.61	1,649.06
4	Bonus for early completion and change of scope and utility income	At the point of time	1,370.25	2,433.92	2,868.52	1,596.76
Total			**7,054.55**	**14,850.91**	**20,330.90**	**19,081.51**

2 Assets and liabilities related to contracts with customers

The following table provides information about receivables, contract assets and contract liabilities from contract with customers:

Description	As at 30 September 2024	As at 31 March 2024	As at 31 March 2023	As at 31 March 2022
Contract assets				
Trade receivables	684.67	669.69	1,098.10	195.42
Receivables under service concession arrangements	42,354.15	41,386.78	37,070.93	20,825.21
Total	**43,038.82**	**42,056.47**	**38,169.03**	**21,020.63**
Contract liability				
Mobilisation advance received from concession authority	-	167.00	28.64	-
Total	**-**	**167.00**	**28.64**	**-**

A receivable is a right to consideration that is unconditional upon passage of time. Revenue from the contracts are recognized upon satisfaction of Performance obligation. Trade Receivables are non-interest bearing and are generally due within 180 days except retention money held by the customer as per the terms and conditions of the contract. Basis the credit risk assessment done by the group, there is no provision for expected credit losses required to be recognized on Trade Receivables. Contract liability is the group's obligation to transfer goods or services to a customer for which the group has received consideration from the customer in advance.

3
There is no adjustment made to the contract price of the contract and hence the revenue recognised in the statement of profit and loss is in agreement with the contracted price under the Contract.

4
For movement in service concession arrangement, refer note 3 for financial asset model. There are no significant changes in other contract assets of the group.

5 Performance obligation

Income from Hybrid Annuity Mode (HAM)

The performance obligation is satisfied over time as the assets is under control of customer and they simultaneously receives and consumes the benefits provided by the SPV Group. The SPV Group receives progressive payment toward provision of services.

Contract revenue

The performance obligation under service concession agreements ('SCA') is due on completion of work as per terms of SCA.

6 Significant changes in the contract liabilities balances during the period / year

Particulars	As at 30 September 2024	As at 31 March 2024	As at 31 March 2023	As at 31 March 2022
Opening balance	167.00	28.64	-	-
Addition during the period / year	-	167.00	28.64	-
Revenue recognised during the period / year	(167.00)	(28.64)	-	-
Closing balance	**-**	**167.00**	**28.64**	**-**

7 Disclosure under Appendix - D & E to Ind AS 115 - " Service Concession Arrangements"

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 (In Years)	Provisional Construction Completion date
Gawar Rohna Jhajjar Highway Private Limited	18 December 2018	10 July 2035	15	10 July 2020
Dewas Ujjain Highway Private Limited	06 July 2021	05 July 2038	15	05 July 2023
Gawar Narnaul Highway Private Limited	19 September 2019	09 January 2036	15	09 January 2021
Gawar Khajuwala BAP Highway Private Limited	22 May 2019	20 January 2036	15	20 January 2021
Gawar Kiratpur Nerchowk Highway Private Limited	12 August 2021	07 June 2038	15	07 June 2023
Hardiya Hasanpur Highway Private Limited	28 April 2021	27 April 2038	15	27 April 2023
Gawar Rohna Sonepat Highways Private Limited	22 January 2020	29 January 2037	15	29 January 2022
Gawar Bangalore Highways Private Limited	21 August 2017	31 December 2035	15	31 December 2020
Gawar Nainital Highways Private Limited	28 October 2017	27 October 2034	15	27 October 2019

i) The above HAM projects shall have following rights / obligations in accordance with the Concession Agreement entered into with the respective Government Authorities:
a. Right to payment as per the milestone schedule agreed with the concessionaire.
b. Obligations to deliver road assets at the end of the construction period.
c. Obligations to maintain the road assets till the end of the concession period.

ii) The actual concession period may vary based on terms of the respective concession agreements.

40 Information on segment reporting pursuant to Ind AS 108 - Operating Segments

The SPV Group's primary business segment is reflected based on principal business activities carried on by the SPV Group i.e. building, operating and management of road construction projects and all other related activities which as per Ind AS 108 on 'Operating Segments" is considered to be the only reportable business segment. The SPV Group derives its major revenues from operation and maintenance of highways and interest income from National Highway Authority of India. The SPV Group is operating in India which is considered as a single geographical segment.

41 Earnings Per Unit

The number of units that Trust will issue to investors in the proposed initial public issue is not presently ascertainable. Hence the disclosures in respect of Earnings per Unit have not been given in these Special Purpose Combined Financial Statements.

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42 The Combined Financial Statements are prepared after considering the adjustments as required pursuant to section 3.3.4 of SEBI Circular no. SEBI/HO/DDHS-PoD-2/P/CIR/2024/44 dated 15 May 2024. Below disclosure compiles with the adjustments made to the audited financial statements of the group for the six month period ended 30 September 2024 and for the financial year ended 31 March 2024, 31 March 2023 and 31 March 2022 respectively, while preparing these Combined Financial Statements:

(i) Impact on Combined Balance Sheet

Particulars	As at 30 September 2024			As at 31 March 2024			As at 31 March 2023			As at 31 March 2022			Note reference
	Special Purpose audited financial statements	Adjustments	Special Purpose Combined Financial Statements	General Purpose audited financial statements *	Adjustments	Special Purpose Combined Financial Statements	General Purpose audited financial statements *	Adjustments	Special Purpose Combined Financial Statements	General Purpose audited financial statements *	Adjustments	Special Purpose Combined Financial Statements	
ASSETS													
Non-current assets													
Financial assets													
Other financial assets	34,132.34	38.05	34,170.39	31,499.42	1,032.71	32,532.13	27,984.46	1,134.61	29,119.07	12,395.95	1,248.76	13,644.71	Note 1
Deferred tax assets (net)	9.36	-	9.36	4.84	(0.52)	4.32	-	0.47	0.47	-	-	-	Note 2
Non-current tax assets (net)	364.32	(30.74)	333.58	-	301.34	301.34	-	362.34	362.34	-	465.04	465.04	Note 3
Other non-current assets	962.62	-	962.62	-	1,092.36	1,092.36	-	1,994.20	1,994.20	-	1,152.10	1,152.10	Note 7
Total non-current assets	**35,468.64**	**7.31**	**35,475.95**	**31,504.26**	**2,425.89**	**33,930.15**	**27,984.46**	**3,491.62**	**31,476.08**	**12,395.95**	**2,865.90**	**15,261.85**	
Current assets													
Financial assets													
Investments	-	-	-	-	-	-	-	-	-	142.09	-	142.09	
Trade receivables	684.67	-	684.67	669.69	-	669.69	1,103.72	(5.62)	1,098.10	195.42	-	195.42	Note 4
Cash and cash equivalents	428.38	-	428.38	975.03	-	975.03	191.75	(14.46)	177.29	345.12	-	345.12	Note 5
Bank balances other than cash and cash equivalents above	1,296.02	-	1,296.02	941.53	(608.80)	332.73	657.26	(443.05)	214.21	322.75	(65.66)	257.09	Note 6
Loans	389.10	-	389.10	-	-	-	-	-	-	-	-	-	
Others financial assets	9,470.47	-	9,470.47	10,243.78	(355.25)	9,888.53	8,879.22	(312.89)	8,566.33	7,697.77	(79.19)	7,618.58	Note 1
Current tax assets (net)	-	-	-	338.56	(338.56)	-	396.16	(396.16)	-	423.57	(423.57)	-	Note 3
Other current assets	1,308.04	-	1,308.04	2,536.85	(1,092.32)	1,444.53	3,295.48	(1,994.19)	1,301.29	2,376.87	(1,169.07)	1,207.80	Note 7
Total current assets	**13,576.68**	**-**	**13,576.68**	**15,705.44**	**(2,394.93)**	**13,310.51**	**14,523.59**	**(3,166.37)**	**11,357.22**	**11,503.59**	**(1,737.49)**	**9,766.10**	
Total assets	**49,045.32**	**7.31**	**49,052.63**	**47,209.70**	**30.96**	**47,240.66**	**42,508.05**	**325.25**	**42,833.30**	**23,899.54**	**1,128.41**	**25,027.95**	
EQUITY AND LIABILITIES													
EQUITY													
Equity share capital	3,468.10	-	3,468.10	3,468.10	-	3,468.10	3,370.10	-	3,370.10	3,131.00	-	3,131.00	
Instruments entirely equity in nature	-	-	-	-	-	-	1,743.60	(1,743.60)	-	846.28	(846.28)	-	Note 9
Other equity	8,878.50	(2.27)	8,876.23	7,700.49	21.48	7,721.97	6,382.71	82.45	6,465.16	1,824.95	17.54	1,842.49	Note 8
Total equity	**12,346.60**	**(2.27)**	**12,344.33**	**11,168.59**	**21.48**	**11,190.07**	**11,496.41**	**(1,661.15)**	**9,835.26**	**5,802.23**	**(828.74)**	**4,973.49**	
LIABILITIES													
Non-current liabilities													
Financial liabilities													
Borrowings	31,418.27	-	31,418.27	29,967.96	(0.04)	29,967.92	23,686.66	0.43	23,687.09	14,773.63	0.03	14,773.66	Note 9
Other financial liabilities	-	-	-	116.54	(116.54)	-	429.62	(429.62)	-	271.85	(54.22)	217.63	Note 10
Deferred tax liabilities (net)	1,452.44	9.58	1,462.02	1,586.84	9.48	1,596.32	1,719.54	(8.75)	1,710.79	348.81	47.45	396.26	Note 2
Total non-current liabilities	**32,870.71**	**9.58**	**32,880.29**	**31,671.34**	**(107.10)**	**31,564.24**	**25,835.82**	**(437.94)**	**25,397.88**	**15,394.29**	**(6.74)**	**15,387.55**	
Current liabilities													
Financial liabilities													
Borrowings	2,134.63	-	2,134.63	2,071.67	0.04	2,071.71	1,136.37	1,743.17	2,879.54	698.04	846.26	1,544.30	Note 9
Trade payables	1,006.13	-	1,006.13	1,584.20	2.53	1,586.73	3,233.98	262.92	3,496.90	1,771.41	1,082.68	2,854.09	Note 11
Other financial liabilities	420.33	-	420.33	440.18	123.66	563.84	556.02	402.81	958.83	77.91	51.95	129.86	Note 10
Other current liabilities	69.10	-	69.10	273.72	(9.65)	264.07	225.70	24.82	250.52	155.66	(17.00)	138.66	Note 12
Current tax liabilities (net)	197.82	-	197.82	-	-	-	23.75	(9.38)	14.37	-	-	-	Note 13
Total current liabilities	**3,828.01**	**-**	**3,828.01**	**4,369.77**	**116.58**	**4,486.35**	**5,175.82**	**2,424.34**	**7,600.16**	**2,703.02**	**1,963.89**	**4,666.91**	
Total liabilities	**36,698.72**	**9.58**	**36,708.30**	**36,041.11**	**9.48**	**36,050.59**	**31,011.64**	**1,986.40**	**32,998.04**	**18,097.31**	**1,957.15**	**20,054.46**	
Total equity and liabilities	**49,045.32**	**7.31**	**49,052.63**	**47,209.70**	**30.96**	**47,240.66**	**42,508.05**	**325.25**	**42,833.30**	**23,899.54**	**1,128.41**	**25,027.95**	

*The figures disclosed above have been extracted from the general purpose financial statements or restated general purpose financial statements (as applicable) of the project SPVs and which have audited by the respective auditors of such project SPVs.

(ii) Impact on Combined statement of profit and loss and total comprehensive income

Particulars	For the six month period ended 30 September 2024			For the year ended 31 March 2024			For the year ended 31 March 2023			For the year ended 31 March 2022			Note reference
	Special Purpose audited financial statements	Adjustments	Special Purpose Combined Financial Statements	General Purpose audited financial statements *	Adjustments	Special Purpose Combined Financial Statements	General Purpose audited financial statements *	Adjustments	Special Purpose Combined Financial Statements	General Purpose audited financial statements *	Adjustments	Special Purpose Combined Financial Statements	
Income													
Revenue from operations	7,057.96	(3.41)	7,054.55	15,363.93	(513.02)	14,850.91	25,791.55	(5,460.65)	20,330.90	19,823.72	(742.21)	19,081.51	Note 14
Interest on bank deposits	71.58	0.00	71.58	102.21	-	102.21	41.44	-	41.44	23.98	-	23.98	
Profit on sale of investments	-	-	-	-	-	-	1.18	-	1.18	8.47	-	8.47	
Other income	824.92	(28.39)	796.53	40.22	441.74	481.96	15.17	4,800.54	4,815.71	0.44	699.79	700.23	Note 15
Total income	**7,954.46**	**(31.80)**	**7,922.66**	**15,506.36**	**(71.28)**	**15,435.08**	**25,849.34**	**(660.11)**	**25,189.23**	**19,856.61**	**(42.42)**	**19,814.19**	
Expenses													
Operating expenses	4,323.37	-	4,323.37	10,137.73	(325.09)	9,812.64	17,535.01	(755.23)	16,779.78	17,642.06	(580.22)	17,061.84	Note 16
Audit fee (statutory auditors of respective project SPVs)	5.13	-	5.13	4.31	-	4.31	3.96	-	3.96	3.40	-	3.40	
Insurance expenses	14.95	(0.00)	14.95	32.14	-	32.14	40.69	-	40.69	36.36	-	36.36	
Employee benefits expense	9.52	-	9.52	15.74	-	15.74	4.76	-	4.76	1.80	-	1.80	
Project management fees	363.87	0.00	363.87	301.09	-	301.09	146.82	-	146.82	53.55	-	53.55	
Finance costs	1,556.58	-	1,556.58	3,184.69	(331.53)	2,853.16	1,517.73	1.61	1,519.34	951.14	0.68	951.82	Note 17
Other expenses	86.23	-	86.23	55.21	612.11	667.32	24.25	18.80	43.05	32.02	(7.35)	24.67	Note 18
Total expenses	**6,359.65**	**0.00**	**6,359.65**	**13,730.91**	**(44.51)**	**13,686.40**	**19,273.22**	**(734.82)**	**18,538.40**	**18,720.33**	**(586.89)**	**18,133.44**	
Profit before tax	**1,594.81**	**(31.80)**	**1,563.01**	**1,775.45**	**(26.77)**	**1,748.68**	**6,576.12**	**74.71**	**6,650.83**	**1,136.28**	**544.47**	**1,680.75**	
Tax expense													
Current tax	548.09	-	548.09	603.43	(24.84)	578.59	300.32	64.56	364.88	180.69	(45.52)	135.17	Note 8
Tax adjustment for earlier years	-	-	-	-	30.74	30.74							Note 8
Deferred tax	(131.29)	(8.05)	(139.34)	(145.76)	27.44	(118.32)	1,370.74	(56.68)	1,314.06	110.34	179.68	290.02	Note 8
Total tax expense	**416.80**	**(8.05)**	**408.75**	**457.67**	**33.34**	**491.01**	**1,671.06**	**7.88**	**1,678.94**	**291.03**	**134.16**	**425.19**	
Net profit for the period / year	**1,178.01**	**(23.75)**	**1,154.26**	**1,317.78**	**(60.11)**	**1,257.67**	**4,905.06**	**66.83**	**4,971.89**	**845.25**	**410.31**	**1,255.56**	
Other comprehensive income	-	-	-	-	-	-	-	-	-	-	-	-	
Items that will not be reclassified to profit or loss													
Re-measurement gains/ (losses) on defined benefit obligation	-	-	-	-	-	-	-	-	-	-	-	-	
Income tax relating to these items	-	-	-	-	-	-	-	-	-	-	-	-	
Total other comprehensive income for the period / year	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	
Total comprehensive income for the period/ year	**1,178.01**	**(23.75)**	**1,154.26**	**1,317.78**	**(60.11)**	**1,257.67**	**4,905.06**	**66.83**	**4,971.89**	**845.25**	**410.31**	**1,255.56**	

*The figures disclosed above have been extracted from the general purpose financial statements or restated general purpose financial statements (as applicable) of the project SPVs and which have audited by the respective auditors of such project SPVs.

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Capital Infra Trust (formerly known as National Infrastructure Trust)
Summary of material accounting policy information and other explanatory information
(All amounts in ₹ millions unless otherwise stated)

Note 1 - Other financial assets (Non-Current and Current)
Adjustments are on account of the following items:
a) restatement to incorporate impact of change in law event, wherein, annuities were brought under the ambit of GST taxation, which was previously considered exempt, in line with the relevant regulations and NHAI circulars;
b) restatement to incorporate the cumulative catchup adjustment impact of change in margin on account of change in management assumptions and estimates.
c) reclassification of term deposits having original maturity of more than 12 months but remaining maturity of less than 12 months reclassed from other 'Bank balances other than cash and cash equivalents' to 'Other current financial asset' in line with suggestive framework.;
d) Restatement to incorporate impact of revenue recognised on provision made in respective financial year on the construction work done basis the subsequent invoices received from the contractor.

Note 2 - Deferred tax assets and liabilities
Adjustments to recognise corresponding deferred tax in accordance with Ind AS 12- 'Income Taxes' and reclassification from 'deferred tax assets' to 'deferred tax liability' after incorporating impacts of the adjustments (explained in this note), wherever applicable.

Note 3 - Tax Assets (Non-Current and Current)
Adjustments on account of the following items:
a) reclassification of advance income taxes (net) from 'current tax assets (net)' to 'non-current tax assets (net) in accordance with best suggestive framework.; and
b) reclassifications between 'current tax assets (net)', 'non-current tax assets (net)' and 'current tax liabilities' to incorporate the income tax impacts on the adjustments in accordance with suggestive framework.

Note 4 - Trade Receivables (Non-Current and Current)
Restatement to incorporate impact of change in law event, wherein, annuities were brought under the ambit of GST taxation, which was previously considered exempt, in line with the relevant regulations and NHAI circulars;

Note 5 - Cash and cash equivalents

Adjustments is on account of reclassification of term deposits having original maturity of more than 3 months but less than 12 months from 'Cash and cash equivalents ' to 'Bank balances other than cash and cash equivalents' in line with suggestive framework.;

Note 6 - Bank balances other than cash and cash equivalents
Adjustments are on account of the following items:
a) reclassification of term deposits having original maturity of more than 12 months but remaining maturity of less than 12 months reclassed from other 'Bank balances other than cash and cash equivalents' to 'Other current financial asset' in line with suggestive framework.;
b) reclassification of term deposits having original maturity of more than 3 months but less than 12 months from 'Cash and cash equivalents' to 'Bank balances other than cash and cash equivalents' in line with suggestive framework.;

Note 7 - Other Asset (Non-Current and Current)
Adjustments are on account of following items:
a) GST input credit which was forecasted to be utilised beyond 1 year from respective balance sheet date has been reclassified to other non-current assets.
b) netting off of current portion of balance with government authorities with tax deducted by NHAI under 'other current liabilities', in line with suggestive framework.

Note 8 - Other Equity and consequent tax impact on adjustments
Adjustments in Other equity and Combined Statement of Profit and Loss has been made consequent to the adjustments (explained in this note) along with corresponding impacts to 'tax expense', wherever applicable.

Note 9 - Borrowings (Non-Current and Current)
Reclassifications on account of unsecured borrowings which were repayable on demand, from instruments entirely equity in nature to current borrowings.

Note 10 - Other financial liabilities (Non-Current and Current)
a) Reclassification of interest accrued on unsecured loan from 'non-current other financial liability' to 'current other financial liability' in line with suggestive framework.;
b) Reclassification of audit fees payable from 'current other financial liability' to 'Trade payables' in line with suggestive framework.;
c) Reclassification of mobilisation advance from NHAI from 'current other financial liability' to 'other current liabilities' in line with suggestive framework.;

Note 11 - Trade payables
Adjustments is on account of the following items:
a) reclassification of audit fees payable from 'current other financial liability' to 'Trade payables' in line with suggestive framework.;
b) Restatement to incorporate impact of provision recognised in respective financial year on the construction work done basis the subsequent invoices received from the contractor.

Note 12 - Other current liabilities
a) Reclassification of mobilisation advance from NHAI from 'current other financial liability' to 'other current liabilities' in line with suggestive framework.;
b) Impact of adjustment with respect to netting off of current portion of balance with government authorities with tax deducted by NHAI under 'other current liabilities', in line with suggestive framework.

Note 13 - Current tax liability

Adjustments been made to recognise corresponding income tax impacts (along with applicable interest) on the adjustments (explained in this note), wherever applicable and reclassifications between 'current tax assets (net)' , 'non-current tax assets (net)' and 'current tax liabilities' post all income tax impacts on the adjustments (explained in this note), in accordance with suggestive framework.

Note 14 - Revenue from operations

Adjustments are on account of the following items:

a) restatement to incorporate impact of change in law event, wherein, annuities were brought under the ambit of GST taxation, which was previously considered exempt, in line with the relevant regulations and NHAI circulars;

b) restatement to incorporate the cumulative catchup adjustment impact of change in margin on account of change in management assumptions and estimates.

c) Restatement to incorporate impact of revenue recognised on provision made in respective financial year on the construction work done basis the subsequent invoices received from the contractor.

Note 15 - Other income

Adjustments are on account of the following items:

a) reclassification of modification gains from 'revenue from operation' to 'other income' in line with suggestive framework;

Note 16 - Operating expenses

Adjustments are on account of the following items:

a) restatement to incorporate impact of change in law event, wherein, annuities were brought under the ambit of GST taxation, which was previously considered exempt, in line with the relevant regulations and NHAI circulars.

b) Restatement to incorporate impact of provision recognised in respective financial year on the construction work done basis the subsequent invoices received from the contractor.

Note 17 - Finance costs

Adjustments is on account of reclassification of modification loss from 'finance costs' to 'other expenses' in line with suggestive framework.;

Note 18 - Other expenses

Adjustments are on account of the following items:

a) reclassification of share issue expenses from 'other expenses to 'other equity' in line with suggestive framework;

b) reclassification of modification loss from 'finance costs' to 'other expenses' in line with suggestive framework.

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43 Disclosures as required by SEBI Circular no. SEBI/HO/DDHS-PoD-2/P/CIR/2024/44 dated 15 May 2024

A Project wise operating cash flows for the six month period ended 30 September 2024:

Particulars	GRJHPL	DUHPL	GNHPL	GKBHPL	GKNHPL
Profit before tax	**170.13**	**37.68**	**122.44**	**296.65**	**458.36**
Adjustments for:					
Interest income on loans and advances	-	-	(4.91)	(21.01)	-
Interest income on bank deposits	(3.71)	(2.86)	(14.48)	(25.39)	(11.39)
Interest income on income tax refund	-	-	(5.77)	-	-
Gain on modification of annuity	(103.16)	-	(0.72)	(144.75)	(274.95)
Loss on modification of annuity	-	37.43	-	-	-
Non-recoverable GST on annuity from NHAI written off	(32.87)	12.42	20.80	(42.58)	29.30
Finance cost	88.50	128.88	126.18	77.83	414.09
Operating profit before working capital changes and other adjustments	**118.89**	**213.55**	**243.54**	**140.75**	**615.41**
Working capital changes and other adjustments:					
Trade receivables	(21.19)	(12.31)	(33.55)	118.40	(16.11)
Other financial assets	148.48	(117.97)	164.13	209.49	(102.41)
Other current assets	42.85	15.11	68.91	(1.85)	53.28
Trade payables	15.33	94.43	25.36	27.97	(6.57)
Other current and non-current financial liabilities	(0.95)	-	1.25	(0.08)	0.06
Other current liabilities	(3.39)	1.59	0.02	(0.13)	4.51
Cash flow from operating activities post working capital changes	**300.02**	**194.40**	**469.66**	**494.55**	**548.17**
Income tax paid (net)	(23.27)	(27.79)	1.61	(42.97)	(108.29)
Net cash generated from operating activities	**276.75**	**166.61**	**471.27**	**451.58**	**439.88**

Project wise operating cash flows for the six month period ended 30 September 2024 (Continued):

Particulars	HHHPL	GRSHPL	GBHPL	GNHPL-II
Profit before tax	**116.38**	**199.40**	**98.90**	**63.07**
Adjustments for:				
Interest income on bank deposits	(2.31)	(5.01)	(3.87)	(2.57)
Interest income on income tax refund	-	-	-	-
Gain on modification of annuity	(30.40)	(90.72)	(99.18)	(20.95)
Loss on modification of annuity	-	-	-	-
Non-recoverable GST on annuity from NHAI written off	17.34	(12.82)	-	-
Finance cost	198.15	121.65	263.94	137.36
Operating profit before working capital changes and other adjustments	**299.16**	**212.50**	**259.79**	**176.91**
Working capital changes and other adjustments:				
Trade receivables	(74.11)	(12.51)	(7.17)	51.99
Other financial assets	134.30	176.72	(394.44)	(469.66)
Other current assets	97.51	65.39	(17.93)	(57.03)
Trade payables	44.62	17.24	(859.67)	60.69
Other current and non-current financial liabilities	1.37	0.46	(4.43)	-
Other current liabilities	(2.68)	(4.59)	(23.53)	(166.77)
Cash flow from / (used in) operating activities post working capital changes	**500.17**	**455.21**	**(1,047.38)**	**(403.87)**
Income tax paid (net)	(42.67)	(40.06)	(53.06)	(40.24)
Net cash from / (used in) operating activities	**457.50**	**415.15**	**(1,100.44)**	**(444.11)**

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Project wise operating cash flows for the financial year ended 31 March 2024:

Particulars	GRJHPL	DUHPL	GNHPL	GKBHPL	GKNHPL
Profit before tax	**129.80**	**(26.81)**	**85.21**	**291.47**	**480.09**
Adjustments for:					
Interest income on loans and advances	-	-	(8.23)	(16.93)	-
Interest income on bank deposits	(7.93)	(1.38)	(16.34)	(35.60)	(6.25)
Interest income on income tax refund	(5.79)	(0.88)	(0.10)	(0.76)	(5.53)
Gain on modification of annuity	(17.96)	-	-	(35.34)	(19.81)
Loss on modification of annuity	13.69	255.84	168.96	63.44	12.35
Non-recoverable GST on annuity from NHAI written off	27.13	11.33	38.48	32.75	34.19
Finance cost	212.34	202.98	259.11	149.01	761.20
Operating profit before working capital changes and other adjustments	**351.28**	**441.08**	**527.09**	**448.04**	**1,256.24**
Working capital changes and other adjustments:					
Trade receivables	(10.73)	5.35	(56.92)	(49.90)	562.75
Other financial assets	218.46	(586.77)	312.19	307.29	(1,264.67)
Other current assets	124.79	1.44	169.79	161.00	248.90
Trade payables	0.05	(563.76)	0.01	(3.88)	(1,588.90)
Other current and non-current financial liabilities	2.10	(1.80)	(0.61)	0.13	-
Other current liabilities	(3.07)	(22.83)	(14.84)	(14.25)	(74.58)
Cash flow from / (used in) operating activities post working capital changes	**682.88**	**(727.29)**	**936.71**	**848.43**	**(860.26)**
Income tax paid (net)	33.29	(30.18)	(74.28)	(91.41)	(11.80)
Net cash generated from / (used in) operating activities	**716.17**	**(757.47)**	**862.43**	**757.02**	**(872.06)**

Project wise operating cash flows for the financial year ended 31 March 2024 (Continued):

Particulars	HHHPL	GRSHPL	GBHPL	GNHPL-II
Profit before tax	**268.60**	**154.39**	**257.00**	**108.92**
Adjustments for:				
Interest income on bank deposits	(2.47)	(9.66)	(4.49)	(18.09)
Interest income on income tax refund	(1.99)	-	-	-
Gain on modification of annuity	(111.90)	(30.03)	(226.70)	-
Loss on modification of annuity	46.85	54.76	-	-
Non-recoverable GST on annuity from NHAI written off	17.02	34.73	-	-
Finance cost	409.91	315.03	377.34	166.24
Operating profit before working capital changes and other adjustments	**626.02**	**519.22**	**403.15**	**257.07**
Working capital changes and other adjustments:				
Trade receivables	(192.54)	81.18	(49.42)	(56.99)
Other financial assets	(426.76)	578.60	(956.66)	(20.54)
Other current assets	134.44	219.94	(260.14)	(41.57)
Trade payables	(1,079.20)	(0.19)	1,082.93	242.77
Other current and non-current financial liabilities	(34.80)	-	(385.94)	-
Other current liabilities	(69.30)	(5.88)	42.12	176.18
Cash flow (used in) / from operating activities post working capital changes	**(1,042.14)**	**1,392.87**	**(123.96)**	**556.92**
Income tax paid (net)	(35.89)	(77.82)	(172.48)	(87.08)
Net cash (used in) / generated from operating activities	**(1,078.03)**	**1,315.05**	**(296.44)**	**469.84**

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Project wise operating cash flows for the financial year ended 31 March 2023 :

Particulars	GRJHPL	DUHPL	GNHPL	GKBHPL
Profit before tax	**486.76**	**644.51**	**1,112.66**	**911.77**
Adjustments for:				
Interest income on bank deposits	(4.40)	-	(12.07)	(19.54)
Interest income on income tax refund	-	(1.06)	(2.51)	(3.01)
Gain on modification of annuity	(410.36)	(432.15)	(916.14)	(641.95)
Loss on modification of annuity	-	-	-	-
Non-recoverable GST on annuity from NHAI written off	12.79	-	19.09	15.74
Gain on sale of investments (net)	(1.18)	-	-	-
Finance cost	235.42	65.17	259.82	147.23
Operating profit before working capital changes and other adjustments	**319.03**	**276.47**	**460.85**	**410.24**
Working capital changes and other adjustments:				
Trade receivables	0.97	(42.74)	31.83	(15.91)
Other financial assets	190.28	(1,496.02)	346.31	305.58
Other current assets	64.84	(179.73)	115.38	111.88
Trade payables	-	121.96	0.01	3.54
Other current and non-current financial liabilities	-	1.80	0.75	0.56
Other current liabilities	(1.07)	3.85	9.75	12.72
Cash flow from / (used in) operating activities post working capital changes	**574.05**	**(1,314.41)**	**964.88**	**828.61**
Income tax paid (net)	(44.85)	0.11	(49.25)	(52.72)
Net cash generated from / (used in) operating activities	**529.20**	**(1,314.30)**	**915.63**	**775.89**

Project wise operating cash flows for the financial year ended 31 March 2023 (Continued):

Particulars	GKNHPL	HHHPL	GRSHPL	GBHPL
Profit before tax	**2,018.78**	**546.06**	**886.47**	**43.82**
Adjustments for:				
Interest income on bank deposits	-	-	(5.43)	-
Interest income on income tax refund	(3.54)	(1.59)	(3.47)	-
Gain on modification of annuity	(1,441.88)	(158.84)	(799.23)	-
Loss on modification of annuity	21.06	-	-	-
Non-recoverable GST on annuity from NHAI written off	-	-	16.54	-
Finance cost	297.43	139.67	366.60	8.00
Operating profit before working capital changes and other adjustments	**891.85**	**525.30**	**461.48**	**51.82**
Working capital changes and other adjustments:				
Trade receivables	(725.20)	(58.55)	(157.24)	-
Other financial assets	(3,739.98)	(3,349.81)	262.42	(53.65)
Other current assets	(693.55)	(438.54)	123.48	(39.36)
Trade payables	467.75	698.64	(650.23)	1.14
Other current and non-current financial liabilities	(1.32)	35.36	-	393.44
Other current liabilities	55.48	57.13	(26.54)	0.54
Cash flow (used in) / from operating activities post working capital changes	**(3,744.97)**	**(2,530.47)**	**13.37**	**353.93**
Income tax paid (net)	(64.03)	(13.30)	(9.94)	1.34
Net cash generated (used in) / from operating activities	**(3,809.00)**	**(2,543.77)**	**3.43**	**355.27**

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Project wise operating cash flows for the financial year ended 31 March 2022:

Particulars	GRJHPL	DUHPL	GNHPL	GKBHPL
Profit before tax	**247.01**	**46.23**	**335.63**	**325.55**
Adjustments for:				
Interest income on bank deposits	(3.65)	-	(9.26)	(11.07)
Interest income on income tax refund	(0.45)	-	-	-
Gain on modification of annuity	(183.60)	-	(200.91)	(121.97)
Gain on investments carried at fair value through profit or loss (net)	(8.47)	-	-	-
Finance cost	254.63	1.33	337.22	193.77
Operating profit before working capital changes and other adjustments	**305.47**	**47.56**	**462.68**	**386.28**
Working capital changes and other adjustments:				
Trade receivables	(43.82)	-	31.61	(66.93)
Other financial assets	445.89	(854.46)	461.67	151.94
Other current assets	(259.04)	(149.06)	(331.10)	(167.45)
Trade payables	(11.98)	461.02	(1,300.66)	(439.21)
Other current and non-current financial liabilities	(50.14)	(0.11)	(23.87)	47.09
Other current liabilities	4.20	24.00	(35.50)	(33.45)
Cash flow from / (used in) operating activities post working capital changes	**390.58**	**(471.05)**	**(735.17)**	**(121.73)**
Income tax paid (net)	(38.55)	(29.02)	(102.37)	(62.50)
Net cash generated from / (used in) operating activities	**352.03**	**(500.07)**	**(837.54)**	**(184.23)**

Project wise operating cash flows for the financial year ended 31 March 2022 (Continued):

Particulars	GKNHPL	HHHPL	GRSHPL
Profit before tax	**145.44**	**64.72**	**516.17**
Adjustments for:			
Gain on modification of annuity	-	-	(193.30)
Finance cost	9.29	0.41	155.17
Operating profit before working capital changes and other adjustments	**154.73**	**65.13**	**478.04**
Working capital changes and other adjustments:			
Trade receivables	-	-	(105.04)
Other financial assets	(3,806.44)	(1,182.57)	(1,337.83)
Other current assets	(483.89)	(176.41)	(288.90)
Trade payables	1,337.49	399.70	(429.05)
Other current and non-current financial liabilities	4.00	(0.07)	(2.74)
Other current liabilities	37.27	18.56	21.45
Cash flow used in operating activities post working capital changes	**(2,756.84)**	**(875.66)**	**(1,664.07)**
Income tax paid (net)	(101.53)	(43.10)	(55.52)
Net cash used in operating activities	**(2,858.37)**	**(918.76)**	**(1,719.59)**

B Capitalisation statement

Particulars	Pre-issue as at 30 September 2024	As adjusted for issue*
Non-current borrowings (refer note 15 A)	31,418.27	
Current borrowings (refer note 15 B)	2,134.63	
Total debt (A)	**33,552.90**	
Equity share capital (refer note 13)	3,468.10	
Other equity (refer note 14)	8,876.23	
Total equity (B)	**12,344.33**	
Debt equity ratio [A/(A+B)]	**0.73**	

*Corresponding details post initial public issue of units are not available, hence the required disclosure in respect of the same have not been provided.

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C Debt payment history as at 30 September 2024

1 Gawar Rohna Jhajjar Highway Private Limited

Particulars	As at 30 September 2024		
	Term loans	Non-convertible debentures	Loans from related parties
Carrying amount of debt at the beginning of the period	**1,965.08**	**-**	**121.55**
Additional borrowings during the period	-	-	41.59
Repayments during the period	(87.04)	-	(107.15)
Transaction cost charged off	0.51	-	-
Carrying amount of debt at the end of the period	**1,878.55**	**-**	**55.99**

2 Dewas Ujjain Highway Private Limited

Particulars	As at 30 September 2024		
	Term loans	Non-convertible debentures	Loans from related parties
Carrying amount of debt at the beginning of the period	**2,251.03**	**-**	**487.48**
Additional borrowings during the period	-	-	35.42
Repayments during the period	(68.31)	-	-
Transaction cost paid	1.26	-	-
Carrying amount of debt at the end of the period	**2,183.98**	**-**	**522.90**

3 Gawar Narnaul Highway Private Limited

Particulars	As at 30 September 2024		
	Term loans	Non-convertible debentures	Loans from related parties
Carrying amount of debt at the beginning of the period	**-**	**3,115.50**	**-**
Additional borrowings during the period	-	-	5.20
Repayments during the period	-	(118.13)	(5.20)
Transaction cost charged off	-	1.62	-
Carrying amount of debt at the end of the period	**-**	**2,998.99**	**-**

4 Gawar Khajuwala BAP Highway Private Limited

Particulars	As at 30 September 2024		
	Term loans	Non-convertible debentures	Loans from related parties
Carrying amount of debt at the beginning of the period	**-**	**1,916.12**	**12.50**
Additional borrowings during the period	-	-	7.00
Repayments during the period	-	(98.00)	(19.50)
Transaction cost charged off	-	0.92	-
Carrying amount of debt at the end of the period	**-**	**1,819.04**	**-**

5 Gawar Kiratpur Nerchowk Highway Private Limited

Particulars	As at 30 September 2024		
	Term loans	Non-convertible debentures	Loans from related parties
Carrying amount of debt at the beginning of the period	**6,401.44**	**-**	**1,857.60**
Additional borrowings during the period	-	-	145.85
Repayments during the period	(98.55)	-	(24.81)
Transaction cost paid	-	-	-
Transaction cost charged off	4.09	-	-
Carrying amount of debt at the end of the period	**6,306.98**	**-**	**1,978.64**

6 Hardiya Hasanpur Highway Private Limited

Particulars	As at 30 September 2024		
	Term loans	Non-convertible debentures	Loans from related parties
Carrying amount of debt at the beginning of the period	**3,668.87**	**-**	**936.14**
Additional borrowings during the period	5,652.17	-	111.57
Repayments during the period	(4,988.60)	-	(971.00)
Transaction cost paid	(27.22)	-	-
Transaction cost charged off	0.89	-	-
Carrying amount of debt at the end of the period	**4,306.11**	**-**	**76.71**

7 Gawar Rohna Sonepat Highways Private Limited

Particulars	As at 30 September 2024		
	Term loans	Non-convertible debentures	Loans from related parties
Carrying amount of debt at the beginning of the period	**3,083.76**	**-**	**109.58**
Additional borrowings during the period	-	-	47.90
Repayments during the period	(105.69)	-	(157.48)
Transaction cost charged off	0.60	-	-
Carrying amount of debt at the end of the period	**2,978.67**	**-**	**-**

8 Gawar Bangalore Highways Private Limited

Particulars	As at 30 September 2024		
	Term loans	Non-convertible debentures	Loans from related parties
Carrying amount of debt at the beginning of the period	**2,411.41**	**-**	**1,487.66**
Additional borrowings during the period	2,000.00	-	285.54
Repayments during the period	(124.33)	-	(504.42)
Transaction cost paid	(15.78)	-	-
Transaction cost charged off	2.31	-	-
Carrying amount of debt at the end of the period	**4,273.61**	**-**	**1,268.78**

9 Gawar Nainital Highways Private Limited

Particulars	As at 30 September 2024		
	Term loans	Non-convertible debentures	Loans from related parties
Carrying amount of debt at the beginning of the period	**1,302.51**	**-**	**911.40**
Additional borrowings during the period	753.23	-	328.44
Repayments during the period	(118.03)	-	(270.86)
Transaction cost paid	(3.77)	-	-
Transaction cost charged off	1.04	-	-
Carrying amount of debt at the end of the period	**1,934.98**	**-**	**968.98**

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C Debt payment history as at 31 March 2024

1 Gawar Rohna Jhajjar Highway Private Limited

Particulars	As at 31 March 2024		
	Term loans	Non-convertible debentures	Loans from related parties
Carrying amount of debt at the beginning of the year	**2,130.37**	**-**	**277.94**
Additional borrowings during the year	-	-	2.50
Repayments during the year	(166.42)	-	(158.89)
Transaction cost charged off	1.13	-	-
Carrying amount of debt at the end of the year	**1,965.08**	**-**	**121.55**

2 Dewas Ujjain Highway Private Limited

Particulars	As at 31 March 2024		
	Term loans	Non-convertible debentures	Loans from related parties
Carrying amount of debt at the beginning of the year	**1,274.42**	**-**	**418.35**
Additional borrowings during the year	1,172.39	-	239.20
Repayments during the year	(187.86)	-	(170.07)
Transaction cost paid	(7.92)	-	-
Carrying amount of debt at the end of the year	**2,251.03**	**-**	**487.48**

3 Gawar Narnaul Highway Private Limited

Particulars	As at 31 March 2024		
	Term loans	Non-convertible debentures	Loans from related parties
Carrying amount of debt at the beginning of the year	**-**	**3,337.77**	**100.18**
Additional borrowings during the year	-	-	9.00
Repayments during the year	-	(225.00)	(109.18)
Transaction cost charged off	-	2.73	-
Carrying amount of debt at the end of the year	**-**	**3,115.50**	**-**

4 Gawar Khajuwala BAP Highway Private Limited

Particulars	As at 31 March 2024		
	Term loans	Non-convertible debentures	Loans from related parties
Carrying amount of debt at the beginning of the year	**-**	**2,097.75**	**-**
Additional borrowings during the year	-	-	15.10
Repayments during the year	-	(183.75)	(2.60)
Transaction cost charged off	-	2.12	-
Carrying amount of debt at the end of the year	**-**	**1,916.12**	**12.50**

5 Gawar Kiratpur Nerchowk Highway Private Limited

Particulars	As at 31 March 2024		
	Term loans	Non-convertible debentures	Loans from related parties
Carrying amount of debt at the beginning of the year	**5,071.46**	**-**	**1,325.25**
Additional borrowings during the year	1,440.00	-	807.11
Repayments during the year	(98.61)	-	(274.76)
Transaction cost paid	(18.37)	-	-
Transaction cost charged off	6.96	-	-
Carrying amount of debt at the end of the year	**6,401.44**	**-**	**1,857.60**

6 Hardiya Hasanpur Highway Private Limited

Particulars	As at 31 March 2024		
	Term loans	Non-convertible debentures	Loans from related parties
Carrying amount of debt at the beginning of the year	**2,645.46**	**-**	**743.87**
Additional borrowings during the year	1,142.70	-	575.05
Repayments during the year	(114.02)	-	(382.78)
Transaction cost paid	(7.21)	-	-
Transaction cost charged off	1.94	-	-
Carrying amount of debt at the end of the year	**3,668.87**	**-**	**936.14**

7 Gawar Rohna Sonepat Highways Private Limited

Particulars	As at 31 March 2024		
	Term loans	Non-convertible debentures	Loans from related parties
Carrying amount of debt at the beginning of the year	**3,279.28**	**-**	**521.21**
Additional borrowings during the year	-	-	12.78
Repayments during the year	(198.39)	-	(424.41)
Transaction cost charged off	2.87	-	-
Carrying amount of debt at the end of the year	**3,083.76**	**-**	**109.58**

8 Gawar Bangalore Highways Private Limited

Particulars	As at 31 March 2024		
	Term loans	Non-convertible debentures	Loans from related parties
Carrying amount of debt at the beginning of the year	**2,530.12**	**-**	**813.20**
Additional borrowings during the year	-	-	674.46
Repayments during the year	(121.70)	-	-
Transaction cost charged off	2.99	-	-
Carrying amount of debt at the end of the year	**2,411.41**	**-**	**1,487.66**

9 Gawar Nainital Highways Private Limited

Particulars	As at 31 March 2024		
	Term loans	Non-convertible debentures	Loans from related parties
Carrying amount of debt at the beginning of the year	**-**	**-**	**-**
Additional borrowings during the year	1,311.50	-	911.40
Repayments during the year	(3.28)	-	-
Transaction cost paid	(6.56)	-	-
Transaction cost charged off	0.85	-	-
Carrying amount of debt at the end of the year	**1,302.51**	**-**	**911.40**

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C Debt payment history as at 31 March 2023

1 Gawar Rohna Jhajjar Highway Private Limited

Particulars	As at 31 March 2023		
	Term loans	Non-convertible debentures	Loans from related parties
Carrying amount of debt at the beginning of the year	**2,288.92**	**-**	**589.64**
Additional borrowings during the year	-	-	20.20
Repayments during the year	(161.28)	-	(331.90)
Transaction cost charged off	2.73	-	-
Carrying amount of debt at the end of the year	**2,130.37**	**-**	**277.94**

2 Dewas Ujjain Highway Private Limited

Particulars	As at 31 March 2023		
	Term loans	Non-convertible debentures	Loans from related parties
Carrying amount of debt at the beginning of the year	**356.76**	**-**	**184.05**
Additional borrowings during the year	984.95	-	234.30
Repayments during the year	(60.11)	-	-
Transaction cost charged off	(7.18)	-	-
Carrying amount of debt at the end of the year	**1,274.42**	**-**	**418.35**

3 Gawar Narnaul Highway Private Limited

Particulars	As at 31 March 2023		
	Term loans	Non-convertible debentures	Loans from related parties
Carrying amount of debt at the beginning of the year	**-**	**3,552.30**	**495.60**
Additional borrowings during the year	-	-	42.42
Repayments during the year	-	(217.51)	(437.84)
Transaction cost charged off	-	2.98	-
Carrying amount of debt at the end of the year	**-**	**3,337.77**	**100.18**

4 Gawar Khajuwala BAP Highway Private Limited

Particulars	As at 31 March 2023		
	Term loans	Non-convertible debentures	Loans from related parties
Carrying amount of debt at the beginning of the year	**-**	**2,267.13**	**110.50**
Additional borrowings during the year	-	-	61.30
Repayments during the year	-	(171.50)	(171.80)
Transaction cost charged off	-	2.12	-
Carrying amount of debt at the end of the year	**-**	**2,097.75**	**-**

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5 Gawar Kiratpur Nerchowk Highway Private Limited

Particulars	As at 31 March 2023		
	Term loans	Non-convertible debentures	Loans from related parties
Carrying amount of debt at the beginning of the year	**1,649.51**	**-**	**662.23**
Additional borrowings during the year	3,460.00	**-**	663.02
Transaction cost paid	(42.65)	**-**	-
Transaction cost charged off	4.60	**-**	-
Carrying amount of debt at the end of the year	**5,071.46**	**-**	**1,325.25**

6 Hardiya Hasanpur Highway Private Limited

Particulars	As at 31 March 2023		
	Term loans	Non-convertible debentures	Loans from related parties
Carrying amount of debt at the beginning of the year	**536.30**	**-**	**250.76**
Additional borrowings during the year	2,118.30	-	493.11
Transaction cost paid	(10.60)	-	-
Transaction cost charged off	1.46	-	-
Carrying amount of debt at the end of the year	**2,645.46**	**-**	**743.87**

7 Gawar Rohna Sonepat Highways Private Limited

Particulars	As at 31 March 2023		
	Term loans	Non-convertible debentures	Loans from related parties
Carrying amount of debt at the beginning of the year	**2,637.35**	**-**	**736.90**
Additional borrowings during the year	3,398.40	-	891.05
Repayments during the year	(2,760.64)	-	(1,106.74)
Transaction cost paid	(20.84)	-	-
Transaction cost charged off	25.01	-	-
Carrying amount of debt at the end of the year	**3,279.28**	**-**	**521.21**

8 Gawar Bangalore Highways Private Limited

Particulars	As at 31 March 2023		
	Term loans	Non-convertible debentures	Loans from related parties
Carrying amount of debt at the beginning of the year	**-**	**-**	**-**
Additional borrowings during the year	2,550.00	-	813.20
Transaction cost paid	(20.12)	-	-
Transaction cost charged off	0.24	-	-
Carrying amount of debt at the end of the year	**2,530.12**	**-**	**813.20**

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C Debt payment history as at 31 March 2022

1 Gawar Rohna Jhajjar Highway Private Limited

Particulars	As at 31 March 2022		
	Term loans	Non-convertible debentures	Loans from related parties
Carrying amount of debt at the beginning of the year	**2,456.48**	**-**	**655.04**
Additional borrowings during the year	-	-	52.70
Repayments during the year	(168.95)	-	(118.10)
Transaction cost charged off	1.39	-	-
Carrying amount of debt at the end of the year	**2,288.92**	**-**	**589.64**

2 Dewas Ujjain Highway Private Limited

Particulars	As at 31 March 2022		
	Term loans	Non-convertible debentures	Loans from related parties
Carrying amount of debt at the beginning of the year	**-**	-	-
Additional borrowings during the year	360.13	-	234.05
Repayments during the year	(0.13)	-	(50.00)
Transaction cost paid	(3.24)	-	-
Carrying amount of debt at the end of the year	**356.76**	**-**	**184.05**

3 Gawar Narnaul Highway Private Limited

Particulars	As at 31 March 2022		
	Term loans	Non-convertible debentures	Loans from related parties
Carrying amount of debt at the beginning of the year	**1,999.99**	**-**	**760.15**
Additional borrowings during the year	2,530.00	3,650.00	922.99
Repayments during the year	(4,529.99)	(75.00)	(1,187.54)
Transaction cost paid	-	(42.38)	-
Transaction cost charged off	-	19.68	-
Carrying amount of debt at the end of the year	**-**	**3,552.30**	**495.60**

4 Gawar Khajuwala BAP Highway Private Limited

Particulars	As at 31 March 2022		
	Term loans	Non-convertible debentures	Loans from related parties
Carrying amount of debt at the beginning of the year	**1,067.79**	**-**	**675.36**
Additional borrowings during the year	2,387.50	2,355.00	178.64
Repayments during the year	(3,455.29)	(73.50)	(743.50)
Transaction cost paid	-	(27.16)	-
Transaction cost charged off	-	12.79	-
Carrying amount of debt at the end of the year	**-**	**2,267.13**	**110.50**

5 Gawar Kiratpur Nerchowk Highway Private Limited

Particulars	As at 31 March 2022		
	Term loans	Non-convertible debentures	Loans from related parties
Carrying amount of debt at the beginning of the year	-	-	8.21
Additional borrowings during the year	1,670.00	-	654.02
Transaction cost paid	(20.59)	-	-
Transaction cost charged off	0.10	-	-
Carrying amount of debt at the end of the year	**1,649.51**	**-**	**662.23**

6 Hardiya Hasanpur Highway Private Limited

Particulars	As at 31 March 2022		
	Term loans	Non-convertible debentures	Loans from related parties
Carrying amount of debt at the beginning of the year	**-**	**-**	**25.75**
Additional borrowings during the year	539.00	-	225.01
Transaction cost paid	(2.70)	-	-
Carrying amount of debt at the end of the year	**536.30**	**-**	**250.76**

7 Gawar Rohna Sonepat Highways Private Limited

Particulars	As at 31 March 2022		
	Term loans	Non-convertible debentures	Loans from related parties
Carrying amount of debt at the beginning of the year	**1,092.94**	**-**	**421.40**
Additional borrowings during the year	1,558.20	-	315.50
Repayments during the year	(2.79)	-	-
Transaction cost paid	(12.76)	-	-
Transaction cost charged off	1.76	-	-
Carrying amount of debt at the end of the year	**2,637.35**	**-**	**736.90**

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44 Business Combination

(A) The Concession Agreement dated 08 February 2016 was executed between National Highways Authority of India (NHAI / Authority) and Sadbhav Bangalore Highway Private Limited ('Original Concessionaire/ Borrower') for the construction, operation, and maintenance of the two/four laning of BRT Tiger Reserve Boundary to Bangalore Section of NH-209 on Hybrid annuity mode ('Project'). A substitution agreement dated 14 August 2019 was entered between NHAI, Original Concessionaire, and State Bank of India ('Lead Bank') granting Senior Lenders the right to propose new entity to NHAI for substituting the concessionaire for the balance concession period. The notice of intention to terminate the concession Agreement with Sadbhav Bangalore Highway Private Limited was issued by NHAI on 12 January 2022. The Lead Bank had issued a notice to NHAI for substituting the concessionaire with the New Concessionaire for the Balance Concession Period, in accordance with the terms and conditions specified under the Concession Agreement and the Substitution Agreement. Accordingly and in order to implement the proposed substitution of the New Concessionaire, the Lead Bank conducted a bidding process by way of swiss challenge mechanism , upon conclusion of the Bidding Process, Gawar Construction Limited was declared as the 'successful bidder'. Further, the Lead Bank issued a letter in favour of NHAI, intimating their consent/proposal to NHAI for substituting the Borrower with Gawar Construction Limited through its SPV as the new concessionaire for the balance concession period.

NHAI provided 'in-principle approval' on 30 December 2022, for substituting the borrower with Gawar Construction Limited as the New Concessionaire ('NHAI In-Principle Approval'), subject to compliance with stipulated terms and conditions.
Gawar Construction Limited incorporated Gawar Bangalore Highways Private Limited ('Proposed New Concessionaire') on 28 November 2022 as a wholly-owned special purpose vehicle for the purpose of substituting the borrower with the Proposed New Concessionaire for the balance concession period and obtaining NHAI's endorsement of the concession.

Pursuant to the endorsement agreement dated 08 February 2023, Gawar Bangalore Highways Private Limited shall continue to comply with all obligations of the Original Concessionaire, as the case may be under original Concession Agreement and Settlement Agreement in terms of completion of construction work. The SPV has accounted the business combination in accordance with IND AS 103- Business combinations. The SPV has also carried out Purchase Price Allocation Study in compliance with Ind AS 103 for the purpose of allocating the aforesaid cash consideration into identifiable net assets.
Accordingly, the revenue and corresponding expenses for SPV in the Combined Statement of Profit and Loss have been included from incorporation date till 31 March 2023.

Details of consideration and value of net identifiable assets acquired:

Consideration	
Purchase consideration paid in cash for the acquisition of the business	3,930.00
Net consideration (A)	**3,930.00**
Fair value of net identifiable assets acquired	
Assets	
Receivables under service concession arrangements	3,930.00
Total assets (B)	**3,930.00**
Liabilities	
Total liabilities (C)	**-**
Net value of identifiable assets acquired (D=B-C)	**3,930.00**
Goodwill/ Capital reserve recognised on acquisition date (D-A-E)	-

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(B) The Concession Agreement dated 02 June 2016 was executed between National Highways Authority of India (NHAI / Authority) and Sadbhav Nainital Highway Private Limited ("Original Concessionaire/ Borrower") for the construction, operation, and maintenance of the four laning of Rampur - Kathgodam section of NH-87 (New NH 9, 109) on Hybrid annuity mode ("Project"). The work on the project was delayed due to reasons not attributable to the Original Concessionaire. A settlement agreement was entered on 25 October 2021 Authority and Original Concessionaire wherein Provisional Certificate was agreed to be issued and balance work was agreed to be completed by 30 June 2022. However, the work got delayed due to COVID-19 and financial issues of Original Concessionaire. The lenders requested the Authority for substitution of Original Concessionaire with New Concessionaire.

NHAI provided 'in-principle approval' on 17 April 2023, for substituting the borrower with Gawar Construction Limited as the New Concessionaire ("NHAI In-Principle Approval"), subject to compliance with stipulated terms and conditions.
Gawar Construction Limited incorporated the Gawar Nainital Highways Private Limited ("Proposed New Concessionaire") on 09 April 2023 as a wholly-owned special purpose vehicle for the purpose of substituting the borrower with the Proposed New Concessionaire for the balance concession Period and obtaining NHAI's endorsement of the Concession.

Pursuant to the endorsement agreement dated 13 July 2023, Gawar Nainital Highways Private Limited shall continue to comply with all obligations of the Original Concessionaire, as the case may be under original Concession Agreement and Settlement Agreement in terms of completion of construction work. The SPV has accounted the business combination in accordance with IND AS 103- Business combinations. The SPV has also carried out Purchase Price Allocation Study in compliance with Ind AS 103 for the purpose of allocating the aforesaid cash consideration into identifiable net assets.
Accordingly, the revenue and corresponding expenses for SPV in the Combined Statement of Profit and Loss have been included from incorporation date till 31 March 2024.

Details of consideration and value of net identifiable assets acquired:

Consideration	
Purchase consideration paid in cash for the acquisition of the business	2,668.98
Net consideration (A)	**2,668.98**
Fair value of net identifiable assets acquired	
Assets	
Receivables under service concession arrangements	2,668.98
Total assets (B)	**2,668.98**
Liabilities	
Total liabilities (C)	**-**
Net value of identifiable assets acquired (D=B-C)	**2,668.98**
Goodwill/ Capital reserve recognised on acquisition date (D-A-E)	-

	For the six month period ended 30 September 2024	For the year ended 31 March 2024	For the year ended 31 March 2023	For the year ended 31 March 2022
45 Details of dividend distributions made and proposed:				
Cash dividends on equity shares distributed:				
Interim dividend by SPV Group for the period/year	**-**	**-**	347.30	**-**
Total cash dividends on equity shares declared and paid	**-**	**-**	**347.30**	**-**
Details of dividend				
Gawar Khajuwala BAP Highway Private Limited	-	-	164.30	-
Gawar Narnaul Highway Private Limited	-	-	183.00	-
Total cash dividends on equity shares declared and paid	**-**	**-**	**347.30**	**-**

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46 All values are rounded to the nearest millions, unless otherwise indicated. Certain amount that are required to disclosed and do not appear due to rounding off are expressed as 0.00

For Walker Chandiok & Co LLP
Chartered Accountants
Firm's Registration No.: 001076N/N500013

For and on behalf of the Board of Directors of
Gawar Investment Manager Private Limited
(acting as Investment Manager to Capital Infra Trust (formerly known as National Infrastructure Trust)

Manish Agrawal
Partner
Membership No.: 507000

Place: New Delhi
Date: 08 November 2024

Rakesh Kumar
Director
DIN:-02082036

Place: Gurugram
Date: 08 November 2024

Bant Singh Singla
Director
DIN:-08620341

Place: Gurugram
Date: 08 November 2024

Manish Satnaliwala
Chief Executive Officer

Place: Gurugram
Date: 08 November 2024

Amit Kumar
Chief Financial Officer

Place: Gurugram
Date: 08 November 2024

Shubham Jain
Company Secretary
ICSI M No. A57893

Place: Gurugram
Date: 08 November 2024

CAPITALISATION STATEMENT

The following table sets forth the Trust's capitalization as at September 30, 2024, on the basis of amounts derived from the Special Purpose Combined Financial Statements, and as adjusted for the Offer. This table should be read in conjunction with the sections "***Management's Discussion and Analysis of Financial Position and Results of Operations***", "***Special Purpose Combined Financial Statements***" and "***Risk Factors***" on pages 301, 227 and 21, respectively.

(in ₹ million, except ratios)

	Pre-Offer as at September 30, 2024	As adjusted for Offer*
Financial liabilities		
Non-current borrowings	31,418.27	[●]
Current borrowings	2,134.63	[●]
Total borrowings (A)	**33,552.90**	**[●]**
Equity		
Equity share capital	3,468.10	[●]
Other equity	8,876.23	[●]
Total Equity (B)	**12,344.33**	**[●]**
Total borrowings / Total Equity ratio (A/B) (times)	**2.72**	**[●]**

* *To be determined upon completion of the Offer*.

MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

*You should read the following discussion and analysis of our financial condition, results of operations and cash flows in conjunction with "**Summary Special Purpose Combined Financial Statements**" and "**Special Purpose Combined Financial Statements**" on pages 54 and 227, respectively. This discussion contains forward-looking statements and involves numerous risks and uncertainties, including, but not limited to, those described in "**Risk Factors**" on page 21. Actual results could differ materially from those contained in any forward-looking statements and for further details regarding forward-looking statements, please refer to "**Forward Looking Statements and Financial Projections**" on page 15. The Special Purpose Combined Financial Statements are prepared in accordance with Ind AS and adjustment/rectification/reclassification wherever necessary read with the SEBI InvIT Regulations and the circulars issued thereunder and the Guidance Note on Combined and Carve-Out Financial Statements issued by the Institute of Chartered Accountants of India, which differs in certain respects from Indian GAAP, IFRS and U.S. GAAP. Our fiscal year ends on March 31 of each year and references to a particular fiscal are to the twelve months ended March 31 of that year. For the sole purposes of the Special Purpose Combined Financial Statements, references to "we", "us" and "our" are to the Project SPVs on a combined basis.*

*Unless otherwise indicated or unless the context requires otherwise, the financial information included herein is based on our Special Purpose Combined Financial Statements included in this Offer Document. For further details, see "**Special Purpose Combined Financial Statements**" on page* 227.

Overview

Capital Infra Trust (erstwhile National Infrastructure Trust) is an infrastructure investment trust sponsored by Gawar Construction Limited ("**GCL**" or "**Sponsor**"), established on September 25, 2023 with the objective to carry on the activities of, and to make investments as, an infrastructure investment trust, as permissible under the SEBI InvIT Regulations. We were settled by way of the Trust Deed, by GCL (the Sponsor), read along with Amendment to the Trust Deed and registered as an infrastructure investment trust with SEBI on March 7, 2024 (updated *vide* SEBI registration certificate dated October 16, 2024) in accordance with the SEBI InvIT Regulations.

Our Sponsor is an infrastructure development and construction company in India, with over 15 years of experience, primarily engaged in the construction of road and highway projects across 19 states in India for various government/ semi-government bodies and statutory authorities including National Highway Authority of India (NHAI), Ministry of Road Transport & Highways (MoRTH), Mumbai Metropolitan Regional Development Authority (MMRDA) and Central Public Works Department (CPWD). Since 2008, our Sponsor undertaken more than100 road construction projects. As on the date of this Offer Document, our Sponsor has a portfolio of 26 road projects on a hybrid annuity mode ("**HAM**") with National Highways Authority of India ("**NHAI**"), of which 11 are completed projects, including the five acquired assets which were erstwhile owned by Sadbhav Infrastructure Project Limited, and 15 under-construction projects.

Our Sponsor has an established track record of efficient project management and execution involving trained and skilled manpower, efficient deployment of equipment and an in-house integrated business model. We believe that these attributes have enabled to complete projects on or ahead of the scheduled period of completion. The in-house materials supply chain management ensures that key construction materials are delivered in a timely manner to the facilities and construction sites thereby enabling our Sponsor to manage its processes effectively and maintain its key raw material inventory to an optimal manner. The project management team working in conjunction with the design and engineering team, ensures operational efficiencies through overall supervision of the development and project execution process. Five out of the seven indigenous HAM projects were completed before scheduled time and have received early completion bonus from NHAI.

Our Sponsor complies with the eligibility requirements under the SEBI InvIT Regulations of requisite track record in development of infrastructure projects.

We primarily intend to acquire, manage and invest in the nine completed and revenue generating Initial Portfolio Assets, aggregating to approximately 682.425 kms, operated and maintained pursuant to concessions granted by the NHAI and are owned and operated by the Project SPVs. These roads are located in the states of Haryana, Rajasthan, Bihar, Uttarakhand, Himachal Pradesh, Madhya Pradesh and Karnataka. Our Initial Portfolio of Assets has a weighted average residual concession life of 11.7 years as of September 30, 2024. For more information about the Initial Portfolio Assets, see "***Business– Details of the Project SPVs and the Initial Portfolio Assets***" on page 159.

In addition to the Initial Portfolio Assets, the Trust, through the Investment Manager, will also have the right to acquire new projects through a right of first offer with our Sponsor in accordance with the Right of First Offer Agreement ("**ROFO Agreement**"). For more details, see "***Business –Assets under ROFO**" and "**Formation Transactions in relation to the Trust– Acquisition of future assets by the Trust- ROFO Agreement***" on pages 172 and 112, respectively.

The Formation Transactions

The Trust intends to acquire 100% of the equity shares in each of the Project SPVs from the Sponsor. As consideration for the acquisition of the equity shares of the Project SPVs, the Trust will issue Units, in accordance with the relevant Share Purchase Agreements, to the Sponsor after the Bid/Issue Closing Date and prior to the Allotment in the Offer, i.e., the closing date pursuant to the Share Purchase Agreements. For more information about the Formation Transactions and key terms of the Share Purchase Agreements, see "***Formation Transactions in relation to the Trust***" on page 102.

As of September 30, 2024, the following projects, which are owned, operated and maintained by the Project SPVs, comprise the Initial Portfolio Assets consisting of approximately 682.425 km of constructed and operational roads across seven states in India:

Name of the Initial Portfolio Assets	Rohna Jhajjar Highway Asset	Khajuwala Bap Highway Asset	Narnaul Highway Asset	Rohna Sonepat Highways Asset	Hardiya Hasanpur Highway Asset	Kiratpur Nerchowk Highway Asset	Dewas Ujjain Highway Asset	Bangalore Highways Asset	Nainital Highways Asset
Brief Description	GRJHPL is a special purpose vehicle which was incorporated to undertake redesigning, rehabilitation, upgradation and development of road of Rohna/Hassangarh to Jhajjar section from km 44.80 to km 80.250 (Design Chainage) (Length 35.450 Km) of NH-334B in Haryana by four laning on a HAM basis.	GKBHPL is a special purpose vehicle which was incorporated to undertake upgradation of road from km 0.00 of NH 911 to km 30.812 of NH 911 via Khajuwala-Poogal Section and the road from km 1.430 of NH 911 to km 182.725 of NH 911 via Poogal Dantour Jaggasar Gokul Goddu Ranjeetpura Charanwala Naukh Bap section under Bharatmala Pariyojna for the stretch of 212.107 km in Rajasthan by two laning on a HAM basis.	GNHPL is a special purpose vehicle which was incorporated for the development of road of 4/6 lanningNarnaul Bypass Crossing to Paniyala Mor (NH-148 B) at NH-48 Junction for a stretch of 31.24 km Nizampur Link Road for a stretch of 2.76 km and Narnaul Bypass crossing to Pacheri Kalan=11.30 km of NH-11 in Haryana on a HAM basis.	GRSHPL is a special purpose vehicle which was incorporated for redesigning, rehabilitation and upgradation road from km 0.00 of NH-334B to km 44.80 of NH-334B via Uttar Pradesh /Haryana border to Rohna section for the stretch of 40.500 km in Haryana by four laning on a HAM basis.	HHHPL is a special purpose vehicle which was incorporated for development of the road from km 54.405 of NH 20 to km 101.630 of NH 31 (New NH 20) via Rajauli-Bakhtiyarpur Section for the stretch of 47.225 km in Bihar by four laning on a HAM basis.	GKNHPL is a special purpose vehicle was incorporated for undertaking development of balance work for the road from km 12.750 of NH 21 to km 26.500 of NH 21, km 126.500 to km 158.500 including ACC link road from km 0.00 of NH 21 to km 2.003 of NH 21 via Kiratpur to Nerchowk Section under greenfield alignment (excluding Sunder Nagar Bypass) for the stretch of 47.753 km in Himachal Pradesh by four laning on a HAM basis.	DUHPL is a special purpose vehicle which was incorporated for the development of the road from km 0.00 of NH 148 to km 19.733 of NH 148, the road from km 19.733 of NH 148 to km 26.90 of NH 148 and the road from km 0.00 of NH 148 to km 14.52 via Dewas Ujjain Section and thereof for the stretch of 41.42 km in Madhya Pradesh by four laning on a HAM basis.	GBHPL is a special purpose vehicle which was incorporated for the development of road from km 287.52 of NH 209 to km 461.55 of NH 209 via BRT Tiger Reserve Boundary to Bangalore Section under National Highways Development Project Phase- IV for the stretch of 164.34 km in Karnataka by two/ four laning on a HAM by. way of harmonious substitution of SBHPL (the erstwhile concessionaire) under the SBHPL Concession Agreement.[1]	GNHPL II is a special purpose vehicle which was incorporated for the development of road from km 42.791 of NH 87 (New NH 09, 109) to km 88 of NH 87 (New NH 09, 109) via Rampur Kathgodam Section under NHDP Phase-III for the stretch of 49.78 km in Uttarakhand by four laning on a HAM basis by way of harmonious substitution of SNHL (the erstwhile concessionaire) under the SNHL Concessionaire Agreement.[2]
State	Haryana	Rajasthan	Haryana	Haryana	Bihar	Himachal Pradesh	Madhya Pradesh	Karnataka	Uttarakhand
Design length (in kms)	35.450	212.107	45.300	40.220	47.225	47.753	40.250	164.340	49.78
Awarding Authority	NHAI	NHAI	NHAI	NHAI	NHAI	NHAI	NHAI	NHAI	NHAI
Date of signing of	May 09, 2018 (amendment to Concession	September 28, 2018	February 28, 2019	May 27, 2019	October 28, 2020	November 26, 2020	December 11, 2020	December 08, 2016	June 2, 2016

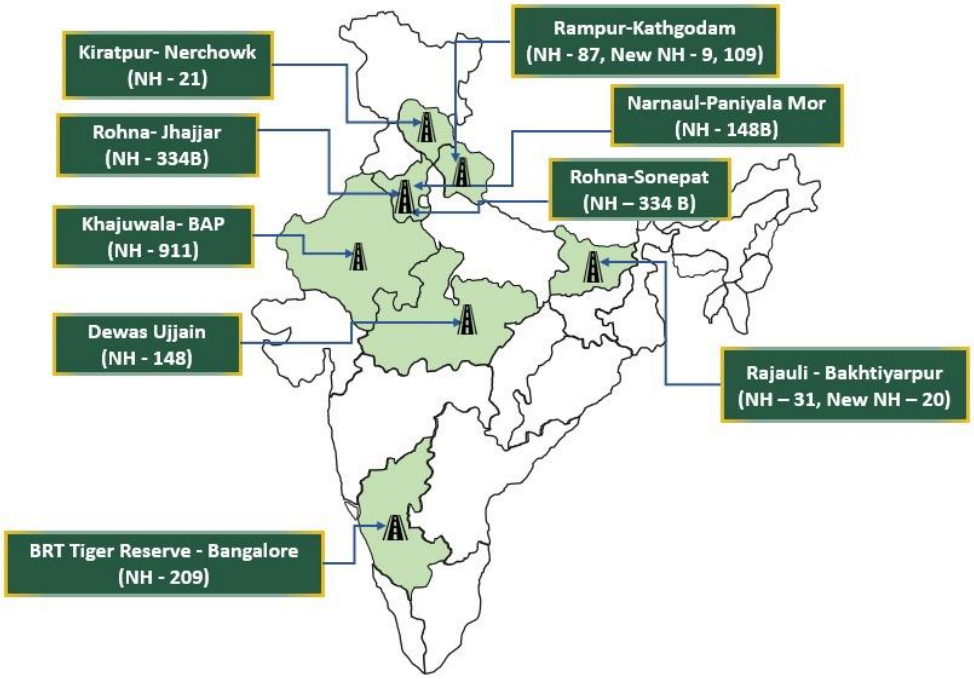
[1] *SBHPL is a wholly owned subsidiary of Sadbhav Infrastructure Projects Limited formed for undertaking development of Bangalore Highway Limited. However, due to persisting issues leading to delay in project completion, the project was endorsed to GBHPL through endorsement agreement on February 13, 2023.*

[2] *SNHL was incorporated by Sadbhav Infrastructure Projects Limited for undertaking development of Nainital Highway Asset. However, due to persisting issues leading to delay in project completion, the project was endorsed to GNHPL II through endorsement agreement on July 14, 2023*

Name of the Initial Portfolio Assets	Rohna Jhajjar Highway Asset	Khajuwala Bap Highway Asset	Narnaul Highway Asset	Rohna Sonepat Highways Asset	Hardiya Hasanpur Highway Asset	Kiratpur Nerchowk Highway Asset	Dewas Ujjain Highway Asset	Bangalore Highways Asset	Nainital Highways Asset
Concession Agreement	Agreement on February 13, 2019)								
Date of Signing of Endorsement Agreement	NA	NA	NA	NA	NA	NA	NA	February 13, 2023	July 14, 2023
PCOD	July 10, 2020	January 20, 2021	January 9, 2021	January 29, 2022	April 27, 2023	June 7, 2023	July 5, 2023	December 31, 2020	October 27, 2019
COD	July 31, 2020	October 30, 2021	January 09, 2021	April 5, 2022	To be notified.	September 5, 2023	January 16, 2024	To be notified	To be notified
Operations and maintenance period (in years)	15	15	15	15	15	15	15	15	15
Bid Project Cost *(in ₹ millions)*	7,180	8,950	11,370	10,200	10,650	20,980	7,160	9,442.30	5,601.10
Completion cost (in ₹ million)**	7,571.31	9,657.88	11,779.32	10,998.10	12,090.88	24,431.21	8,233.30	10,495.62	7,684.70
Total annuities receivable until the concession end date (in ₹ million)	4,510.73	5,794.73	7,013.02	6,656.99	7,304.64	14,746.84	4,946.87	5,480.72	3,683.85
Annuities received until the concession end date or as on September 30, 2024 whichever is earlier) (in ₹ million)	804.04	891.08	1,083.82	724.20	311.91	629.69	211.23	668.65	219.97
Cash Inflows* received as on September 30, 2024 (in ₹ millions)	201.28	260.41	311.15	311.32	381.52	740.68	255.46	558.22	203.35

* *Cash Inflows include interest on annuity and O&M payments for April 1, 2024, to September 30, 2024.*

** *Completion Cost may be adjusted due to changes in the weighted price index, consumer price index, and any modifications to the reference date as per NHAI's evaluation under the Concession Agreement.*



All of the Initial Portfolio Assets are HAM projects awarded by NHAI. The Sponsor will be monetizing future annuity payments (including interest payable thereon) and O&M income receivable from the NHAI by transferring the Initial Portfolio Assets to the Trust. Our revenue stream primarily comprises interest income on financial assets receivable from NHAI, as well as revenue from operations, maintenance of roads, construction services, and operating revenues received from NHAI. The revenue from operations of the Initial Portfolio Assets based on the Special Purpose Combined Financial Statements for six months period ended September 30, 2024, and the Financial Years ended March 31, 2024, 2023 and 2022 was ₹ 7,054.55 million, ₹ 14,850.91 million, ₹ 20,330.90 million and ₹ 19,081.51 million, respectively.

Factors Affecting Results of Operations

The Project SPVs' business, prospects, results of operations and financial conditions are affected by a number of factors, including the following:

Interest rate fluctuations

As our infrastructure business is capital intensive, our projects are funded to a large extent by debt, and as a result we are exposed to interest rate risks. Our current debt facilities carry interest at fixed and variable rates with the provision for periodic reset of interest rates. As at September 30, 2024, the majority of our indebtedness was subject to variable interest rates. Considering the capital-intensive nature of the infrastructure business, an increase in interest expense at the Project SPV level is likely to have a significant adverse effect on our financial results.

Inflation and interest risk

In all the Concession Agreements, the interest payable to us on balance completion cost is linked with the applicable bank rate plus 3% and income arising out of O&M payments is linked with the movements of inflation indices in the relevant period. However, there are no specific provisions in the Concession Agreements protecting us against increases in interest rates on our borrowings or cost of raw materials, except to the extent of rates linked to applicable Bank Rate and the inflation index. The loan facilities availed by the Project SPVs typically carry a floating rate of interest specified by the lender (benchmarked to MCLR). Our lenders may have the right to periodically adjust our interest rates and our applicable interest rates may increase based on their review of our credit profile and perceived risks in our operations. Our operational costs may change if our Project Manager fails to perform its O&M duties and responsibilities under the Project Management Agreement. Many factors causing such adverse changes are beyond our control and we are not permitted to demand matching increases in our annuities to account for the impact of inflation and interest rate adjustments on our costs.

Strategic expansions through acquisitions including under the Right of First Offer

The Investment Manager intends to develop and expand our Initial Portfolio Assets by capitalizing on opportunities provided by our Sponsor to undertake strategic acquisitions of road assets. For details, please see the section entitled "***Business – Assets under ROFO***" on page 172. To achieve this objective, in addition to the Initial Portfolio Assets, the Investment Manager will

also have the ability to acquire new projects through (i) a right of first offer with our Sponsor in accordance with the ROFO Agreement; and (ii) through other acquisitions from third parties. Any acquisitions will have a direct impact on our revenue growth as well as having a corresponding increase in any operating and financial expenses that we will incur. Any acquisitions in the future are expected to be financed by incurring additional debt and/or through the issuance of fresh Units, which could affect our cash flows or could lead to dilution of holdings of existing holders that do not maintain their percentage interests upon the issuance of fresh Units.

The road sector in India

We derive and expect to continue to derive in the foreseeable future, our revenues and operating profits are from India. Changes in macroeconomic conditions generally impact the road industry and could negatively impact our business. Accordingly, our business is highly dependent on the state of development of the Indian economy and the macroeconomic environment prevailing in India. Since the use of our Projects, our expansion plans and future projects depend or will depend on macroeconomic factors that may negatively impact demand of the development of road infrastructure projects in India, or the timely commencement of their operations could in turn have a material adverse effect on our growth prospects, business and cash flows. Furthermore, during economic downturns, financing may become more expensive or unavailable on terms that are acceptable to businesses.

General economic conditions in India, economic conditions in the areas in which the Project SPVs operate and the level of investment and activity in the road infrastructure sector

Demand for roads in India and consequently, the performance and growth of road projects are impacted by economic conditions in India and government policies relating to infrastructure development to support long-term growth plans of the Indian economy.

The Indian economy has been affected by the recent global economic uncertainties, volatility in interest rates, currency exchange rates, commodity and electricity prices, adverse conditions affecting agriculture and various other macroeconomic factors. Since the Project SPVs focus on the road and highways sectors, any slowdown or perceived slowdown in the Indian economy, or in those sectors of the Indian economy, could materially and adversely impact the business, financial performance and results of operation of the Project SPVs. Similarly, the health and sustained economic development in the regions in which the Project SPVs operate could have a significant impact on the revenues and growth prospects of the Project SPVs. Additionally, an increase in trade deficit or a decline in India's foreign exchange reserves could negatively impact interest rates and liquidity, which could adversely impact the Indian economy and our business. Any downturn in the macroeconomic environment in India could materially and adversely affect our business.

Due to increased budgetary allocations by the Government and its road development initiatives as well as investments by the private sector in the infrastructure projects, the road and highways sectors have developed significantly in the last decade. While recent Indian governments have been focused on encouraging private participation in the industrial sector, any adverse change in policy could result in a further slowdown of the Indian economy. The rate of economic liberalisation could decrease, and specific laws and policies affecting foreign investment, currency exchange rates and other matters affecting investment in India could change as well. In the road sector, there can be no assurance that the GoI's engagement with and outreach to private sector operators, including InvIT, will continue in the future. A significant change in India's economic liberalisation and deregulation policies, in particular, those relating to the road sector, could disrupt business and economic conditions in India generally and our business in particular.

Dependence on support from governmental entities

Any significant changes in a particular government's policy for the road infrastructure sector could have a significant effect on the InvIT's revenues, expenditure and growth prospects as they relate to future projects. The results of operations of future projects are likely to be affected by budgetary allocations made by the various central and state government agencies for the infrastructure sector as well as funding provided by international and multilateral development finance institutions for road infrastructure projects. Any adverse change in focus or policy framework regarding infrastructure development or the surface transportation industry, or the InvIT's relationship with the government or various governmental entities in India could adversely affect the InvIT's business, financial condition and results of operations. Changing political or social imperatives can also affect the InvIT's and the Project SPVs' businesses.

Competition

The InvIT faces competition from other road operators, financial investors and other infrastructure investment trusts in acquiring profitable concessions for future projects. The competition for road 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 competitors may have, greater financial resources, economies of scale and operating efficiencies than the InvIT. In respect of new and eligible acquisition opportunities, the InvIT may rely on the experience and qualifications of our Sponsor, which faces competition from both domestic and international entities in the roads and highways infrastructure sector, as most of the contracts awarded by the Government of India and State Governments are awarded on a competitive bidding basis and subject to satisfaction of other prescribed pre-qualification criteria. There can be no assurance that our Sponsor can effectively compete with its competitors

in relation to the acquisition of future projects, and any failure to compete effectively may have a material adverse effect on the InvIT's financial condition and results of operations.

Critical Accounting Policies

The preparation of the Special Purpose Combined Financial Statements requires management to make judgements, estimates and assumptions that affect the reported amounts of revenues, 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 periods.

While all aspects of the Special Purpose Combined 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:

Basis of preparation and presentation

The Investment Manager of the Trust have prepared Special Purpose Combined Financial Statements of the Project SPVs which comprise of the special purpose combined balance sheets as at September 30, 2024 and March 31, 2024, March 31, 2023, March 31, 2022; the special purpose combined statements of profit and loss (including other comprehensive income); the special purpose combined cash flow statements; and the special purpose combined statements of changes in equity for the respective years; special purpose combined statements of net assets at fair value as at September 30, 2024; special purpose combined statements of total returns at fair value for the six months period ended September 30, 2024, and notes to the combined financial statements including a material accounting policy information and other explanatory information.

Basis of Combination

These Special Purpose Combined Financial Statements have been prepared using uniform accounting policies for like transactions and other events in similar circumstances. The financial statements of all the SPV Group used for the purpose of combination are drawn up to the same reporting date i.e. six months period ended September 30, 2024, and year ended on March 31 each year. The financial statements of the Project SPVs have been prepared in accordance with the Ind AS and/or any addendum thereto as defined in the Rule 2(1)(a) of the Companies (Indian Accounting Standards) Rule, 2015 and other relevant provisions of the Companies Act.

Summary of material accounting policies

The following is the summary of material accounting policy information applied by the SPV Group in preparing its Special Purpose Combined Financial Statements:

Business combination

Business combinations have been accounted for using the acquisition method under the provisions of Ind AS 103, Business Combinations. The purchase price in an acquisition is measured at the fair value of the assets transferred and liabilities incurred or assumed at the date of acquisition, which is the date on which control is transferred to the Project SPV. The purchase price also includes the fair value of any contingent consideration. Identifiable assets acquired and liabilities and contingent liabilities assumed in a business combination are measured initially at their fair value on the date of acquisition. Contingent consideration is remeasured at fair value at each reporting date and changes in the fair value of the contingent consideration are recognized in the combined statement of profit and loss.

Goodwill is measured as 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 resulting gain on bargain purchase is recognised in other comprehensive income and accumulated in equity as capital reserve. However, if there is no clear evidence of bargain purchase, the entity transfers the gain directly in equity as capital reserve, without routing the same through other comprehensive income.

Basis of classification as current and non-current

The SPV Group presents assets and liabilities in the combined balance sheet based on current/non-current classification. An asset is current when it is:

- Expected to be realized or intended to be sold or consumed in the normal operating cycle
- Held primarily for the purpose of trading
- Expected to be realized 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 have been classified as non-current. A liability is current when:

- It is expected to be settled in the 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 SPV Group classifies all other liabilities as non-current.

Deferred tax assets and liabilities are classified as non-current assets and liabilities.

Operating cycle of the SPV Group is the time between the acquisition of assets for processing and their realization in cash or cash equivalents. As the SPV Group's normal operating cycle is not clearly identifiable, it is assumed to be twelve months.

Fair value measurement

The SPV Group measures financial instruments 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 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. See "***Note 35−Special Purpose Combined Financial Statements***" on page 270 for fair value hierarchy.

All assets and liabilities for which fair value is measured or disclosed in the Special Purpose Combined Financial Statements are categorized 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 recognized in the Special Purpose Combined Financial Statements on a recurring basis, the SPV Group determines whether transfers have occurred between levels in the hierarchy by re-assessing categorization (based on the lowest level input that is significant to the fair value measurement as a whole) at the end of each reporting period.

External valuers are involved for valuation of significant assets such as annuity receivable, where required. Involvement of external valuers is decided by each Project SPV management on a need basis and relevant approvals. The valuers involved are selected based on criteria like market knowledge, reputation, independence and professional standards. The management of each Project SPV decides after discussion with the external valuers, which valuation techniques and inputs to use for each case.

At each reporting date, the management of each Project SPV analysis the movement of assets and liabilities which are required to be re-measured or reassessed as per the Project SPV accounting policy. For this analysis, the management of each Project SPV 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 in conjunction with each Project SPV external valuers also compares the change in fair value of each asset and liability with relevant external sources to determine whether the change is reasonable.

Revenue Recognition

To determine whether to recognize revenue, the Project SPV Group follows a 5-step process:

- Identifying the contract with a customer
- Identifying the performance obligations
- Determining the transaction price
- Allocating the transaction price to the performance obligations
- Recognizing revenue when/as performance obligation(s) are satisfied.

In all cases, the total transaction price is allocated amongst the various performance obligations based on their relative standalone selling price. The transaction price excludes amounts collected on behalf of third parties. The consideration promised include fixed amounts, variable amounts, or both. The specific recognition criteria described below must also be met before revenue is recognized.

Taxation

Current income tax

Current income tax assets and liabilities are measured at the amount expected to be recovered from or paid to the tax authorities. The tax rates and tax laws used to compute the amount are those that are enacted or substantively enacted at the reporting date.

Current income tax relating to items recognized outside statement of profit or loss is recognized outside statement of profit or loss (either in other comprehensive income or in equity). Current tax items are recognized 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 assets are recognized for all deductible temporary differences, the carry forward of unused tax credits and any unused tax losses. Deferred tax assets are recognized 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 utilized.

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 SPV Group will pay normal income tax during the specified period. Minimum alternate tax ("**MAT**") credit entitlement is recognized as an asset only when and to the extent there is convincing evidence that normal income tax will be paid during the specified 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.

Borrowing costs

Borrowing cost include interest calculated using the effective interest method, amortization of ancillary costs and other costs the SPV Group incurs in connection with the borrowing of funds. Borrowing costs directly attributable to the acquisition or construction of a qualifying asset are capitalized during the period of time that is necessary to complete and prepare the asset for its intended use or sale. A qualifying asset is one that necessarily takes substantial period of time to get ready for its intended use. Capitalisation of borrowing costs is suspended in the period during which the active development is delayed due to, other than temporary, interruption. All other borrowing costs are charged to the combined statement of profit and loss as incurred.

Use of estimates and judgements

The preparation of Special Purpose Combined Financial Statements requires management to make certain estimates and assumptions that affect the amounts reported in the Special Purpose Combined Financial Statements and notes thereto. The management believes that these estimates and assumptions are reasonable and prudent. However, actual results could differ from these estimates. Any revision to accounting estimates is recognized prospectively in the current and future period. An

overview of the areas that involve a higher degree of judgement or complexity, and of items which are more likely to be materially adjusted due to estimates and assumptions turning out to be different than those originally assessed have been disclosed below. Detailed information about each of these estimates and judgments is included in the relevant notes together with information about the basis of calculation for each affected line item in the Special Purpose Combined Financial Statements.

Estimate and judgements are continually evaluated and are based on historical experience and other factors, including expectations of future events that may have a financial impact on the entity and that are believed to be reasonable under circumstances.

The SPV Group makes estimates and assumptions concerning the future. The resulting accounting estimates will, by definition, seldom be equal to the related actual results. The estimates and assumptions that have significant risk of causing a material adjustment to the carrying amount of assets and liabilities are disclosed below:

Service concession agreement

"Service concession arrangements" applies to "public to private" service concession arrangements, which can be defined as contracts under which the grantor transfers to a concession holder the right to deliver public services that give access to main public facilities for a specified period of time in return of managing the infrastructure used to deliver those public services.

More specifically, it applies to public to private service concession arrangement if the grantor:

a) Controls or regulates what services the operators must provide with the infrastructure, to whom it must provide them, and at what price; and

b) Controls through ownership or otherwise –any significant residual interest in the infrastructure at the end of the term of the arrangement.

Refer Note 2.3(f) which explains revenue recognition where the estimates are involved to determine the relative selling prices of performance obligations under service concessions arrangements. The HAM revenue model based on which the revenue and finance income are recognized under the service concessions arrangements assumes certain estimates and assumptions based which the project effective internal rate of return (IRR) is calculated for finance income recognition. The key inputs of the model comprise of annuity and interest on annuity inflows, estimations on cost to build and maintain the asset and other operational costs. These inputs are based on circumstances existing and management judgement / assumption on the future expectations based on current situations. Judgements include management view on expected earnings in future years, changes in interest rates, cost inflation, government policy changes, etc.

Provisions and liabilities

Provisions and liabilities are recognized in the period when it becomes probable that there will be a future outflow of funds resulting from past operations or events and the amount of cash outflow can be reliably estimated. The timing of recognition and quantification of the liability requires the application of judgement to existing facts and circumstances, which can be subject to change.

Fair value measurements

Management applies valuation techniques to determine the fair value of financial instruments (where active market quotes are not available). This involves developing estimates and assumptions consistent with how market participants would price the instrument. The SPV Group engages third party valuers, where required, to perform the valuation. Information about the valuation techniques and inputs used in determining the fair value of assets are disclosed in the notes to Special Purpose Combined Financial Statements.

Impairment of financial assets

The impairment provision for financial assets is based on assumptions about risk of default and expected loss rates. The SPV Group uses judgement in making these assumptions and selecting the inputs to the impairment calculation, based on the SPV Group's history, existing market conditions as well as forward looking estimates at the end of each reporting period.

Fair valuation and disclosures

SEBI Guidelines issued under the SEBI InvIT Regulations requires disclosures 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 Investment Manager of the Trust works closely with the valuers to establish the appropriate valuation techniques and inputs to the model. 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 Weighted average cost of capital ("**WACC**"), tax rates, inflation rates etc. Changes in assumptions about these factors could affect the fair value.

Recognition of deferred tax assets

The extent to which deferred tax assets can be recognized is based on an assessment of the probability of the future taxable income against which the deferred tax assets can be utilized.

Income taxes

Significant judgements are involved in estimating budgeted profits for the purpose of paying advance tax, determining the provision for income taxes, including amount expected to be paid / recovered for uncertain tax positions. The extent to which deferred tax assets/minimum alternate tax credit can be recognized is based on management's assessment of the probability of the future taxable income against which the deferred tax assets/minimum alternate tax credit can be utilized.

Contingent liabilities

The SPV Group is subject to legal proceedings and tax issues covering a range of matters, which are pending in various jurisdictions. Due to the uncertainty inherent in such matters, it is difficult to predict the final outcome of such matters. The cases and claims against the SPV Group often raise difficult and complex factual and legal issues, which are subject to many uncertainties, including but not limited to the facts and circumstances of each particular case and claim, the jurisdiction and the differences in applicable law. In the normal course of business management of each Project SPV consults with legal counsel and certain other experts on matters related to litigation and taxes. The SPV Group accrues a liability when it is determined that an adverse outcome is probable and the amount of the loss can be reasonably estimated.

Evaluation of indicators for impairment of assets

The evaluation of applicability of indicators of impairment of assets requires assessment of several external and internal factors which could result in deterioration of recoverable amount of the assets.

Recoverability of advances/ receivables

At each balance sheet date, based on historical default rates observed over expected life, the management assesses the expected credit losses on outstanding receivables and advances.

Results of Operations

The following table sets forth certain information with respect to the results of operations of the InvIT (on a combined basis) for the financial years indicated:

Particulars	Six months period ended September 30, 2024		Year Ended March 31, 2024		Year Ended March 31, 2023		Year Ended March 31, 2022	
	(in ₹ million)	Percentage of Total Income (%)	(in ₹ million)	Percentage of Total Income (%)	(in ₹ million)	Percentage of Total Income (%)	(in ₹ million)	Percentage of Total Income (%)
Income and gains								
Revenue from operations	7,054.55	89.04	14,850.91	96.22	20,330.90	80.71	19,081.51	96.30
Interest income on bank deposits	71.58	0.90	102.21	0.66	41.44	0.17	23.98	0.12
Profit on sale of investments	-	-	-	-	1.18	-	8.47	0.04
Other income	796.53	10.06	481.96	3.12	4,815.71	19.12	700.23	3.54
Total Income – (I)	**7,922.66**	**100.00**	**15,435.08**	**100**	**25,189.23**	**100**	**19,814.19**	**100**
Expenses and loss								
Operating expenses	4323.37	54.57	9,812.64	63.57	16,779.78	66.61	17,061.84	86.11
Audit fee (statutory auditors of respective project SPVs)	5.13	0.06	4.31	0.03	3.96	0.02	3.40	0.02
Insurance expenses	14.95	0.19	32.14	0.21	40.69	0.16	36.36	0.18
Employee benefits expense	9.52	0.12	15.74	0.10	4.76	0.02	1.80	0.01
Project management fees	363.87	4.59	301.09	1.95	146.82	0.58	53.55	0.27
Finance costs	1,556.58	19.65	2,853.16	18.48	1,519.34	6.03	951.82	4.80
Other expenses	86.23	1.09	667.32	4.32	43.05	0.17	24.67	0.12
Total Expenses – (II)	**6,359.65**	**80.27**	**13,686.40**	**88.66**	**18,538.40**	**73.59**	**18,133.44**	**91.51**
Profit before tax (I-II) – (III)	**1,563.01**	**19.73**	**1,748.68**	**11.34**	**6,650.83**	**26.41**	**1,680.75**	**8.49**
Tax expenses								
Current tax	548.09	6.92	578.59	3.75	364.88	1.45	135.17	0.68
Current taxes of earlier years	-	-	30.74	0.20	-	-	-	-
Deferred tax (credit)/charge	(139.34)	(1.76)	(118.32)	(0.77)	1,314.06	5.22	290.02	1.46
Total tax expenses (IV)	**408.75**	**5.16**	**491.01**	**3.18**	**1,678.94**	**6.67**	**425.19**	**2.14**
Net profit for the period/ year (V) = (III) – (IV)	**1,154.26**	**14.57**	**1,257.67**	**8.16**	**4,971.89**	**19.74**	**1255.56**	**6.35**

For six months period ended September 30, 2024

Total Income

Total income was ₹ 7,922.66 million for the six months period ended September 30, 2024.

Revenue from operations

Revenue from operations was ₹ 7,054.55 million which comprised 89.04 % of the Total income for the six months period ended September 30, 2024. Revenue from operations comprised of:

- *Interest income on financial assets receivable from National Highways Authority of India ('NHAI')*: Interest income on financial assets receivable from NHAI was ₹ 2,323.10 million for the six months period ended September 30, 2024. Interest income on financial assets receivable from NHAI represented 29.32% of our Total Income for the six months period ended September 30, 2024.

- *Revenue from operations and maintenance of road*: Revenue from operations and maintenance of road was ₹ 764.46 million for the six months period ended September 30, 2024. Revenue from operations and maintenance of road represented 9.65% of our Total Income for the six months period ended September 30, 2024.

- *Revenue from construction services*: Revenue from construction services was ₹ 2,596.74 million for the six months period ended September 30, 2024. Revenue from construction services represented 32.78% of our Total Income for the six months period ended September 30,2024.

- *Other operating revenues*: Other operating revenue was ₹ 1,370.25 million for the six months period ended September 30, 2024, which was principally attributable to (i) bonus of early completion of ₹ 513.00 million and (ii) change of scope and utility income of ₹ 857.25 million. Other operating revenue represented 17.30% of our Total Income for the six months period ended September 30,2024.

Interest income on bank deposits

Interest income on bank deposits was ₹ 71.58 million for the six months period ended September 30, 2024.

Other income

Other income was ₹ 796.53 million for the six months period ended September 30, 2024, which comprised primarily of gain on modification of financial assets of ₹ 764.84 million.

Expenses

Total expenses for six months period ended September 30, 2024, was ₹ 6,359.65 million.

- *Operating expenses*: Operating expense was ₹ 4,323.37 million for the same period, which primarily comprised of (i) engineering, procurement and construction expenses of ₹ 1,613.40 million, (ii) technical consultancy charges of ₹ 71.23 million, (iii) escalation cost paid to contractor of ₹ 877.15 million (excluding GST), (iv) routine maintenance expenses of ₹ 373.25 million (excluding GST), (v) Change of scope and utility shifting expenses of ₹ 857.25 million (excluding GST), (vi) bonus paid for early completion of work ₹ 513.00 million (excluding GST).

- *Insurance expenses*: Insurance expenses were ₹ 14.95 million for the six months period ended September 30, 2024.

- *Employee benefits expenses*: Employee benefits expenses were ₹ 9.52 million for the six months period ended September 30, 2024.

- *Finance costs*: Finance costs were ₹ 1,556.58 million which primarily comprised of interest expense on non-convertible debentures, term loans and related party loan of ₹ 201.86 million, ₹ 999.24 million, ₹ 341.54 million, respectively.

- *Project management fees*: Project management fees was ₹ 363.87 million for six months period ended September 30, 2024.

- *Other expenses*: Other expenses were ₹ 86.23 million which primarily comprised of (i) legal and professional expenses of ₹ 14.14 million, (ii) corporate social responsibility expenses of ₹ 33.56 million, and (iii) loss on modification of financial assets of ₹ 37.43 million.

Profit before tax

As a result of the factors outlined above, our profit before tax was ₹1,563.01 million for six months period ended September 30, 2024.

Tax expenses

Total tax expenses were ₹ 408.75 million which comprised of current tax expenses of ₹ 548.09 million netted off against deferred tax credit of ₹ 139.34 million for the six months period ended September 30, 2024.

Net profit for the year

As a result of the factors outlined above, our net profit for the six months period ended September 30, 2024 was ₹ 1,154.26 million.

Fiscal 2024 compared to Fiscal 2023

Total Income

Total income decreased by ₹ 9754.15 million, or 38.72%, from ₹ 25,189.23 million for Fiscal 2023 to ₹ 15,435.08 million for Fiscal 2024, primarily due to a decrease in revenue from operations and other income.

Revenue from operations

Revenue from operations decreased by ₹ 5,479.99 million, or 26.95%, from ₹ 20,330.90 million for Fiscal 2023 to ₹14,850.91 million for Fiscal 2024, primarily due to a decrease in revenue from construction work which was principally attributable to two projects, namely GKNHPL and DUHPL, achieving COD and one of our project HHHPL achieving PCOD in Fiscal 2023, as a result of which the construction cost in Fiscal 2023 was higher as compared to Fiscal 2024 (resulting in lower revenues for Fiscal 2024). Revenue from operations represented 96.22% and 80.71% of our total income in Fiscals 2024 and 2023, respectively.

- *Interest income on financial assets receivable from National Highways Authority of India ('NHAI')*: Interest income on financial assets receivable from NHAI increased by ₹1,806.36 million or 67.11%, from ₹2,691.61 million in Fiscal 2023 to ₹4,497.97 million in Fiscal 2024 which was principally attributable to (i) acquisition of two new projects namely GBHPL and GNHPL II and (ii) the projects undertaken by two of our Project SPVs, namely GKNHPL and DUHPL, achieving COD and the project undertaken by HHHPL achieving PCOD in Fiscal 2023.

- *Revenue from operations and maintenance of road*: Revenue from operations and maintenance of road increased by ₹509.51 million or 133.77 % from ₹380.89 million in Fiscal 2023 to ₹890.40 million in Fiscal 2024, which was principally attributable to the increase in scope of O&M works in respect of (i) two new SPVs acquired namely GBHPL and GNHPL II in Fiscal 2023 and Fiscal 2024, respectively (ii) the projects undertaken by two of our Project SPVs, namely GKNHPL and DUHPL, achieving COD and one of our project HHHPL achieving PCOD in Fiscal 2023.

- *Revenue from construction services*: Revenue from construction services decreased by ₹7,361.26 million or 51.16%, from ₹14,389.88 million in Fiscal 2023 to ₹7,028.62 million in Fiscal 2024, which was principally attributable to decrease in construction services on account of projects undertaken by two of our Project SPVs, namely GKNHPL and DUHPL, achieving COD and the project undertaken by HHHPL achieving PCOD in Fiscal 2023.

- *Other operating revenues*: Other operating revenue decreased by ₹434.60 million or 15.15%, from ₹2,868.52 million in Fiscal 2023 to ₹2,433.92 million in Fiscal 2024, which was principally attributable to non-receipt of any bonus on early completion of our projects in Fiscal 2024 (as opposed to ₹30.99 million as early completion bonus for our projects received in Fiscal 2023) and a decrease in the change of scope and utility income which decreased from ₹2,837.53 million in Fiscal 2023 to ₹2,433.92 million in Fiscal 2024, primarily on account of no major change in scope of work allotted by NHAI.

Interest income on bank deposits

Interest income on bank deposits increased by ₹60.77 million or 146.65%, from ₹41.44 million in Fiscal 2023 to ₹ 102.21 million in Fiscal 2024, which was principally attributable to an increase in the deposits placed with banks for creating debt service reserve accounts, debenture redemption reserve and major maintenance reserve.

Profit on Sale of Investments

Profit on sale of investments decreased by ₹1.18 million or 100 %, from ₹1.18 million in Fiscal 2023 to nil in Fiscal 2024, which was principally attributable to the redemption of the surplus funds invested in mutual funds in Fiscal 2023.

Other income

Other income decreased by ₹4,333.75 million or 89.99%, from ₹4,815.71 million in Fiscal 2023 to ₹481.96 million in Fiscal 2024, which was principally attributable to a recognition of gain on modification of financial assets in fiscal year 2023 due to increase in interest rate from NHAI.

Expenses

Total expenses decreased by ₹4,852.00 million, or 26.17%, from ₹18,538.40 million in Fiscal 2023 to ₹13,686.40 million in Fiscal 2024, primarily due to a reduction in operating expenses on account of decrease in construction expenses netted off by the increase in employee cost, finance cost and project management fees.

- *Operating expenses*: Operating expenses decreased by ₹6,967.14 million or 41.52%, from ₹16,779.78 million in Fiscal 2023 to ₹9,812.64 million in Fiscal 2024, which was principally attributable to decrease in construction costs on account of reduction of construction work attributable to the projects undertaken by two of our Project SPVs, namely GKNHPL and DUHPL, achieving COD and the project undertaken by HHHPL achieving PCOD in Fiscal 2023, as a result of which our construction expenses decreased by ₹6,941.76 million or 50.71%, from ₹13,688.19 million in Fiscal 2023 to ₹6,746.43 million in Fiscal 2024.

- *Employee benefits expenses*: Employee benefits expenses increased by ₹10.98 million or 230.67%, from ₹4.76 million in Fiscal 2023 to ₹15.74 million in Fiscal 2024, which was principally attributable to an increase in the number of employees in certain projects and increase in salary of existing employees.

- *Finance costs*: Finance costs increased by ₹1,333.82 million or 87.79%, from ₹1,519.34 million in Fiscal 2023 to ₹2,853.16 million in Fiscal 2024, which was principally attributable to (i) acquisition of two Project SPVs namely GBHPL and GNHPL II, which resulted in an overall increase in borrowings and consequent increase in interest costs; (ii) additional borrowings availed from banks towards completion of construction in existing projects undertaken by certain projects, namely GKNHPL, HHHPL and DUHPL and (iii) increase in finance costs on account of increase in the MCLR rates by lenders.

- *Project management fees*: Project management fees increased by ₹154.27 million or 105.07%, from ₹ 146.82 million in Fiscal 2023 to ₹301.09 million in Fiscal 2024, which was principally attributable to project management fees charged in the additional project acquired namely GBHPL and projects undertaken by GKNHPL, HHHPL and DUHPL achieving PCOD/COD in Fiscal 2023.

- *Other expenses*: Other expenses increased by ₹624.27 million or 1,450.10%, from ₹43.05 million in Fiscal 2023 to ₹667.32 million in Fiscal 2024, which was principally attributable to an increase in loss on modification of financial assets, increase in legal and professional fees, CSR expenses and fees and subscription.

Profit before tax

As a result of the factors outlined above, our profit before tax was ₹1,748.68 million for Fiscal 2024 compared to ₹6,650.83 million for Fiscal 2023.

Tax expenses

Total tax expenses decreased by ₹1,187.93 million or 70.75%, from ₹1,678.94 million for Fiscal 2023 to ₹ 491.01 million for Fiscal 2024, which was principally attributable to a reduction in profit before tax.

Net profit for the year

As a result of the factors outlined above, our net profit for the year was ₹1,257.67 million for Fiscal 2024 compared to ₹4,971.89 million for Fiscal 2023.

Fiscal 2023 compared to Fiscal 2022

Total Income

Total income increased by ₹5,375.04 million or 27.13%, from ₹19,814.19 million for Fiscal 2022 to ₹25,189.23 million for Fiscal 2023, primarily due to an increase in revenue from operations and other income.

Revenue from operations

Revenue from operations increased by ₹1,249.39 million, or 6.55%, from ₹19,081.51 million for Fiscal 2022 to ₹20,330.90 million for Fiscal 2023, due to (i) increase in financials assets primarily on account of projects undertaken by GKNHPL, HHHPL and DUHPL achieving pre-agreed milestones under the relevant concession agreements and (ii) an increase in the

scope of work and utility shifting by NHAI. Revenue from operations represented 80.71 % and 96.30% of our total income in Fiscals 2023 and 2022, respectively.

- *Interest income on financial assets receivable from National Highways Authority of India ('NHAI')*: Interest income on financial assets receivable from NHAI increased by ₹ 1,042.55 million or 63.22%, from ₹1,649.06 million in Fiscal 2022 to ₹2,691.61 million in Fiscal 2023 which was principally attributable projects undertaken by GKNHPL, HHHPL and DUHPL achieving pre-agreed milestones under the relevant concession agreements leading to increase in financial assets.

- *Revenue from operations and maintenance of road*: Revenue from operations and maintenance of road increased by ₹138.68 million or 57.26 % from ₹242.21 million in Fiscal 2022 to ₹380.89 million, which was principally attributable to the project undertaken by GRSHPL achieving COD in Fiscal 2023.

- *Revenue from construction services*: Revenue from construction services decreased by ₹1,203.60 million or 7.72% from ₹15,593.48 million in Fiscal 2022 to ₹14,389.88 million in Fiscal 2023, which was principally attributable to reduction of construction services on account of the project undertaken by GRSHPL achieving COD in Fiscal 2023.

- *Other operating revenues*: Other operating revenue increased by ₹1,271.76 million or 79.65%, from ₹1,596.76 million in Fiscal 2022 to ₹2,868.52 million in Fiscal 2023, which was principally attributable to an increase in the change of scope and utility income which increased from ₹908.27 million in Fiscal 2022 to ₹2,837.53 million in Fiscal 2023, primarily on account of additional scope of work allotted by NHAI of ₹ 1,929.26 million, which was offset by a decrease in the bonus on early completion of our projects from ₹688.49 million in Fiscal 2022 to ₹30.99 million in Fiscal 2023.

Interest income on bank deposits

Interest income on bank deposits with banks increased by ₹17.46 million or 72.81%, from ₹23.98 million in Fiscal 2022 to ₹41.44 million in Fiscal 2023, which was principally attributable to an increase in the deposits placed with banks for creating debt service reserve accounts, debenture redemption reserve and major maintenance reserve.

Profit on Sale of Investments

Profit on sale of investments decreased by ₹7.29 million or 86.07%, from ₹8.47 million in Fiscal 2022 to ₹1.18 million in Fiscal 2023, which was principally attributable to gain in fair valuation of investments as per accounting standards in Fiscal 2022.

Other income

Other income increased by ₹4,115.48 million or 587.73%, from ₹700.23 million in Fiscal 2022 to ₹ 4,815.71 million in Fiscal 2023, which was principally attributable to a recognition of gain on modification of financial assets in Fiscal 2023 due to increase in interest rate.

Expenses

Total expenses increased by ₹404.96 million, or 2.23%, from ₹18,133.44 million in Fiscal 2022 to ₹18,538.40 million in Fiscal 2023, primarily due to an increase in operating expenses, project management fees and an increase in finance cost on account of additional borrowings taken.

- *Operating expenses*: Operating expenses decreased by ₹282.06 million or 1.65%, from ₹17,061.84 million in Fiscal 2022 to ₹16,779.78 million in Fiscal 2023 which was principally attributable to an increase in change of scope, utility shifting expenses and escalation cost on account of additional work allotted by NHAI, which was partially offset by a decrease in construction expenses.

- *Employee benefits expenses*: Employee benefits expenses increased by ₹2.96 million or 164.44%, from ₹1.80 million in Fiscal 2023 to ₹4.76 million in Fiscal 2023, which was principally attributable to an increase in the number of employees in certain projects and increase in salary of existing employees.

- *Finance costs*: Finance costs increased by ₹567.52 million or 59.62%, from ₹951.82 million in Fiscal 2022 to ₹1,519.34 million in Fiscal 2023, which was principally attributable to cost increase in borrowings on account of additional borrowings were taken from banks towards completion of construction in existing projects undertaken by certain Project SPVs, namely GRSHPL, GKNHPL, HHHPL and DUHPL.

- *Project management fees*: Project management fees increased by ₹93.27 million or 174.17%, from ₹53.55 million in Fiscal 2022 to ₹146.82 million in Fiscal 2023, which was principally attributable to project management fees charged in GRSHPL and GRJHPL on becoming fully operational.

- *Other expenses*: Other expenses increased by ₹18.38 million or 74.50%, from ₹24.67 million in Fiscal 2022 to ₹43.05 million in Fiscal 2023, which was principally attributable to a decrease in legal and professional fees, fee and subscription expenses and miscellaneous expenses.

Profit before tax

As a result of the factors outlined above, our profit before tax was ₹6,650.83 million for Fiscal 2023 compared to ₹1,680.75 million for Fiscal 2022.

Tax expenses

Total tax expenses increased by ₹1,253.75 million or 294.87%, from ₹425.19 million for Fiscal 2022 to ₹1,678.94 million for Fiscal 2023, which was principally attributable to additional deferred tax liability on account of increase in financial assets during the Fiscal 2023.

Net profit for the year

As a result of the factors outlined above, our net profit for the year was ₹4,971.89 million for Fiscal 2023 compared to ₹1,255.56 million for Fiscal 2022.

Cash Flows

The following table sets forth certain information relating to the cash flows of the SPV Group on a combined basis for the six months period ended September 30, 2024 and years ended March 31, 2024, March 31, 2023 and March 31, 2022:

(in ₹ million)

Particulars	Six months period ended September 30, 2024	Year Ended March 31, 2024	Year Ended March 31, 2023	Year Ended March 31, 2022
Net cash flow from operating activities	1,134.16	1,116.51	(5,087.64)	(6,666.53)
Net cash used in investing activities	(1,496.31)	(3,061.68)	(3,880.16)	(517.88)
Net cash flow from financing activities	(184.50)	2,742.91	8,799.97	7,463.11

Operating activities

Net cash flow from operating activities for six months period ended September 30, 2024, was ₹ 1,134.16 million which was principally attributable to receipts from NHAI, working capital changes and non-current financial assets, non-current financial liabilities.

Net cash flow from operating activities for Fiscal 2024 was ₹1,116.51 million which was principally attributable to receipts from NHAI, working capital changes and non-current financial assets, non-current financial liabilities.

Net cash flow used in operating activities for Fiscal 2023 was ₹ 5,087.64 million, which was principally attributable to receipts from NHAI, working capital changes and non-current financial assets.

Net cash flow used in operating activities for Fiscal 2022 was ₹ 6,666.53 million, which was principally attributable to receipts from NHAI, working capital changes and non-current financial assets.

Investing activities

Net cash flow used in investing activities for six months period ended September 30, 2024, was ₹ 1,496.31 million, which was principally attributable to investments in bank deposits, redemption of bank deposits and outflow of loans.

Net cash flow used in investing activities for Fiscal 2024 was ₹3,061.68 million, which was principally attributable to investments in bank deposits and redemption of bank deposits.

Net cash flow used in investing activities for Fiscal 2023 was ₹3,880.16 million, which was principally attributable to investments in bank deposits and redemption of bank deposits and acquisition financial asset (receivables under service concession agreement).

Net cash flow used in investing activities for Fiscal 2022 was ₹ 517.88 million, which was principally attributable to investments in bank deposits.

Financing activities

Net cash flow used in financing activities for six months period ended September 30, 2024 was ₹ 184.50 million, which was principally attributable to proceeds from term loans from banks, loan taken from related parties restricted to the extent of repayment of external debt.

Net cash flow generated from financing activities for Fiscal 2024 was ₹2,742.91 million, which was principally attributable to proceeds from term loans from banks, loan taken from related parties restricted to the extent of repayment of external debt.

Net cash flow generated from financing activities for Fiscal 2023 was ₹8,799.97 million, which was principally attributable to proceeds from term loans from banks, loan taken from related parties.

Net cash flow generated from financing activities for Fiscal 2022 was ₹7,463.11 million, which was principally attributable to proceeds from term loans from banks, proceeds from non-convertible debentures, loan taken from related parties.

Contingent Liabilities

As of September 30, 2024, our contingent liabilities primarily comprised of income tax and indirect tax demands raised against the Project SPV amounting to ₹ 110.43 million. For details, see "***Note 34 - Special Purpose Combined Financial Statements - Contingent Liabilities and claims***" on page 270.

Related Party Transactions

The Project SPVs have, in the course of their business and operations, entered into various transactions with related parties, such as operation and maintenance charges, project management fees, loans and advances, EPC costs, investment by way of equity share capital, CSR expenses, bank guarantees and other reimbursement expenses.

For further information on our related party transactions, see "***Related Party Transactions***" on page 214.

Known Trends or Uncertainties

Other than as described in "***Risk Factors***" on page 21 and this section, to our knowledge there are no known trends or uncertainties that have had or are expected have a material adverse impact on our revenues or income from continuing operations.

Sufficiency of working capital

The Investment Manager has confirmed that the Trust has the ability to meet the working capital requirements for a period of at least 12 months from the date of listing of the Units.

Seasonality

All the Initial Portfolio Assets comprise HAM projects and accordingly, our business is not seasonal.

Unusual or infrequent transactions

Except as disclosed in this Offer Document, there have been no events or transactions to our knowledge which could be categorized as unusual or infrequent.

Total turnover from each major segment of the InvIT

All the Project SPVs currently operate only road projects and therefore we have only one business segment.

Quantitative and Qualitative Disclosures on Market Risks

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. As of September 30, 2024, 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 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.

Credit Risk

The Project SPVs are engaged in infrastructure development business under HAM project. It currently derives its revenue primarily from hybrid annuity business. Since the annuity receivables are from NHAI and various Government authorities, the credit risk with respect to such receivables from government institutions is expected to be very low and hence, no provision for expected credit loss is deemed necessary except in the case where individual receivables are known to be uncollectable.

Liquidity Risk

Liquidity risk relates to the risk that the Trust or the Project SPVs will not be able to meet their respective obligations associated with its financial liabilities. The Trust and the Project SPVs are exposed to liquidity risk in respect of financing arrangements and short-term and long-term investment programs mainly in their growth projects.

It is expected that the InvIT, through the Investment Manager, will regularly monitor liquidity requirements to ensure that it maintains adequate means of obtaining funds necessary in order to meet liquidity requirements in the short and longer term. Further, the InvIT and the Project SPVs aim to minimize the risk by generating sufficient cash flows from their current operations, cash and cash equivalents, liquid investments and by deploying a robust cash management system.

Significant Developments since March 31, 2024

Except as disclosed in this Offer Document and except in the ordinary course of business of the Project SPVs, we are not aware of any circumstances that have arisen since March 31, 2024 that materially and adversely affect, or are likely to affect, our operations or profitability, the values of our respective assets or our ability to pay our respective liabilities in the next twelve months.

The InvIT and the Investment Manager confirm that there has been no material change in contingent liabilities since March 31, 2024, which is the date of the latest financial information included by way of the Special Purpose Combined Financial Statements.

The capital and other commitments, decreased to ₹ 485.38 million for the six months period ended September 30, 2024, from ₹ 2,118.24 million for March 31, 2024, attributable to decrease in estimated project cost for construction for highway committed to be executed for the same period.

Further, the following table sets forth the monthly revenue of the Project SPVs since March 31, 2024:

(in ₹ million)

Project SPV	**Annuity received/ receivable from NHAI for the month of**							
	April 2024*	**May 2024***	**June 2024***	**July 2024***	**August 2024***	**September 2024***	**October 2024***	**November 2024***
Dewas Ujjain Highway Private Limited	63.15	63.15	63.15	54.66	63.93	60.53	62.55	60.53
Gawar Bangalore Highways Private Limited	110.93	110.93	110.93	144.81	130.51	112.70	116.46	112.70
Gawar Khajuwala Bap Highway Private Limited	67.90	67.90	67.90	67.04	70.26	66.52	68.74	79.71
Gawar Kiratpur Nerchowk Highway Private Limited	176.55	176.55	173.73	172.88	183.59	172.88	178.64	172.88
Gawar Narnaul Highway Private Limited	81.45	81.45	81.45	80.62	83.89	79.71	82.36	79.71
Gawar Nainital Highways Private Limited	46.50	60.92	58.96	60.92	60.92	58.96	61.29	61.69
Gawar Rohna Jhajjar Highway Private Limited	53.25	53.25	53.25	52.30	54.93	52.07	53.81	66.52
Gawar Rohna Sonepat Highways Private Limited	73.09	73.09	73.09	95.20	79.71	76.81	79.37	76.81
Hardiya Hasanpur Highway Private Limited	89.63	89.09	89.09	89.09	91.61	87.59	90.47	87.41
Total	**762.45**	**776.33**	**771.55**	**817.52**	**819.35**	**767.77**	**793.69**	**797.96**

Note: The amount was determined by averaging the bi-annual annuity payments on a daily basis over six-month period as of the due date and the interest on annuity receivable, which is based on the closing financial assets receivable from NHAI.
**It includes Annuity, Interest and operation and maintenance Grant*

FINANCIAL INDEBTEDNESS AND DEFERRED PAYMENTS

The Project SPVs have primarily availed loans, amongst others, for refinancing/take-over of the existing loans sanctioned and availed, for their respective projects to the extent outstanding, or repayment of the loans availed from the Sponsor for setting up their respective projects. Certain Project SPVs have availed loans for financing their respective projects, to meet the interest and O&M expenses from their respective COD till receipt of the first annuity payment from NHAI, and submission of bank guarantee for receiving advance payment from NHAI in terms of their respective Concession Agreements. Further, the Project SPVs have availed loans from the Sponsor for the purpose of their respective projects which forms part of the total means of finance of the projects ("**Sponsor Loans**").

The details of indebtedness of the Trust and Project SPVs as at September 30, 2024, together with a brief description of certain material covenants of the relevant financing agreements, are provided below. For additional details, Investors should also refer to *"**Use of Proceeds**"* on page 80.

(in ₹ million)

Sr. No.	Name of the Project SPV	Pre-Offer Principal Amount outstanding, as on September 30, 2024***	Post-Offer Principal Amount outstanding*
1.	***GRJHPL***		
	Secured term loan	1,878.55	[●]
	Unsecured loan**	56.00	[●]
	Total (A)	**1,934.55**	**[●]**
2.	***GKBHPL***		
	Secured term loan	-	[●]
	Secured listed NCDs	1,819.04	[●]
	Unsecured loan**	-	[●]
	Total (B)	**1,819.04**	**[●]**
3.	***GNHPL***		
	Secured term loan	-	[●]
	Secured listed NCDs	2,998.99	[●]
	Unsecured loan**	-	[●]
	Total (C)	**2,998.99**	**[●]**
4.	***GKNHPL***		
	Secured term loan[(1)]	6,306.98	[●]
	Unsecured loan**	1,978.64	[●]
	Total (D)	**8,285.62**	**[●]**
5.	***HHHPL***		
	Secured term loan	4,306.11	[●]
	Unsecured loan**	76.71	[●]
	Total (E)	**4,382.82**	**[●]**
6.	***GRSHPL***		
	Secured term loan	2,978.66	[●]
	Unsecured loan **	-	[●]
	Total (F)	**2,978.66**	**[●]**
7.	***GNHPL II***		
	Secured term loan	1,934.97	[●]
	Unsecured loan **	968.98	
	Total (G)	**2,903.95**	**[●]**
8.	***GBHPL***		
	Secured term loan	4,273.61	[●]
	Unsecured loan **	1,268.78	
	Total (H)	**5,542.39**	**[●]**
9.	***DUHPL***		
	Secured term loan	2,183.98	[●]
	Unsecured loan**	522.90	[●]
	Total (I)	**2,706.88**	**[●]**
	Total (Total (A+B+C+D+E+F+G+H+I)	**33,552.90**	**[●]**

(1) The Company has received a sanction of an amount of ₹ 1,250 million from Axis Bank Ltd, pursuant to a sanction letter dated October 30, 2024, the purpose of which inter-alia includes repayments of promoter/sponsor sub-ordinate loan. The Company proposes to undertake the disbursement of the loan post the receipt of the listing and trading approval

* *Will be determined upon completion of the Offer. To be updated in the Final Offer Document prior to filing with SEBI and the Stock Exchanges.*

** *The unsecured loans have been extended by the Sponsor to the SPVs in the form of inter corporate deposits.*

****Post deducting Transaction Cost. Transaction Cost is defined as the advance processing fees paid upfront at the time of sanction of loan, which is amortized over the tenure of loan and is reduced in financial statements as per IND AS.*

For further details of the equity share capital of each of the Project SPVs, refer to the section titled "***Formation Transactions in relation to the Trust***" on page 102.

I. Principal terms of the borrowings (secured term loans) availed by the Project SPVs:

1. *Interest and commissions:* The facilities availed by the Project SPVs typically have a benchmark floating rate of interest specified by the lender (repo rate, MCLR or T-Bill rate) plus an applicable spread which may be altered by the lender upon occurrence of events specified in the financing agreements, interest tax and other statutory levies, payable monthly. The applicable spread varies amongst different loans and is subject to reset in a manner specified in the relevant financing agreements.

2. *Maturity and repayment:* The final maturity period of the loans availed by the Project SPVs is a time period between 10 years and 4 months to 15 years 7 months. These loans are repayable in approximately 28 structured semi-annual installments in accordance with the repayment schedule specified in the relevant financing agreements.

3. *Security/Collateral:* Borrowings availed by the Project SPVs are secured by, amongst:

   (i). first ranking *pari passu* charge by way of hypothecation over:

      (a) all the Project SPVs' fixed assets and tangible moveable assets (present and future);

      (b) all of the bank accounts of the Project SPVs, including but not limited to the escrow account, DSRA and sub-accounts that may be opened pursuant to the transaction documents;

      (c) book debts, operating cash flows, receivables, commissions, revenues of whatsoever nature and whenever arising, both present and future; and

      (d) all intangible assets of the Project SPVs.

   (ii). first ranking *pari passu* charge/assignment by way of security over:

      (a) all the rights, titles, interests, benefits, claims and demands whatsoever of the Project SPVs in, to and under the project agreements;

      (b) all the right, title, interest, benefits, claims and demands whatsoever of the Project SPVs in, to and under all the clearances;

      (c) all the right, title, interest, benefit, claims and demands whatsoever of the Project SPVs in, to and under any letter of credit, guarantees provided by any person in favour of the Project SPVs under any project agreement; and

      (d) all the right, title, interest, benefits, claims, and demands whatsoever of the Project SPVs in, to and under all insurance contracts and insurance proceeds.

   (iii). first ranking *pari passu* charge by way of pledge over certain specified percentage of equity shares and preference shares, both present and future, held by the Sponsor aggregating to at least 51% of the share capital of the Project SPVs;

   (iv). pledge over quasi-equity (except including OCDs and CCDs and excluding preference shares) instruments and debt securities extended by the Sponsor to the Project SPVs, in favour of the security trustee for the benefit of the lenders in form and substance satisfactory to the security trustee; and

   (v). security interest by way of equitable assignment or pledge (as applicable) of the subordinate loans, if any, extended by the Sponsor to the Project SPVs.

4. *Pre-payment:* The Project SPVs have the right to voluntarily prepay all or part of the outstanding amounts, subject to payment of a prepayment premium, which is typically 1% of the amount proposed to be repaid. The Project SPVs have the right to prepay all or part of the outstanding amounts without payment of a prepayment premium on the occurrence of certain events specified in the relevant facility agreement.

   Further, certain facility agreements have provisions for mandatory prepayment of the entire amount outstanding, without payment of prepayment premium, on the receipt of monies pursuant to occurrence of certain mandatory prepayment events such as any damage/penalty received pursuant to the project agreements, in excess of the corresponding amount due to be paid by the Project SPVs to the other entity, any insurance proceeds to the extent not applied to repair/restore the project assets, proceeds resulting from arbitral or judicial award in connection with any project agreement, proceeds from sale/ transfer/ disposal of the project assets, proceeds in connection with breach of warranty or guarantee under any project documents

or change in control has occurred without prior written consent of the lenders, subject to the terms specified in the relevant financing agreements.

The repayment charges of the borrowings are the same as that of pre-payment charges, i.e. 1% of the amount proposed to be repaid.

5. *Restrictive covenants:* Borrowing arrangements entered into by the Project SPVs contain certain standard restrictive covenants affecting the Project SPVs, which mandates certain actions and prevent them from undertaking certain actions.

The positive covenants in the borrowing arrangements typically include:

(i). to maintain all necessary approvals/ clearances from central government, state government and other statutory bodies during the concession period;

(ii). permit lenders and their authorized officers, employees consultants to visit and inspect facilities, properties records and documents in relation to the project;

(iii). to submit a credit rating from external rating agency as accredited by the RBI;

(iv). agree that in the event of reduction in the, cost of the project, there will be a pro-rata reduction in all debt and Sponsor's equity;

(v). to intimate lenders of the financial condition, business and operations of the Project SPVs including any circumstances or incidents affecting the financial position of the Project SPVs;

(vi). to submit the lender's independent engineer reports on a quarterly basis;

(vii). comply with the environmental, health, safety, social and other requirements, including compliance with applicable central and state environmental laws, social labor, health and safety standards, preparation of a due diligence social and environmental annual compliance report by a consultant and timely intimation and correction of any incident/ accident which could be reasonably expected to have material adverse effect on the business, and;

(viii). to take all necessary steps to ensure smooth implementation and operation of the Project.

Additionally, the borrowing arrangements enumerate certain financial covenants, including maintain specific debt equity ratios which the Project SPVs have to comply with as per the terms of the facility documents.

The negative covenants in the facility documents in relation to the Project typically include:

(i). not effect any change in its capital structure including reduction, purchase, buy-back, re-organisation of share capital;

(ii). not formulate any scheme for winding up, merger, de-merger, consolidation, amalgamation with its shareholders or creditors;

(iii). not dispose of the project assets (excluding subleasing of land/facilities);

(iv). not acquire assets of any other person or make any investment in any entity, give any loans, extend financial assistance to any person, undertake any obligation on behalf of or for the benefit of any other person;

(v). not enter into long term contractual arrangement/obligations except as permitted;

(vi). not declare or pay any restricted payments, as specified in the financing agreements;

(vii). not create any security interest on or in any of its assets;

(viii). not take any action to cancel or terminate any transaction document, sell, transfer or assign its interest in any transaction document;

(ix). not directly or indirectly incur any financial indebtedness with any other person or financial institution except as permitted;

(x). not abandon the project;

(xi). not raise any equity or preference capital except as permitted;

(xii). not prepay any debt, redeem preference shares, change its capital structure;

(xiii). not repay the monies brought in by the Sponsor;

(xiv). not permit any change in ownership/control/management except as permitted;

(xv). not alter, augment, modernize, expand or otherwise make material changes to scope of the project and the corresponding agreements;

(xvi). not undertake any new Project or business diversification or expansion of Project, except as permitted;

(xvii). not open or operate any bank account other than the escrow account;

(xviii). not remove any person exercising substantial powers of management of the affairs of the Project SPVs;

(xix). not to effect any change in the management control/ownership and a minimum 51% shareholding of the Project SPV up to the final settlement date;

(xx). not carry out any amendments or alternations to memorandum and articles of association which shall have material adverse effect; and

(xxi). not enter any transaction with any person other than in ordinary course of business and on arm's length basis and on a commercially reasonable basis.

6. *Events of default:* In terms of the borrowing arrangements entered into by the Project SPVs, the following, amongst others, are the events of default:

(i). default payment of any repayment installment or interest payment on respective due dates;

(ii). failure to obtain or repudiation, termination or unenforceability necessary approvals in relation to the project;

(iii). any default including any breach of the financial covenants under any of the financing agreements;

(iv). default in performance of or misrepresentation of covenants and conditions under the financing agreements;

(v). cross default under any other facility arrangements;

(vi). any amendments to memorandum and articles of association of Project SPVs which detrimentally affect the interests of the lenders;

(vii). supply of misleading information by the Project SPVs;

(viii). failure to maintain insurance required under the transaction documents;

(ix). non creation/perfection of security interests by Project SPVs;

(x). sale, disposal and removal of project assets by Project SPVs;

(xi). insolvency, bankruptcy winding up or dissolution of the Project SPVs;

(xii). downgrade of the credit rating by more than three notches or less than 'BBB'

(xiii). failure of the Sponsor to meet its obligations under the transaction documents, including any breach of the material covenants of the concession agreement;

(xiv). failure of the Sponsor to perform its obligations under the transaction documents, including failure to make a contribution by way of equity subscription by the Sponsor or the shareholders as committed;

(xv). the Sponsor or the Project SPVs or any of their directors (except directors nominated by financial institutions) are included in the RBI's wilful defaulters

(xvi). any event occurs which could have a material adverse effect on the business and operations of the Project SPVs;

(xvii). change in ownership below agreed thresholds and management control of the Project SPVs and;

(xviii). misutilization of the facility availed.

7. *Consequences of Events of default:* In terms of the borrowing arrangements entered into by the Project SPVs, the following, amongst others, are the consequences of default:

(i). restrict the Project SPVs from declaration or payment of any dividend or other distribution in respect of the shares in the case of payment defaults;

(ii). accelerate the maturities or declare the outstanding amount under the facility as due and payable;

(iii). cancellation or suspension of the available commitments;

(iv). exercise its right to convert the debt into equity, at its discretion;

(v). enforce the securities in case of payment defaults;

(vi). appointment of a nominee director on the board of directors of the Project SPVs;

(vii). appointment of a concurrent auditor and determination of the terms of the concurrent auditor in case of payment defaults, and;

(viii). exercise of other remedies as permitted or available under the borrowing arrangements and transaction documents.

This is an indicative list of the terms of the borrowings availed by the Project SPVs and there may be additional terms, conditions and requirements under the various borrowing arrangements entered into by the Project SPVs.

Given the nature of these borrowings and the terms of prepayment, the aggregate outstanding borrowing amounts may vary from time to time. In addition to the above, the Project SPVs may, from time to time, enter into re-financing arrangements and draw down funds thereunder, prior to the filing of this Offer Document.

II. Borrowing availed by the Trust

As of the date of this Offer Document, the Trust has not entered into any borrowing arrangements with the financial institutions, banks or the Sponsor.

III. Principal terms of borrowings (unsecured loans) availed by certain Project SPVs from the Sponsor ("Sponsor Loan")

The debt financing provided by the Sponsor to GRJHPL, HHHPL, GBHPL, GNHPL, GNHPL II, GKNHPL, GKBHPL, GRSHPL and DUHPL comprises intercorporate deposits in the form of unsecured subordinate loans ("**Sponsor Loans**"). The indicative principal terms of Sponsor Loans are as follows:

Facility	**The Project SPVs have borrowings of a consolidated amount of ₹ 6,071.40 million**
Summary of financing documents proposed to be executed by the Project SPVs	Intercorporate Term Sheets.
Purpose	Towards enabling the Project SPVs to meet the project requirements.
Interest Rate	Nil to 12% p.a. payable semi- annually. For GRSHPL, GRJHPL, HHHPL, GKBHPL, GKNHPL, GNHPL, GNHPL II, GBHPL and DUHPL the interest shall be compounded annually (w.e.f. achievement of PCOD/ COD)
Security	Nil
Repayment	The repayment up to commercial operations date may be made from the funds as and when available with the Project SPVs. For GRSHPL, GNHPL and GRJHPL the entire loan is payable after the senior debt payment, however in case of excess funds available in project the same may be paid during the senior debt.

IV. Principal terms of NCDs

GKBHPL and GNHPL have issued NCDs to their respective debenture holders. Certain principal terms of applicable to the NCDs are as follows:

Instrument	INR denominated, senior, rated, listed, secured, redeemable, non-convertible debentures
Tenure	GKBHPL: Tenure of 12 years and one month from December 31, 2021 (i.e., with a minimum tail period of three Annuity Payments). GNHPL: Tenure of 13 years and six months from January 31, 2022 (i.e., with a minimum tail period of three Annuity Payments).
Repayment	GKBHPL: To be redeemed in 25 structured semi-annual instalments as per the redemption schedule specified in the relevant debenture trust deed. GNHPL: To be redeemed in 26 structured semi-annual instalments as per the redemption schedule specified in the relevant debenture trust deed.
Security	See above, '***Principal terms of the borrowings (secured term loans) availed by the Project SPVs:– 3. Security***'. Additionally, the charge over the receivables shall be enforceable by the Debenture Holders (or on their behalf) only for the purpose of ensuring that the receivables are credited to the Escrow Account for the purpose of being applied to the extent of waterfall of priority of payment as specified in the Concession Agreement and the Escrow Agreement.
Coupon Rate	The percentage rate per annum (payable semi-annually) which is the aggregate of repo rate plus an applicable spread, which are subject to reset in a manner specified in the relevant debenture trust deed. The applicable spread varies amongst different lenders.
Events of Default	All customary events of default customary to the issuance of NCDs apply. See above, '***Principal terms of the borrowings availed by the Project SPVs:– 6. Events of Default'.*** Additionally, the following events of default also apply: (i) Default in the redemption of debentures; (ii) The above-mentioned Security is in jeopardy; (iii) Failure to obtain/maintain an adequate insurance cover; (iv) If any Governmental Authority or agency or any other competent authority shall have condemned, nationalized, seized, compulsory acquired or otherwise expropriated all or any material (in the opinion of the Trustee) part of the assets;
Consequences of Events of Default	All customary consequences of events of default customary to the issuance of NCDs apply. See above, '***Principal terms of the borrowings availed by the Project SPVs:– 7.Consequences of Events of Default'.***

The descriptions above are only indicative, and there may be additional terms and conditions with respect to security, financial or other covenants and events of default under the various NCD-related borrowing arrangements entered into by GKBHPL and GNHPL. Further, GKBHPL and GNHPL 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 them for the purpose of issuing such NCDs are not triggered.

V. Trust Borrowing - Principal terms of the borrowing to be availed by the Trust from external lender

The Trust has received certain in-principle sanctions from certain external lender in relation NCDs to be issued by the Trust ("**Trust NCD (s)**"). The key terms of in-principle term sheets of the Trust NCD(s) facility are as follows:

A. For Kotak Mahindra Bank Limited

Particular	Details
Facilities	Senior Secured Rated Listed Redeemable Non-Convertible Debentures ("**NCD**") of up to ₹ 14, 000 million
Sponsor Undertaking	Sponsor to maintain its holding in the Issuer as per regulatory guidelines during the tenor of the Facilities. Each Debenture Holder will have right to seek mandatory prepayment within 30 days in case Sponsor shareholding falls below requirement in regulatory guidelines during the tenor of the facilities without any prepayment charges
Coupon Rate	7.80% p.a payable semi-annually
Coupon Reset	Coupon Rate to be reset at the end of every year from the deemed date of allotment basis mutual agreement between Majority Debenture Holders and Issuer. (Revised Coupon Rate). The Issuer shall mandatorily redeem the NCDs held by the Debenture Holders who are not in agreement with the Revised Coupon Rate. Such Redemption will be made by the Company within 90 days from the Coupon Reset Date without any prepayment charges.
Coupon Type	Fixed

Particular	Details
Step Up/ Step Down Coupon Rate	25 bps increase in Coupon Rate upon every notch rating downgrade of the NCDs/Issuer by any Credit Rating Agency 25 bps decrease in Coupon Rate upon every notch rating upgrade of the NCDs/Issuer by any Credit Rating Agency For the sake of clarity, under this clause, the lowest credit rating by the Credit Rating Agencies will be used for calculating the Coupon Rate.
Default Interest Rate	If: (a) an Event of Default occurs, then the Issuer shall pay Interest on the Debentures at a rate which is 2% over and above the applicable Coupon Rate for the period until such Event of Default ceases to exists or is cured to the satisfaction of the Trustee (acting on the instructions of the Debenture Holders); (b) the Company fails to list the Debentures on the Stock Exchange within 3 (three) Business Days from the Issue Closing Date, then the Company shall pay Interest on the Debentures at a rate which is 1% (one per cent) over and above the applicable Coupon Rate for the period from the expiry of 3 (three) Business Days from the Issue Closing Date till the final listing approval of Debentures is obtained from the Stock Exchange; and (c) the Issuer fails to execute the Debenture Trust Deed before making the final application for listing of the Debentures, then the Issuer shall pay Interest on the Debentures at a rate which is 2% over and above the applicable Coupon Rate for the period commencing on the Deemed Date of Allotment till the Deed is executed to the satisfaction of the Trustee (acting on the instructions of the Debenture Holders). (d) In case of delay in security creation from the stipulated timelines, the company shall pay additional interest of 1% over and above Coupon Rate for the defaulting period.
Face Value	₹ 1,00,000 (Indian Rupees One Lakh only) per Debenture
Purpose	The proceeds shall be used towards refinancing of the existing debt/ debentures availed by Project SPVs.
Tenor	Door to door tenor of 13 years from date of disbursement.
Debt Service Reserve Account (DSRA)	The Issuer shall create DSRA within 1 month from date of allotment of NCDs with an amount equivalent to principal, interest, due and payable in respect of the Facility for the subsequent 3 months. In case of external rating of the Issuer falls below AA+, DSRA to be maintained for 6 months. DSRA is allowed to be kept in the Authorized Investments. The Sponsor and Issuer has the option of replacing the 100% of DSRA balance by a Bank Guarantee from a Scheduled Commercial Bank whose Tier-I capital is rated at least AA. DSRA shall need to be topped up/ reduced periodically on a continual basis to cover the next principal installment and interest servicing for next 3 months from cash flows.
Security	The obligations of the Issuer under the Facility, all interest and other monies in respect thereof shall be secured by a first ranking security interest including, but not limited to following: 1. First *pari passu* charge on all moveable assets and the receivables of the InvIT present and future including but not limited to: a. Receivable of the InvIT limited to Project SPVs & the interest and principal repayment of loans advanced by InvIT to Project SPVs b. charge over rights of the InvIT under the loans advanced by InvIT to Project SPV(s) and securities created in favour of the InvIT to secure the loans advanced by the InvIT to the SPV(s). Dividends and any other amounts to be paid / payable by the Project SPVs to the InvIT. 2. First *pari passu* charge on all immoveable assets of the Issuer (if any and if permitted under law). 3. First *pari passu* charge on the InvIT Escrow Account opened by the InvIT in which the free cash flows of the Project SPVs owned by the InvIT will be deposited/ credited or any other account opened / maintained by the InvIT in relation to such SPVs 4. First *pari passu* charge over DSRA 5. Fist *pari passu* charge on any other current assets of the Issuer limited to Project SPVs to be shared with InvIT lenders 6. First *pari passu* security interest on Inventories, contract rights, securities, equipment and/or insurances (in each instance, if any) of the Issuer towards Project SPVs 7. Assignment of rights of the Issuer, in respect of the loans made by the Issuer in the Project SPV(s) including rights of the Substitution Agreements as permissible under Concession Agreements of the respective Project SPVs by way of Agreement for Assignment 8. Pledge of 51% equity shares (including CCPS and CCDs of Project SPVs held by the InvIT) of all Project SPVs 9. Securities as specified in the points above shall be created upfront and perfected within 30 days of creation

Particular	Details
	10. The Escrow and Substitution Agreement for loans extended by the InvIT to Project SPVs as senior lenders/ which shall be executed within 180 days from the date of first disbursement. **Note:** *1. Further, security to be perfected phase wise and within timelines as defined above from date of disbursement at the InvIT level for repayment of specific SPV Debt.*
Negative Covenants	Without the prior written permission of the Debenture Trustee, the Issuer shall not take any action in relation to the items set out in this Clause. The Debenture Trustee shall take the consent of Majority Debenture Holders prior to any such approval/dissent to: (i) Change of business - Change the general nature of its business as per SEBI Guidelines. (ii) Constitutional Documents - Change its Trust Deed in any material way which would prejudicially affect the interests of the Lenders or cause Material Adverse Effect (iii) Any additional indebtedness exceeding Permitted Indebtedness and the prevailing SEBI Guidelines (iv) Wind-up, liquidate or dissolve its affairs or take any actions towards the same; and (v) Material change in the Project Documents which results in Material Adverse Effect to the senior lenders of the Trust (vi) Any distribution of cashflow by whatever name called to unitholders in case of any default in servicing of debt unless the same is remedied (vii) Change the general nature of its business (viii)Subject to SEBI InvIT regulation, change its Trust Deed which may lead to Material Adverse Effect (ix) Not to provide any guarantee or create any security interest except as permitted in financing agreement without prior approval from the Lender (x) Neither sell/ dispose any assets, nor create charge or otherwise encumber any of its assets without prior approval from Lenders, unless permitted by the Lender under the Financing Documents or otherwise, except assets with a cumulative value of ₹ 50 million in any financial year for each SPV (xi) Change the Project Manager and/or Investment Manager apart from as per Project Management Agreement entered into.
Acceleration Event	The InvIT Lenders, individually shall reserve the right to recall the Facility along with all other monies/ accrued interest due in respect thereof a) if the credit rating of the Issuer falls to AA- or below by any Credit Rating Agency. b) Withdrawal / suspension of long-term credit rating of Instrument c) Failure of Company to list the debentures under this Term sheet d) Delisting of NCDs issued under this Term Sheet The Issuer shall be required to prepay the Facility within 30 days from the date of written demand by any InvIT Lender in the above scenario.
Events of Default	Events of default pertaining to payment default, security and insolvency (including winding up, bankruptcy, etc.) will be triggered upon instructions received from any InvIT Lender and any other events of default will be triggered upon instructions received from Majority InvIT Lender. Events as mentioned below, an Event of Default shall include inter-alia, the following: (i) Any principal, interest or any other amounts under the Facilities not paid on the respective due dates to any InvIT Lender; (ii) If the Facilities do not have a valid credit rating; (iii) Breach of any terms of any Transaction Documents by the Borrower or the Project SPVs and such breach if capable of remedy in the opinion of the Facility Agent, is not remedied within 45 (forty-five) days from the date of such breach; (iv) Failure to comply with any condition, covenant (including but not limited to Financial Covenants) or undertaking provided under the Transaction Documents, and such breach if capable of remedy in the opinion of the Trustee, is not remedied within 45 (forty-five) days from the date of such breach; (v) Any representation or warranty under any of the Transaction Documents is incorrect and results in a Material Adverse Effect or breach of any of the Financial Covenants; (vi) Any application/petition (voluntary/ involuntary) is filed for corporate insolvency resolution against the Borrower and/or its Project SPVs under the Insolvency & Bankruptcy Code, 2016 (other than by an operational creditor for a claim amount which is less than or equal to ₹ 500,000,000 (Rupees Fifty million only)), which has not been stayed or dismissed within 180 Days from the date of filing of the application;

Particular	Details
	(vii) Abandonment/Termination of a project SPV contributing more than 20% of Enterprise Value of InvIT and which impacts the ability of debt repayment of borrower i.e. projected DSCR covenants are below defined threshold. (viii) An order for winding up, approval of a resolution plan, or for insolvency or liquidation, or for appointment of a liquidator, insolvency resolution professional or similar officer, being passed in any proceedings against the Borrower or Project SPVs, by a third party under any bankruptcy or insolvency laws subject to these Project SPVs contribute more than 20% of Enterprise Value of InvIT; (ix) Investment Manager becomes insolvent or is wound up, liquidated or dissolved and is not replaced within time frame permitted under SEBI regulations; and (x) Cessation/ declaration of intent of cessation of business or its functions by the Issuer or the Project SPVs (xi) Unlawfulness and invalidity of Transaction Documents (xii) Security invalid, unenforceable or not having the effect and ranking as stipulated under the Transaction Documents (xiii)Failure to deposit receivables of the Project SPV's in the Project SPV's Escrow Account as per terms hereof (xiv) Incurring debt in excess of that permitted under the InvIT Regulations, not cured within a period of 60 days; (xv) Failure to transfer amounts to INVIT Escrow account from Project SPV Escrow account as per terms (xvi) Making any Restricted Payment without satisfaction of restricted payment conditions (xvii) Material Adverse Effect has occurred and if capable of being remedied, such event, circumstance, occurrence or condition has not been remedied within 30 days of its occurrence. (xviii) Any change in control (contrary to permissions granted under this term sheet) in any of the project SPVs, Investment Manager (xix)The Sponsor, Issuer or any Project SPV, or any of their Directors, or directors of the sponsor is declared as a wilful defaulter by any bank, financial institution, or other entity within the meaning of the term as set out in the guidelines/circulars issued by the RBI/SEBI from time to time in this regard and if such event is capable of being remedied, the same is not remedied within 60 days of such declaration or classification. (xx) Nationalisation, confiscation, etc of the assets of the Sponsor, Issuer/ and or its Project SPVs. (xxi)Failure by the Issuer and/or any of its Project SPVs to maintain necessary authorizations failure of which may lead to MAE (xxii) Any clearance obtained in compliance with the Facilities or any other Transaction Document is revoked, terminated, withdrawn, suspended, modified or withheld or ceases to be in full force and effect, with leads to a MAE (xxiii) Any Transaction Document is terminated prior to its stated termination date or is amended or ceases to be in full force and effect otherwise than by performance of efflux of time, which leads to a MAE (xxiv) Default by the Issuer or any of the Project SPVs in performance of their obligations under any Transaction Document, which leads to a MAE and such default if capable of remedy in the opinion of the Trustee, is not remedied within 90 days from the date of such default (xxv) Change of activities of any Project SPVs which adversely impact the ability of the Issuer to meet its payment obligations under the Transaction Documents. (xxvi) Non creation and perfection of security within stipulated timelines (xxvii) If the Issuer's assets have not been kept insured by the Issuer and the same is not remedied within 30 (thirty) days from the date of such default. (xxviii) Any insurance contracted or taken by the Issuer is not, or ceases to be, in full-force and effect at any time when it is required to be in effect or any insurance is avoided, or any insurer or re-insurer avoids or suspends any insurance or any claim under it or otherwise reduces its liability under any insurance or any insurer of any insurance is not bound, or ceases to be bound to meet its obligations in full or in part, under any insurance and the same ins not remedied within 30 days from the date of such default. (xxix) Failure to maintain the stipulated DSRA as stipulated in the Transaction Documents, which is not cured or waived within a period of 30 days (xxx) External credit rating of the Issuer/Facility falls to A or below
Consequences of Event of Default	If an Event of Default has occurred, inter-alia, InvIT Lenders may exercise any one or more of the following actions, including but not limited to: (i) declare all amounts payable by the Borrower in respect of the Facilities to be due and payable immediately; (ii) exercise rights with respect to the Security, including enforcement of Security, in accordance with the Transaction Documents; (iii) Enforcement of Security and any other rights available to the InvIT Lenders under the Transaction Documents

Particular	Details
	(iv) utilize any amounts in the InvIT/Project SPV's Escrow Accounts to service and repay/prepay the Facilities in accordance with and pursuant to the provisions of the InvIT Escrow Agreement; (v) require the Investment Manager to reconstitute its board with sufficiently qualified or experienced persons as may be found satisfactory to the InvIT Lenders; (vi) Exercise the rights of InvIT Escrow Bank to instruct the SPV Escrow Bank to transfer funds available in the SPV Escrow Accounts to the InvIT Escrow Account (vii) Exercise the rights as available to the InvIT Lender under any Transaction Document (viii)Exercise all rights under applicable law (ix) In case of default on the loans extended by the Trust to any project, the InvIT Lenders will have the right to instruct the Trust to enforce the security under the Project SPV loan agreement and the Trust shall follow these instructions (x) Appoint a nominee director on the Board of the Investment Manager
Permitted Indebtedness	"Permitted Indebtedness" shall mean the following Financial Indebtedness of the Issuer (a) any debt to be availed for capital expenditure and major maintenance requirements of the Project SPVs; (b) any debt to finance any entity , to be acquired by the Issuer, after complying with the terms of Permitted Acquisition Conditions; (c) Bank Guarantee (BG) facilities to be availed for DSRA creation Provided that, prior to incurring any of the above Permitted Indebtedness, the Issuer shall have complied with the following Permitted Indebtedness Conditions: (a) Credit rating of Issuer is retained at AAA post additional indebtedness (b) Consolidated Debt/ EV condition as per InvIT Regulation to be complied (c) DSCR covenants post additional indebtedness are in compliance as per covenant agreed vide this letter (d) Facilities have not been accelerated by the Lenders (e) No notice of Event of Default in relation to a subsisting Event of Default should have been served by the InvIT Lenders.
Permitted Acquisition	Any acquisition of new projects or special purpose vehicles, other than the current Project SPVs and/or Security sharing with incoming lenders of newly acquired SPV, shall be done without prior approval of InvIT Lenders / Debenture Holders, if I. The external credit rating of the Issuer is retained at AAA post such acquisition II. Debt/ EV condition as per InvIT guidelines are complied III. No notice of Event of Default in relation to a subsisting Event of Default should have been served by the InvIT Lenders which is valid as on date of acquisition. IV. Asset should be either project under NHAI HAM or annuity mode. Projects other than NHAI HAM or annuity should not be more than 25% of EV V. Facilities have not been accelerated by the Lenders VI. All the projects to be acquired in future should have achieved PCOD or COD Above parameters to be complied at InvIT level considering acquisition of any new assets It may be clarified that if any of the above conditions are not met while acquiring a new asset, then that particular acquisition shall be subject to the debenture trustee's approval (based on the majority debenture holders' approval).

B. For Axis Bank Limited

Particular	Details
Issue Amount	Up to ₹ 12,000 million
Facilities	Senior Secured Rated Listed Redeemable Non-Convertible Debentures ("**NCD**")
Sponsor Undertaking	Sponsor to maintain its holding in the Issuer as per regulatory guidelines during the tenor of the Facilities. Each Debenture Holder/Lenders will have right to seek mandatory prepayment within 30 days in case Sponsor shareholding falls below requirement in regulatory guidelines during the tenor of the facilities without any prepayment charges
Coupon Rate	7.73 % p.a. for the period from (and including) the Deemed Date of Allotment until (and excluding) the Final Redemption Date. This rate is valid till January 22, 2025.
Coupon Reset	Coupon Rate to be reset at the end period up to 1 year from the deemed date of allotment basis mutual agreement between Majority Debenture Holders and Issuer (Revised Coupon Rate) and every 1 year thereafter. The Issuer shall mandatorily redeem the NCDs held by the Debenture Holders who are not in agreement with the Revised Coupon Rate. Such Redemption will be made by the Company within 90 days from the Coupon Reset Date without any prepayment charges.
Coupon Type	Fixed
Step Up/ Step Down Coupon Rate	Spread will be revised upwards by 0.25% for each notch of rating downgrade in the credit rating of the Issuer from AAA till AA.

Particular	Details
	In case, the Credit Rating of the Debentures is downgraded to AA- or below, by any of the Credit Rating Agency, a. Each of the Debenture Holders shall have the right to exercise Accelerated Redemption of the Debentures. b. The Issuer shall exercise Call Option on the Debentures at Par. c. In case, Accelerated Redemption / Call Option as mentioned in (a)/ (b) above are not exercised, then the Coupon Rote applicable on the Debentures shall be immediately increased by 50 basis points for each notch downgrade without any further action being required from the Trustee. For the avoidance of doubt, it the Debentures have been rated by multiple Rating Agencies, the lowest of such credit ratings will be considered. In no case, the coupon shall be less than the Initial Coupon Rate. 25 bps decrease in Coupon Rate upon every notch rating upgrade of the NCDs/Issuer by any Credit Rating Agency.
Default Interest Rate	If: (a) an Event of Default occurs, then the Issuer shall pay Interest on the Debentures on the rate which is 2% (two percent) over and above the applicable Coupon Rate for the period until such Event of Default ceases to exists or is cured to the satisfaction of the Trustee (acting on the instructions of the Debenture Holders); (b) the Company fails to list the Debentures on the Stock Exchange within 3 (three) Business Days from the Issue Closing Date, then the Company shall pay Interest on the Debentures at a rate which is 1% (one per cent) over and above the applicable Coupon Rate for the period from the expiry of 3 (three) Business Days from the Issue Closing Date till the final listing approval of Debentures is obtained from the Stock Exchange; and (c) the Issuer fails to execute the Debenture Trust Deed before making the final application for listing of the Debentures, then the Issuer shall pay Interest on the Debentures at a rate which is 2% over and above the applicable Coupon Rate for the period commencing on the Deemed Date of Allotment till the Deed is executed to the satisfaction of the Trustee (acting on the instructions of the Debenture Holders). (d) In case of delay in security creation from the stipulated timelines, the company shall pay additional interest of 1% over and above Coupon Rate for the defaulting period. (e) 2% (two percent) per annum over the Coupon Rate will be payable by the Issuer for the defaulting period in case of default in payment of Coupon or Redemption Amount. (f) In case of breach of any of the Financial covenants, 2% (two per cent) per annum on the outstanding Debt from the date of the audited balance sheet for the relevant Fiscal Year of the Issuer, until the adverse deviation in the Financial Covenants has been cured.
Face Value	₹ 1,00,000 (Indian Rupees One Lakh only) per Debenture
Purpose	The proceeds shall be used towards refinancing of the existing debt/ debentures availed by Project SPVs. The Issuer shall not use the Issue Proceeds towards: i. acquisition or purchase of land; ii. investment in any real estate business; iii. investments in any capital market (including investments in any capital market-oriented mutual fund schemes, or any equity or real estate mutual funds); and/ or any purpose which is not a bank eligible purpose, and which would, in any manner, violate any regulations stipulated by the RBI.
Tenor	Door to door tenor of ~13 years from the deemed date of allotment with the final maturity date of xx.
Debt Service Reserve Account (DSRA)	The Issuer shall create within 1 month from date of allotment of NCDs with an amount equivalent to principal, interest, due and payable in respect of the Facility for the subsequent 3 months. In case of external rating of the Issuer falls below AA+, DSRA to be maintained for 6 months. DSRA is allowed to be kept in the Authorized Investments. The Sponsor and Issuer has the option of replacing the 100% of DSRA balance by a Bank Guarantee from a Scheduled Commercial Bank whose Tier-I capital is rated at least AA.

Particular	Details
	DSRA shall need to be topped up/ reduced periodically on a continual basis to cover the next principal installment and interest servicing for next 3 months/6 months as applicable, from cash flows.
Description regarding Security (where applicable) including type of security (movable/immovable/tangible etc.), type of charge (pledge/hypothecation/mortgage etc.), date of creation of security /likely date of creation of security, minimum security cover, revaluation	The obligations of the Issuer under the Facility, all interest and other monies in respect thereof shall be secured by a first ranking security interest including, but not limited to following: 1. First *pari passu* charge on all moveable assets and the receivables of the InvIT present and future including but not limited to: a. Receivable of the InvIT limited to Project SPVs & the interest and principal repayment of loans advanced by InvIT to Project SPVs b. charge over rights of the InvIT under the loans advanced by InvIT to Project SPV(s) and securities created in favour of the InvIT to secure the loans advanced by the InvIT to the SPV(s). Dividends and any other amounts to be paid / payable by the Project SPVs to the InvIT. 2. First *pari passu* charge on all immoveable assets of the Issuer (if any and if permitted under law). 3. First *pari passu* charge on the InvIT Escrow Account opened by the InvIT in which the free cash flows of the Project SPVs owned by the InvIT will be deposited/ credited or any other account opened / maintained by the InvIT in relation to such SPVs 4. First *pari passu* charge over DSRA 5. Fist *pari passu* charge on any other current assets of the Issuer limited to Project SPVs to be shared with InvIT lenders 6. First *pari passu* security interest on Inventories, contract rights, securities, equipment and/or insurances (in each instance, if any) of the Issuer towards Project SPVs 7. Assignment of rights of the Issuer, in respect of the loans made by the Issuer in the Project SPV(s) including rights of the Substitution Agreements as permissible under Concession Agreements of the respective Project SPVs by way of Agreement for Assignment 8. Pledge of 51% equity shares (including CCPS and CCDs of Project SPVs held by the InvIT) of all Project SPVs 9. Securities as specified in the points above shall be created upfront and perfected within 30 days of creation 10. The Escrow and Substitution Agreement for loans extended by the InvIT to Project SPVs as senior lenders/ which shall be executed within 180 days from the date of first disbursement. **Note:** *1. Further, security to be perfected phase wise and within timelines as defined above from date of disbursement at the InvIT level for repayment of specific SPV Debt.*
Negative Covenants	Without the prior written permission of the Debenture Trustee, the Issuer shall not take any action in relation to the items set out in this Clause. The Debenture Trustee shall take the consent of Majority Debenture Holders prior to any such approval/dissent to: (i) Change of business - Change the general nature of its business as per SEBI Guidelines. (ii) Constitutional Documents - Change its Trust Deed in any material way which would prejudicially affect the interests of the Lenders or cause Material Adverse Effect (iii) Any additional indebtedness exceeding Permitted Indebtedness and the prevailing SEBI Guidelines (iv) Change in control of any of the Project SPVs, except as permitted in the term sheet. (v) Wind-up, liquidate or dissolve its affairs or take any actions towards the same; (vi) Material change in the Project Documents which results in Material Adverse Effect to the senior lenders of the Trust (vii) Any distribution of cashflow by whatever name called to unitholders in case of any default in servicing of debt unless the same is remedied (viii)Change the general nature of its business (ix) Subject to SEBI InvIT regulation, change its Trust Deed which may lead to Material Adverse Effect (x) Not to provide any guarantee or create any security interest except as permitted in financing agreement without prior approval from the Lender (xi) Neither sell/ dispose any assets, nor create charge or otherwise encumber any of its assets without prior approval from Lenders, unless permitted by the Lender under the Financing Documents or otherwise, except assets with a cumulative value of ₹ 50 million in any financial year for each SPV (xii) Change the Project Manager and/or Investment Manager apart from as per Project Management Agreement entered into.

Particular	Details
Acceleration Event	The InvIT Lenders, individually shall reserve the right to recall the Facility along with all other monies/ accrued interest due in respect thereof a) if the credit rating of the Issuer falls to AA- or below by any Credit Rating Agency. b) Withdrawal / suspension of long-term credit rating of Instrument c) Failure of Company to list the debentures under this Term sheet d) Delisting of NCDs issued under this Term Sheet The Issuer shall be required to prepay the Facility within 30 days from the date of written demand by any InvIT Lender in the above scenario.
Events of Default	Events of default pertaining to payment default, security and insolvency (including winding up, bankruptcy, etc.) will be triggered upon instructions received from any InvIT Lender and any other events of default will be triggered upon instructions received from Majority InvIT Lender. Events as mentioned below, an Event of Default shall include *inter-alia*, the following: (i) Any principal, interest or any other amounts under the Facilities not paid on the respective due dates to any InvIT Lender; (ii) If the Facilities do not have a valid credit rating; (iii) Breach of any terms of any Transaction Documents by the Borrower or the Project SPVs and such breach if capable of remedy in the opinion of the Debenture Trustee, is not remedied within 45 (forty-five) days from the date of such breach; (iv) Failure to comply with any condition, covenant (including but not limited to Financial Covenants) or undertaking provided under the Transaction Documents, and such breach if capable of remedy in the opinion of the Trustee, is not remedied within 45 (forty-five) days from the date of such breach; (v) Any representation or warranty under any of the Transaction Documents is incorrect and results in a Material Adverse Effect or breach of any of the Financial Covenants; (vi) Any application/petition (voluntary/ involuntary) is filed for corporate insolvency resolution against the Borrower and/or its Project SPVs under the Insolvency & Bankruptcy Code, 2016 (other than by an operational creditor for a claim amount which is less than or equal to ₹ 500,000,000 (Rupees Fifty million only), which has not been stayed or dismissed within 180 Days from the date of filing of the application; (vii) Abandonment/Termination of a project SPV contributing more than 20% of Enterprise Value of InvIT and which impacts the ability of debt repayment of borrower i.e. projected DSCR covenants are below defined threshold. (viii) An order for winding up, approval of a resolution plan, or for insolvency or liquidation, or for appointment of a liquidator, insolvency resolution professional or similar officer, being passed in any proceedings against the Issuer or Project SPVs, by a third party under any bankruptcy or insolvency laws subject to these Project SPVs contribute more than 20% of Enterprise Value of InvIT; (ix) Investment Manager becomes insolvent or is wound up, liquidated or dissolved and is not replaced within time frame permitted under SEBI regulations; and (x) Cessation/ declaration of intent of cessation of business or its functions by the Issuer or the Project SPVs (xi) Filing of any proceedings for insolvency/dissolution/extinguishment/revocation of the Issuer, which is not dismissed, quashed or stayed within a period of 180 days from the date of such initiation. (xii) Initiation of any proceedings for cancellation of the registration by the Board leading to illegality of the Issuer, which is not dismissed, quashed or stayed within a period of 180 days from the date of such initiation. (xiii)Unlawfulness and invalidity of Transaction Documents (xiv)Security invalid, unenforceable or not having the effect and ranking as stipulated under the Transaction Documents (xv) Failure to deposit receivables of the Project SPV's in the Project SPV's Escrow Account as per terms hereof (xvi) Incurring debt in excess of that permitted under the InvIT Regulations, not cured within a period of 60 days; (xvii) Failure to transfer amounts to INVIT Escrow account from Project SPV Escrow account as per terms (xviii) Making any Restricted Payment without satisfaction of Restricted Payment Condition;

Particular	Details
	(xix) Material Adverse Effect has occurred and if capable of being remedied, such event, circumstance, occurrence or condition has not been remedied within 30 days of its occurrence; (xx) Any change in control (contrary to permissions granted under this term sheet) in any of the project SPVs, Investment Manager (xxi) The Sponsor, Issuer or any Project SPV, or any of their Directors, or directors of the sponsor is declared as a wilful defaulter by any bank, financial institution, or other entity within the meaning of the term as set out in the guidelines/circulars issued by the RBI/SEBI from time to time in this regard and if such event is capable of being remedied, the same is not remedied within 60 days of such declaration or classification. (xxii) Nationalisation, confiscation, etc of the assets of the Sponsor, Issuer/ and or its Project SPVs. (xxiii) Failure by the Issuer and/or any of its Project SPVs to maintain necessary authorizations failure of which may lead to Material Adverse Effect (xxiv) Any clearance obtained in compliance with the Facilities or any other Transaction Document is revoked, terminated, withdrawn, suspended, modified or withheld or ceases to be in full force and effect, with leads to a Material Adverse Effect (xxv) Any Transaction Document is terminated prior to its stated termination date or is amended or ceases to be in full force and effect otherwise than by performance of efflux of time, which leads to a Material Adverse Effect (xxvi) Default by the Issuer or any of the Project SPVs in performance of their obligations under any Transaction Document, which leads to a Material Adverse Effect and such default if capable of remedy in the opinion of the Trustee, is not remedied within 90 days from the date of such default (xxvii) Change of activities of any Project SPVs which adversely impact the ability of the Issuer to meet its payment obligations under the Transaction Documents. (xxviii) Non creation and perfection of security within stipulated timelines (xxix) If the Issuer's assets have not been kept insured by the Issuer and the same is not remedied within 30 (thirty) days from the date of such default. (xxx) If the Borrower's assets have not been kept insured by the borrower and the same is not remedied within 30 (thirty) days from the date of such default. (xxxi) Any insurance contracted or taken by the Issuer is not, or ceases to be, in full-force and effect at any time when it is required to be in effect or any insurance is avoided, or any insurer or re-insurer avoids or suspends any insurance or any claim under it or otherwise reduces its liability under any insurance or any insurer of any insurance is not bound, or ceases to be bound to meet its obligations in full or in part, under any insurance and the same ins not remedied within 30 days from the date of such default. (xxxii) Failure to maintain the stipulated DSRA as stipulated in the Transaction Documents, which is not cured or waived within a period of 30 days (xxxiii) External credit rating of the Issuer/Facility falls to A or below
Consequences of Event of Default	If an Event of Default has occurred, *inter-alia*, InvIT Lenders may exercise any one or more of the following actions, including but not limited to: (i) declare all amounts payable by the Issuer in respect of the Facilities to be due and payable immediately; (ii) exercise rights with respect to the Security, including enforcement of Security, in accordance with the Transaction Documents; (iii) Enforcement of Security and any other rights available to the InvIT Lenders under the Transaction Documents (iv) utilize any amounts in the InvIT/Project SPV's Escrow Accounts to service and repay/prepay the Facilities in accordance with and pursuant to the provisions of the InvIT Escrow Agreement; (v) require the Investment Manager to reconstitute its board with sufficiently qualified or experienced persons as may be found satisfactory to the InvIT Lenders; (vi) Exercise the rights of InvIT Escrow Bank to instruct the SPV Escrow Bank to transfer funds available in the SPV Escrow Accounts to the InvIT Escrow Account (vii) Exercise the rights as available to the InvIT Lender under any Transaction Document (viii) Exercise all rights under applicable law (ix) In case of default on the loans extended by the Trust to any project, the InvIT Lenders will have the right to instruct the Trust to enforce the security under the Project SPV loan agreement and the Trust shall follow these instructions (x) Appoint a nominee director on the Board of the Investment Manager
Permitted Indebtedness	"Permitted Indebtedness" shall mean the following Financial Indebtedness of the Issuer (a) any debt to be availed for capital expenditure and major maintenance requirements of the Project SPVs;

Particular	Details
	(b) any debt to finance any entity, to be acquired by the Issuer, after complying with the terms of Permitted Acquisition Conditions; (c) Bank Guarantee (BG) facilities without any security by the Project SPVs to be availed for DSRA creation Provided that, prior to incurring any of the above Permitted Indebtedness, the Issuer shall have complied with the following Permitted Indebtedness Conditions: (a) Credit rating of Issuer is retained at AAA post additional indebtedness (b) Consolidated Debt/ EV condition as per InvIT Regulation to be complied (c) DSCR covenants post additional indebtedness are in compliance as per covenant agreed vide this letter (d) Facilities have not been accelerated by the Lenders (e) No notice of Event of Default in relation to a subsisting Event of Default should have been served by the InvIT Lenders. (f) Permitted Indebtedness does not allow to load debt on the InvIT for distribution to Unitholders.
Permitted Acquisition	Any acquisition of new projects or special purpose vehicles, other than the current Project SPVs and/or Security sharing with incoming lenders of newly acquired SPV, shall be done without prior approval of InvIT Lenders / Debenture Holders, if I. No additional debt beyond such amount and stipulated by SEBI in its SEBI InvIT Regulations (As amended from time to time) is being added to the InvIT II. The external credit rating of the Issuer is retained at AAA post such acquisition III. Debt/ EV condition as per InvIT guidelines are complied IV. No notice of Event of Default in relation to a subsisting Event of Default should have been served by the InvIT Lenders which is valid as on date of acquisition. V. Asset should be either project under NHAI HAM or annuity mode. Prior intimation to lender within 60 days provided the rating continue to be AAA rated and Total asset is within 10% of EV value of the InvIT for addition of any toll asset under the InvIT VI. Facilities have not been accelerated by the Lenders VII. All the projects to be acquired in future should have achieved PCOD or COD Above parameters to be complied at InvIT level considering acquisition of any new assets It may be clarified that if any of the above conditions are not met while acquiring a new asset, then that particular acquisition shall be subject to the Debenture Trustee's approval (based on the majority Debenture Holders' approval).

The Investment Manager, on behalf of the Trust, proposes to provide to the Project SPVs, certain amount from the Trust NCD(s) by way of secured rupee term loans pursuant to the On-lending Agreement.

Post-Offer Indebtedness of the Trust

The post-Offer consolidated borrowings and deferred payments of the Trust will be formulated and approved by the Investment Manager in accordance with the Borrowing Policy and the SEBI InvIT Regulations. Upon full utilization of the Offer Proceeds, and drawdown of additional debt, the indebtedness and deferred payments of the Trust, on a consolidated basis, shall not exceed 49% of the value of the Initial Portfolio Assets, subject to any additional indebtedness incurred after Allotment of Units and Listing of Units in accordance with applicable law and the SEBI InvIT Regulations.

Leverage

In accordance with and subject to the SEBI InvIT Regulations, the provisions of the Trust Deed, and the borrowing policy adopted by the Investment Manager, the aggregate consolidated borrowings and deferred payments of the Trust, and Initial Portfolio Assets, net of cash and cash equivalents, may be up to 70% of the value of the Initial Portfolio Assets, subject to the conditions prescribed under Regulation 20 of the SEBI InvIT Regulations.

For details of the capital structure of the Project SPVs, including any borrowings or deferred payments with respect to the Project SPVs prior to the Offer and post-Offer, on a standalone and consolidated basis, please refer to the sections entitled "***Formation Transactions in relation to the Trust – Acquisition of the Project SPVs by the Trust***", "***Financial Indebtedness and Deferred Payments***" and "***Special Purpose Combined Financial Statements***" on pages 109, 321 and 227, respectively.

Status of lender consents

The Project SPVs have availed debt from certain third-party lenders and consents from the respective lenders are required for and in connection with the Offer. As on the date of this Offer Document, Project SPVs have made their applications to the relevant lenders for seeking their consent in relation to the Offer and all of these consents have been received.

These consents are subject to certain conditions, including obtaining the NHAI approval for the change in ownership of the SPVs as per the terms of the relevant concession agreements, execution of security documents or undertakings by the SPVs and the Trust like pledge agreements, subordination of unsecured debt and undertaking in the time periods specified therein. Also see the section entitled "***Risk Factors – We may face limitations and risks associated with debt financing, refinancing and restrictions on investment, which may adversely affect our operations and our ability to make distributions to Unitholders***" on page 27.

Borrowing Policy

The Investment Manager shall ensure that all funds borrowed in relation to the Trust are in compliance with the SEBI InvIT Regulations. Accordingly, the Investment Manager has formulated a borrowing policy to outline the process for borrowing monies in relation to the Trust. For further details, please see the section entitled "***Corporate Governance – Policies adopted in relation to the Trust – Borrowing Policy***" on page 202.

MATERIAL LITIGATION AND REGULATORY ACTION

Except as stated in this section, there are no outstanding material litigation or regulatory action involving the Project SPVs and against the Trust, the Sponsor, the Investment Manager, the Project Manager or any of their associates and the Trustee, that are currently pending.

*For purposes of this section, on the basis described below, details of all regulatory actions and criminal matters involving Project SPVs or the Trust, the Sponsor, the Investment Manager, the Project Manager or their respective Associates (collectively referred to as the "**Relevant Parties**") and the Trustee that are currently pending have been disclosed. Further, any civil matter that is pending involving an amount equivalent to, or more than, the amount or threshold as disclosed below, in respect of (i) the Trust, its associates and the Initial Portfolio Assets; (ii) the Sponsors, the Project Manager, the Investment Manager and each of their associates; and (iii) the Trustee has been disclosed. Details of proceedings related to direct and indirect taxes have been disclosed in a consolidated manner, indicating the number of cases and the total amount.*

In relation to the Trust and the Project SPVs, all outstanding civil matters which involve an amount exceeding ₹154.35 million (being 1% of the consolidated income of the Trust, including the SPVs, as on March 31, 2024) have been considered material.

In relation to the Sponsors and the Project Manager and its associates, all outstanding civil matters which involve an amount exceeding ₹78.38 million (being 1% of the profit after tax of the Sponsor, as on March 31, 2024) have been considered material.

In relation to the Investment Manager and its associates, all outstanding civil matters which involve an amount exceeding ₹5.78 million (being 5% of the consolidated net worth of the Investment Manager, as on March 31, 2024) have been considered material.

In relation to the Trustee, all outstanding civil matters which involve an amount exceeding ₹12.33 million (being 5% of the profit after tax of the Trustee, as on March 31, 2024) have been considered material.

Further, in cases where the outcome of one matter impacts one or more other matters, which individually are below the amounts mentioned above, but collectively above, such cases will also be disclosed in this Offer Documents. Additionally, in relation to an outstanding matter where the monetary liability is not quantifiable, such matter shall be considered material if the outcome of such matter would have a material adverse effect on the position of the Relevant Parties or the Project SPVs.

It is clarified that notices received by the Relevant Parties or the Project SPVs from third parties (excluding notices from regulatory or tax authorities or notices threatening criminal action) shall not be evaluated for materiality until the Relevant Parties or the Project SPVs are impleaded as defendants in proceedings before any judicial forum. Additionally, there have been certain criminal complaints and first information reports filed against the employees of the Relevant Parties during the course of their employment of the Relevant Parties, wherein the Relevant Parties have not been impleaded, and therefore, such matters have not been disclosed.

I. Litigation and Regulatory Actions involving the Trust.

As of the date of this Offer Document, there are no outstanding criminal litigation, regulatory actions or material civil litigation involving the InvIT.

II. Litigation and Regulatory Actions involving the Associates of the Trust.

As of the date of this Offer Document, there are no outstanding criminal litigation, regulatory actions or material civil litigation involving the Associates of the InvIT.

III. Litigation and Regulatory Actions involving the Project SPVs.

Except as disclosed below, there are no outstanding criminal litigation, regulatory actions or material civil litigation involving the Project SPVs

Project Gawar Kiratpur-Nerchowk Highway Private Limited

1. The Government of India granted approval for widening and strengthening of existing 2 lane shoulder to 4 lane with paved shoulders from Kiratpur Nerchowk (the "**Highway**") to NHAI. Madan Lal (the "**Petitioner**") filed a PIL before the High Court of Himachal Pradesh seeking directions for construction of pedestrian facilities and safety barriers along the Highway from Gawar Kiratpur Nerchowk Highway Private Limited, one of the respondents ("**Respondent 6**"). The matter is currently pending.

   Additionally, the Petitioner also filed a writ petition before the High Court of Himachal Pradesh under Article 226 of the Constitution of India against Respondent 6 and the other respondents alleging illegal muck dumping in Govind Sagar

Lake in Bilaspur and Una districts. The Petitioner sought an order directing the respondents to undertake the removal of illegal muck dumped from the Govind Sagar Lake. The Sponsor has installed coir mat, geotextile and gabion wall to protect slippage of muck into river and the project has already achieved commercial operation date. The matter is currently pending.

IV. Litigation and Regulatory Actions involving the Sponsor and Project Manager.

Civil Litigation involving the Sponsor

1. Haryana State Road & Bridge Development Corporation Limited (the "**Respondent**") invited bids for the work of improvement of Punhana-Jurhera Road and providing service lane and drains on Gurgaon-Nuh-Alwar road in Gurgaon and Mewat district (the "**Project**"). The completion of the Project was delayed. The matter was referred to an arbitral tribunal (the "**Tribunal**") *vide* its order dated December 26, 2020, and directed the Respondent to pay an amount ₹262.84 million with interest at 13.75% amounting to ₹211.96 million plus GST charges, along with post award interest at 9.40% on an aggregating sum of ₹474.80 million from December 27, 2020 since the delay was beyond the control of the Respondent and moreover the respondent had claimed additional expenses which were partially approved in the said award. An appeal was filed by the Respondent before the District and Sessions Court, Panchkula under Section 34 of the Arbitration and Conciliation Act, 1996 to set aside the award passed by the Tribunal. The matter is currently pending. The Tribunal further directed the Respondent to return the duly discharged bank guarantee to the Claimant against the Liquidated Damages imposed on the Claimant.

2. The Government of NCT Delhi, through EE, ITPO PD, PWD ("**Respondent**") had appointed the Sponsor ("**Claimant**") for construction of flyover at Shastri Park Intersection (6 lane) and Seelampur (2 lane) ramps, footpath, road work including signage, streetlight works, drainage and other allied works ("**Project**"). The matter was referred to the arbitral tribunal (the "**Tribunal**"). The Claimant alleged that the completion of the Project was delayed owing to circumstances beyond their control. The Respondent claimed that the bonus sought by Claimant under the conditions of their agreement, was beyond the scope of their agreement and objected to the claim. The arbitral tribunal (the "**Tribunal**") *vide* its order dated January 15, 2022 directed the Respondent to pay ₹176.96 million along with future interest at an interest rate of 10% p.a. till realisation, subsequently corrected on February 16, 2022. The Claimant filed an execution petition for the arbitral award before the High Court of Delhi ("**High Court of Delhi**") under Section 36 of the Arbitration and Conciliation Act, 1996 seeking realisation of the awarded amount. The matter is currently pending.

   Further, the Respondent has filed an appeal under Section 34 of the Arbitration and Conciliation Act, 1996, to set aside the arbitral award dated January 15, 2022 (revised on February 16, 2022) before the High Court of Delhi. The Respondent has further requested that the High Court of Delhi to allow all claims submitted by the Respondent during the arbitral proceedings. The Respondent is yet to file a statement of truth with the appeal. The matter is currently pending.

3. Suwarna Buildcon Private Limited ("**Petitioner**") was engaged by Sadbhav Engineering Limited, Sadbhav Infrastructure Projects Limited and Sadbhav Bangalore Highway Private Limited ("**Defendants 1 to 3**") as a sub-contractor for the execution and completion of the project for two/four laning of the BRT Tiger Reserve Boundary to Bangalore Section of NH-209 ("**Project**"). The Plaintiff alleges that the Defendant 1 is attempting to substitute Defendant 3 with our Sponsor ("**Defendant 5**") as the concessionaire in the Project, in order to allow undue benefit to Defendant 5. The Petitioner filed a commercial suit ("**Suit**") against Defendant 1 before the Commercial Court of Pune ("**Commercial Court**") seeking inter alia (i) a decree passed in its favour declaring it the sub-contractor of the Project; and (ii) a temporary injunction on the lender-initiated substitution of the present concessionaire of Project with our Sponsor ("**Defendant 5**"). The Suit is currently pending.

   The Commercial Court *vide* its order dated January 19, 2023 set aside passed an order to proceed *ex-parte* and further vide order dated February 24, 2023 held that the equitable relief of temporary injunction cannot be granted ("**Order**"). Consequently, the Petitioner filed a writ petition before the High Court of Judicature at Bombay under Article 227 of the Constitution of India seeking to quash and set aside order dated January 19, 2023 passed by the Commercial Court, Pune. The matter is currently pending.

4. The State of Rajasthan and the Transport Commissioner ("**Respondents**") had seized a portable plant/equipment, and two vehicles *vide* seizure memo dated April 15, 2019 ("**Seizure Memo**") from our Sponsor. Our Sponsor filed a writ petition before the High Court of Judicature of Rajasthan, Jaipur bench seeking a stay on the seizure. The High Court of Judicature of Rajasthan, Jaipur bench *vide* order dated May 3, 2019 directed the Respondents to release the portable plant/equipment and the vehicles subject to our Sponsor furnishing a bank guarantee of the equivalent amount which has been raised by way of demand *vide* Seizure Memo. The matter is currently pending.

5. Our Sponsor ("**Petitioner**") is involved in construction and trading of hard stones. On October 6, 2008, the Government of Rajasthan issued a circular requiring all persons dealing in hard stones to obtain a short-term permit ("**Circular**"). The Petitioner challenged the Circular before the High Court of Rajasthan, which was quashed by the Division Bench

of Jodhpur, Rajasthan *vide* judgement dated January 17, 2011 ("**Judgement**"). During the year 2011 and 2012, the Petitioner was involved in the trading of ballast stones and paid the required fees, taxes, and royalty as per the notifications issued by Government of Rajasthan. In the year 2014, the State of Rajasthan through the joint secretary mines, Mines and Geology Department, Government of Rajasthan and other authorities (the "**Respondents**") issued show-cause notices to the Petitioner, to which the Petitioner provided its reply, but no final orders were issued. Subsequently, the Government of Rajasthan filed a special leave petition before the Supreme Court of India against the Judgement, which was allowed *vide* order dated February 26, 2016. However, in 2022, the authorities started proceedings for recovery of penalty amounts from the Petitioner. The Petitioner has filed a writ petition before the High Court of Rajasthan challenging the recovery proceedings initiated by the Respondents. The matter is currently pending.

6. The State of Haryana through its officers ("**Respondent**") acquired the land bifurcating village Dhana and village Barsi in order to lay down the railway line. Rajbir Singh (the "**Petitioner**") filed an application before the High Court of Punjab and Haryana seeking an order to restrain the Respondent and our Sponsor from causing any kind of obstruction in the pucca rasta. Our Sponsor was responsible for the construction of the project in dispute. However, the project in dispute has already received its commercial operation date. The matter is currently pending.

7. Dharamvir and others ("**Plaintiffs**") were residents of the suit property. The State of Haryana through its Collector, Rohtak ("**Defendant 1**") through the Executive Engineer, Provincial Division No. 1, PWD, Rohtak ("**Defendant 2**", and together with Defendant 1 and the Sponsor, "**Defendants**") sent a notice to the Plaintiffs for removal of the encroachments on the suit property. The Court of Additional Civil Judge (Senior Division), Meham *vide* its order dated February 26, 2019 dismissed the suit instituted by the Plaintiffs ("**Judgement 1**"). The Plaintiffs filed an appeal before the Additional District and Sessions Judge at Rohtak, who *vide* its order dated September 30, 2022 ("**Judgement 2**") allowed the appeal and set aside the Judgment. The Defendants filed an appeal before the High Court of Punjab and Haryana seeking an order to set aside Judgment 2. The matter is currently pending.

8. Jeet Ram ("**Petitioner**") filed a writ petition before the High Court of Himachal Pradesh under Article 226 of the Constitution of India claiming that plant dust from the wet mix macadam plant ("**WMM Plant**"), set up by the State of Himachal Pradesh, NHAI and our Sponsor and others (together, the "**Respondents**"), was causing damage to the Petitioner's crop of cauliflower. The Tehsildar, Ghumarwin District, Bilaspur, Himachal Pradesh ("**Tehsildar**"), one of the Respondents, suggested shifting of the WMM Plant, sand, gravel from the land of Petitioner to protect the crop of vegetables being produced in the greenhouse and open fields. The WMM Plant was, in accordance with the suggestion by the Tehsildar, was relocated. The matter is currently pending.

9. NHAI started construction work of Pathankot to Mandi 4-lane road and installed a hot mix plant and crusher plant (the "**Plant**") at Bhalli village, which was being operated by our Sponsor (together with NHAI, "**Respondents**"). Aman ("**Petitioner**") filed a writ petition under Article 226 of the Constitution of India before the High Court of Himachal Pradesh alleging that the Plant was installed without requisite approvals and in a residential and adjoining schooling area, which is in contravention of the norms issued by the Himachal Pradesh State Pollution Control Board. The Petitioner sought an order directing the respondents to stop the functioning of the Plant, inspect the installation of Plant at Village Bhali and shifting it to some other place. The matter is currently pending.

10. NHAI allotted the work of supply of ordinary earth for completion of work of four lanning of Srinagar-Banihal section of NH-44 to our Sponsor. Our Sponsor authorised Mohammad Shafi Dar ("**Petitioner**") to provide the soil for aforementioned project. The Petitioner filed a writ petition under Article 226 of the Constitution of India before the High Court of Jammu and Kashmir seeking directions against the Adil Hussain Bhat and others ("**Respondents**") to restrain them for interfering into the smooth execution of work of transportation/lifting of ordinary earth for completion of the work on NH-44. The matter is currently pending.

11. State of Himachal Pradesh, NHAI and our Sponsor ("**Respondents**") were constructing a four lanning road in and above Mohal in Dehvi village of Himachal Pradesh ("**Four-Lane Road**"). Balwant Singh and others ("**Plaintiff**") filed a writ petition under Article 226 of the Constitution of India before the High Court of Himachal Pradesh seeking an order or direction to the Respondents to connect the ambulance road in Mohal Dehvi at Dehvi village with the Four-Lane Road which was destroyed/obstructed by the Respondents at the time of construction of the Four-Lane Road. The matter is currently pending.

12. The Chief Engineer of National Highways Uttar Pradesh Public Works Department ("**Respondent**") engaged our Sponsor ("**Claimant**"), *vide* an agreement dated December 28, 2016 ("**Agreement**") for rehabilitation and upgradation of Sisiya-Nanpara section of NH-370 ("**Project**"). The completion of the Project was delayed due to certain circumstances and the Respondent withheld the payment of the Claimant. The parties invoked the arbitration clause of the Agreement and the arbitral tribunal passed an award dated September 20, 2020 directing the Respondent to pay an amount aggregating to approximately ₹219.80 million along with post-arbitration payable up to the date of payment ("**Award**"). Subsequently, the Respondent filed a petition ("**Petition**") before the Commercial Court, Lucknow ("**Commercial Court**") under Section 34 of the Arbitration and Conciliation Act, 1996 ("**A&C Act**") against the

Claimant seeking an order to set aside the Award. The Commercial Court *vide* its order dated October 31, 2022 dismissed the Petition. Consequently, the Respondent has filed an appeal before the High Court of Judication at Allahabad under Section 37 of the A&C Act challenging the arbitral award. The matter is ongoing.

Meanwhile, the Claimant has filed an application under Section 36 of the A&CA Act before the Commercial Court seeking directions to update the amount of the Award to ₹287.82 million. The matter is currently pending.

Further, the Claimant filed a petition under Section 36 of the A&CA Act read with order XXI rule 10 and section 151 of the Code of Civil Procedure before the Commercial Court seeking *inter alia* execution of the Award along with appointment of any person or officer to ensure performance of all acts required to be done for execution of the Award for money. The matter is currently pending.

13. Vinay Kumar Sinha ("**Petitioner**") filed a writ petition ("**Writ Petition**") before the High Court of Judicature at Patna ("**High Court**") claiming that Union of India and its authorities ("**Respondents**") intimidated the Petitioner to demolish the structure present on the property of the Petitioner without initiating any proceeding for acquisition or serving any notice under the Bihar Public Land Encroachment Act, 1956. The High Court *vide* order dated March 3, 2022 ("**Impugned Order**") directed all parties to maintain status quo existing as on the date of the order.

    An interlocutory application was filed before the High Court seeking to set aside the Impugned Order. The High Court *vide* its order dated November 30, 2023 set aside the Impugned Order and directed that the proposed work be commenced and also impleaded our Sponsor as a respondent to the Writ Petition. This matter is currently pending.

14. Arun Tiwari filed an application before the National Green Tribunal, Principal Bench, New Delhi ("**NGT**") against the State of Uttar Pradesh, for illegal mining of soil from the farmer's land construction of Bundelkhand Expressway Project. The NGT constituted a joint committee to determine the extent of illegal mining, if any and also the damage to the environment caused in that process and to also suggest the preventive and remedial measures. extent of illegal mining, if any, done by the project proponent. Post the submission of the report by the joint committee, the NGT v*ide* order dated February 26, 2024 impleaded our Sponsor as a respondent in the matter since the report did not disclose that our Sponsor has carried out the mining after obtaining the environmental clearance. The NGT has ordered the Central Pollution Control Board *vide* order dated May 6, 2024 to inspect at the site and also to file a detailed report in the matter before next date of hearing. The matter is currently pending.

15. A civil public interest litigation was filed before the High Court of Himachal Pradesh ("**High Court**") pertaining to slow construction of work of national highways undertaken by NHAI in Himachal Pradesh. Several sectors of construction are involved from Kiratpur to Manali highway, where our Sponsor was also executing certain projects ("**Projects**"). The High Court vide its order dated January 10, 2018 ("**Order**") clarified that pendency of cases in any courts shall not come in the way of completion of the work in the Projects. Madan Lal filed a special leave petition before the Supreme Court of India against the Order claiming compensation for his land being acquired. Our Sponsor has been served the notice and matter is pending.

16. Sushil Kumar ("**Petitioner**") filed a suit for mandatory and permanent injunction ("**Suit**") before the Civil Judge, Junior Division, Bhiwani, Haryana ("**Civil Judge**"), seeking directions to the Sponsor ("**Defendant**") remove the material from the land of the Petitioner which was affecting the land and the crops. The Petitioner further filed an application under Order 39 Rules 1 and 2 read with Section 151 of the Code of Civil Procedure, 1908 against our Sponsor seeking an ad-interim injunction in the Suit. The Civil Judge dismissed the application. The suit is currently pending.

17. The NHAI was constructing a four-lane at Bagthedu, Tehsil Ghumarwin, Bilaspur, Himachal Pradesh ("**Project**") and appointed our Sponsor ("**Defendant**") for the Project. Rameshwari ("**Plaintiff**") and others alleged that the Defendant had forcefully entered into the suit land and caused damages due to movement of heavy machinery. The Plaintiff filed an application before the before the Court of Senior Civil Judge, Ghumarwin, Bilaspur seeking (i) a decree of permanent prohibitory injunction restraining the Defendant from causing any interference in their land and (ii) a decree for mandatory injunction to restore the suit land into its original nature. The matter is currently pending.

    The Plaintiff also filed an appeal under Order 43 rule (1)(r) read with section 104 of CPC before the District Judge, Bilaspur, Himachal Pradesh against the Defendant condoning the delay in filing an appeal. The matter is currently pending.

18. Hem Raj ("**Plaintiff**") owned a hotel which was rented by I.L.&F.S. Engineering and Construction Company Limited ("**Company**") till March 2017, since they had started construction work of the four lane from Kiratpur to Nair Chowk. Since the employees of the Company were staying in the hotel, they had installed the plant and machinery near the hotel and the Plaintiff allowed the same. However, the project was terminated and then Company invited bids for the balance work, which was awarded to our Sponsor. Our Sponsor purchased the crusher, hot mix plant and other machinery from the Company and used the plant and machinery near the hotel. The Plaintiff filed a suit under section 37 and 38 of the

Specific Relief Act, 1963 before the District Court of Bilaspur seeking directions for permanent prohibitory injunction restraining the Defendant from causing any type of interference near the suit land by installation of machinery or causing damage to any part of suit land. The Plaintiff also sought an alternative decree for damages if any loss caused by the Defendant to the suit land of the Plaintiff during the pendency of the suit. The project achieved the commercial operation date, and the matter is currently ongoing.

19. Our Sponsor ("**Petitioner**") was engaged by Haryana State Industrial and Infrastructure Development Corporation Limited ("**Defendant**") for providing infrastructure facilities at Industrial Model Township, Faridabad. There was a delay in completion of the work and the Petitioner invoked the arbitration clause of their agreement. The arbitral tribunal published an award partly in favour of the Petitioner ("**Award**"). However, the arbitral tribunal did not allow claims with respect to losses arising due to closure of their agreement prematurely and cost of arbitration ("**Claims**"). The Petitioner filed an application under section 34 of the Arbitration and Conciliation Act, 1996 before the District and Session Court, Chandigarh challenging the award for the Claims. The matter is currently pending.

    Further, the Defendant has also filed a case before the District and Session Court, Chandigarh against the Petitioner challenging the Award that was passed in favour of the Petitioner. The matter is currently ongoing.

    Furthermore, the Petitioner filed a writ petition before the High Court of Punjab and Haryana seeking directions for the Defendant to release the fixed deposit receipt amounting to ₹2.15 million, which was submitted as security during the arbitration proceedings, along with the interest. The matter is currently pending.

20. Prem Lal ("**Plaintiff**") had filed a suit before the Court of Civil Judge, Ghumarwin, Himachal Pradesh demanding an injunction to restrain our Sponsor ("**Defendant**") from causing any type of interference in the suit land of Plaintiff land. Thereafter, the parties reached a compromise and a statement regarding the same was recorded by the National Lok Adalat and the matter was disposed off.

    Presently. the Petitioner filed an execution petition before the Court of Civil Judge, Ghumarwin, Himachal Pradesh under Rule 21 read with Section 32 of CPC seeking directions for the Defendants to comply with the terms of the settlement. The matter is currently pending.

21. A culvert was being reconstructed on the Gohana-Jind Road by our Sponsor ("**Defendant**"). Sandeep Kumar ("**Deceased**") fell on the road and sustained critical injuries while crossing the culvert, which caused his death. Ridhi and Saksham, the legal heir of the Deceased and others ("**Plaintiffs**") alleged that the Defendant had not covered the construction area with any sign boards and thereby filed a suit for damages against the Defendant before the Court of Additional Civil Judge (Senior Division), Gohana ("**Court**"). The Plaintiffs have prayed the Court for damages. The matter is currently pending.

22. The Ministry of Railways ("**Defendant**") has acquired part of the land from Ram Chander ("**Plaintiff**") for construction of Rohtak-Hansi Railway line to construct an underpass to connect the land with each other. The Plaintiff filed an application before the Court of Civil Judge, Hansi, Haryana under Section 80(2) of CPC seeking decree for injunction to the effect that the defendants be directed to provide the necessary passage to the agriculture land of the plaintiff as well as performa defendants and further to direct defendants be restrained from interfering in the sanctioned passage. Our Sponsor has filed its reply in that matter. The matter is currently pending.

23. State of Haryana, through its collector and Union of India, Railway Department for the purpose of Hansi, Meham Rohtak Railway Line acquired the land in dispute from Rajbir Singh ("**Plaintiff**") and others. The Respondents allotted the construction work to our Sponsor (together with State of Haryana, "**Respondents**") and our Sponsor commenced the work for the railway line which creating obstruction for the Plaintiff and the farmers. The Plaintiff filed a suit before the Civil Court, Hansi for prohibitory injunction under section 80(2) of the CPC and Section 205 of Haryana Panchayati Raj Act, 1994 to the effect that the Defendants be restrained from causing any obstruction in the suit property. The matter is currently pending.

24. The Ministry of Railway acquired the land of Sandeep Kumar ("**Plaintiff**") for construction of Rohtak-Hansi railway line (Ministry of Railways along with our Sponsor, "**Defendants**"). The Plaintiff filed a suit for mandatory injunction to the effect that the Defendants be directed to provide necessary passage to the agricultural land of the Plaintiff by removing the obstruction, created by the Defendant. The Plaintiff also sought prohibitory injunction to the effect that the Defendants be retrained from interfering in the sanctioned passage of agriculture on the suit land and further to direct the defendants to construct an underpass to connect the fields of the Plaintiff and defendant with each other. The matter is currently pending.

25. The Commissioner, Employees' Compensation Act, Jhajjar at Bahadurgarh ("**Commissioner**") received notice about the death of an employee, Dinesh Ram, of our Sponsor ("**Respondent**"). The Commissioner served a notice under section 10 of the Employees' Compensation Act, 1923 and the Respondent failed to comply to send a statement to reply

of the notice. The Commissioner sanctioned the Labour Inspector, Circle III, Jhajjar at Bahadurgarh ("**Petitioner**") to file a complaint under section 18(A)(b) of the Employees' Compensation Act, 1923 against the Respondent before the Court of Chief Judicial Magistrate. The matter is currently pending.

26. A suit has been filed by the Balraj ("**Plaintiff**") before the Court of Civil Judge, Hind for permanent injunction restraining the NHAI our Sponsor and other ("**Defendants**") from demolishing and blocking pucca khal/ water channel and culvert and for mandatory injunction directing the Defendants to construct a culvert under the national highway of the water channel which leads to irrigation of agriculture land of Hasanpur and for drinking water for villagers of Hasanpur. The Defendants were constructing the widening the road which leads to Jind to Karnal. The Plaintiff alleged that the Defendants started digging both sides of the road. The complaint was filed by the villagers along with the Complainant. Matter reported in several newspapers. NHAI in response to the same stated that there was no water channel and no pucca khal on the spot. The reply has also been filed. The matter is currently pending.

27. Our Sponsor ("**Respondent**") was engaged in the development of six lane access controlled in Uttar Pradesh portion of Delhi-Saharanpur Highway from Akshardham Junction to Uttar Pradesh ("**Project**"). BSES Yamuna Power Limited ("**Petitioner**") filed a complaint before the District and Sessions Judge at Karkardooma District Court under sections 138, 139 and 140 of the Electricity Act, 2003 against the Respondent alleging that the Respondent has shifted some of the power lines which led to damage of the power cables endangering the safety of the public and also violated the provisions of the Central Electrical Authority, 2010. Further, the Petitioner also filed an application seeking damages from the Respondent. The matter is currently pending.

28. Our Sponsor ("**Defendant**") was engaged in road construction work at Mandi, Himachal Pradesh. The Labour Enforcement Officer (Central), Jalandhar ("**Authority**") inspected the work site of the Defendant and found the Defendant to be in violation of provisions of the Contract Labour (Regulation and Abolition) Act, 1970 ("**Contract Labour Act**") along with the directions and show cause notice issued by the Authority from time to time. The Authority ("**Petitioner**") filed a complaint under Section 24 of Contract Labour Act before the Court of the Chief Judicial Magistrate, Kullu against the Defendant praying for cognizance to be taken for the offices and appropriate directions for payment of damages by the Defendant be imposed. The matter is currently pending.

29. Prem Singh ("**Plaintiff**") has filed a civil suit before the Karkardooma District Court alleging that our Sponsor ("**Defendant**") has forcefully and illegally tried to grab the property from the Plaintiff and further alleged that the Defendant also wanted to dispossess the Plaintiff from the suit property by way of using machinery, system and illegal force. The Plaintiff prayed for a permanent injunction to restrain the Defendant, his agents, servants from carrying out illegal and unauthorised construction and also restraining them from dispossessing the Plaintiff illegally from the property. The matter is currently pending.

30. Basant Singh ("**Plaintiff**") filed a suit for permanent prohibition and mandatory injunction under section 36 to 39 of the Specific Relief Act, 1963 before the Mandi District Court for the construction of culvert over the suit land wherein the Plaintiff has prayed to be restrained the MoRTH and our Sponsor and others ("**Defendants**") through permanent and prohibitory injection from constructing culvert over the suit land or any part thereof and in case if the Defendants are succeeded in constructing of culvert over the suit land in that event the same may be ordered to be removed/demolished and the suit may be restored to its original position by issuing mandatory injunction. The matter is currently pending.

31. Suwarna Buildcon Private Limited ("**Plaintiff**") filed a commercial suit under Section 2(c)(vi) of the Commercial Courts, Commercial Division and Commercial Appellate Division of High Courts (Amendment) Act, against the Sadbhav Engineering Limited, our Sponsor and others ("**Defendants**") before the Commercial Court, Pune. The District Court of Pune ("**Court**") *vide* common order dated December 2, 2023 allowed the execution petition No. 4596/2023 directing the judgment debtor to take appropriate steps in order to get transfer this execution petition, to any other Court by approaching either to High Court of Bombay or the Principal District Judge, Pune and dismissed the application for referral of the suit to any other court since the Court was appointed as a mediator in the suit. The matter is currently pending.

32. V. K. Sood Engineers and Contractors Private Limited ("**Plaintiff**") has filed this suit for declaration with consequential relief of permanent injunction under section 37, 38 and 39 of Specific Relief Act before the Court of Additional Civil Judge, Senior Division, Sri Anandpur Sahib, Rupnagar, Punjab with regard to stored construction material, inventory, construction plant, machinery and equipment, vehicle and scrap ("**Material**"). The Plaintiff alleges that our Sponsor ("**Defendant**") has been falsely claiming ownership of stored material of the Plaintiff and has been threatening to forcibly lift and usurp the same since December 27, 2022 and now Defendant refused to accede the requests. The matter is currently pending.

33. Sorkhi Industries Private Limited and its director, Rajender Singh ("**Plaintiffs**") filed a suit against State of Haryana through its authorities for the demolition of the plaintiff's property before the Court of Civil Judge (Junior Division),

Hansi. The Plaintiffs alleged that Rakesh Kumar, one of the Director of our Sponsor ("**Defendant**") was directly involved in the alleged illegal demolition of the industrial unit on the Plaintiffs' property. The matter is currently ongoing.

34. Divya Sood ("**Applicant**") filed a suit before the Court of Civil Judge (Senior Division), Gurugram, Haryana against Gurugram Metropolitan Development Authority and our Sponsor ("**Defendants**") seeking a decree of permanent injunction restraining the Defendants from constructing a foot over bridge on the property of the Petitioner. The matter is currently pending.

35. NHAI and our Sponsor ("**Defendants**") had acquired a certain part of land owned by Surinder Kumar ("**Plaintiff**") for the widening of the road as per a government notification. The Plaintiff alleged that the Defendants were interfering and demolishing the house situated on the part of the land which was not acquired by the Defendants ("**Suit Land**"). The Plaintiff filed an application under order 39 rule 1 and 2 of the Code of Civil Procedure, 1908 before the District Judge, Kangra, Dharamshala ("**Court**") inter alia seeking an order restraining the Defendants from causing interference on the Suit Land. The matter is currently pending.

36. Durga Dass ("**Plaintiff**") was in possession of the land which was acquired by NHAI ("**Respondent 1**") for construction of NH – 70 for Hamirpur-Mandi section ("**Suit Land**"). Our Sponsor ("**Respondent 3**") was engaged for the construction on Suit Land. The Plaintiff alleges that Respondent 3 was cutting over the Suit Land illegally and also refused to remove the debris. The Plaintiff filed a suit under Sections 40, 39 and 38 of the Specific Relief Act before the Court of Senior Civil Judge, Mandi, Himachal Pradesh seeking a decree of mandatory injunction against the Respondents directing them to remove the debris in the Suit Land due to the illegal cutting. The matter is currently pending.

37. National Highway Authority of India and our Sponsor (collectively "**Defendants**") had acquired a part of the land which was in the possession of Sushma Devi ("**Petitioner**") for the purpose of construction of national highway. The remaining part of the land of the Petitioner still had existing house/structure over it. The Petitioner filed an application under order 39 rule 1 and 2 read with Section 151 of the Code of Civil Procedure, 1908 before the Court of Senior Civil Judge, Kangra *inter alia* seeking ad-interim injunction to the effect that the Defendants should not interfere with the remaining land of the Petitioner. The matter is currently pending.

38. Our Sponsor ("**Petitioner**") pursuant to a contract of construction of road was provided permission dated October 25, 2019, subject to depositing an amount of ₹ 32.00 million as royalty for excavation of earth and sand in accordance with applicable laws. Subsequently, an order dated June 24, 2021, was passed by the Collector, Morena imposing a penalty of ₹ 2.16 million on account of alleged illegal mining of earth and sand and non-payment of royalty in accordance with permission dated October 25, 2019. ("**Order 1**"). The review of Order 1 was dismissed by the competent authority *vide* order dated September 28, 2021 ("**Order 2**"). The Petitioner filed a writ petition of mandamus bearing no. 28355 of 2021 before the Hon'ble High Court of Madhya Pradesh, Gwalior bench *inter-alia* seeking quashing of Order 1 and Order 2. The matter is currently pending.

Criminal Litigation involving the Sponsor

1. Amit Thakur ("**Respondent**") filed a FIR against our Sponsor at Dhalli Police Station, Shimla ("**FIR**") alleging commission of offences under Sections 336, 442 and 447 of the Indian Penal Code, 1860. Our Sponsor ("**Plaintiff**") filed a petition before the High Court of Himachal Pradesh under section 482 of the Criminal Procedure Code, 1908 set aside the FIR and further consequential proceedings. The matter is currently pending.

2. Balwinder Kaur ("**Complainant**") filed an application under section 12 of Protection of Women from Domestic Violence Act, 2005 before the court of Sub-Division Judicial Magistrate, Balachour District, Shaheed Bhagat Singh Nagar, against her husband Amarjit Singh and others ("**Defendant**"). The Complainant alleged that she was harassed and ill-treated by the Defendants. The Complainant had also named our Sponsor as a defendant in the matter; however, no specific relief has been sought against our Sponsor. The Complainant sought, inter alia, protection and residence orders under the Protection of Women from Domestic Violence Act, 2005. The matter is currently pending.

3. The Municipal Corporation of Gurgaon ("**MCG**"), one of the respondents, had awarded a tender for construction of 13-foot over bridges to our Sponsor ("**Petitioner**"). However, MCG passed an order dated July 13, 2015 instructing cessation of the construction work due to receipt of complaints regarding the location of foot over bridge and concerns over road safety and traffic ("**Discontinuing Order**"). The Petitioner filed a civil writ petition before the Hon'ble High Court of Punjab and Haryana ("**Punjab and Haryana High Court**") seeking issuance of writ in the nature of *certiorari* to quash the Discontinuing Order. The Punjab and Haryana High Court *vide* order dated April 2, 2024 ("**Order**") appointed Deenbandhu Chhotu Ram University of Science and Technology, Murthal, Haryana ("**DCRUST**") as the independent assessor to determine the quantum of compensation to be disbursed within a period of two months thereafter. DCRUST in its report dated June 18, 2024 determined ₹498.94 million as the compensation amount to be paid to the Petitioner on or before August 18, 2024. MCG delayed the payment of the compensation amount. Therefore, our Sponsor filed a contempt petition against the State of Haryana, MCG and others ("**Respondents**") before the Punjab

and Haryana High Court, under Section 11 and 12 read with Section 2B of the Contempt of Courts Act, 1971, *inter alia*, praying for initiation of contempt proceedings against the Respondents for disobedience of the Order and disbursement of payment of ₹498.94 million to the Petitioner. The matter is currently pending.

Other Litigation involving the Sponsor

33 motor vehicle accident cases have been filed by certain individuals ("**Petitioners**") against our Sponsor and other parties under various provisions of the Indian Penal Code, alleging negligence on part of our Sponsor that caused injury and endangerment to human life. The Petitioners have filed application before various courts and forum seeking compensation from our Sponsor under the Motor Vehicles Act, 1988. These matters are currently at various stages of adjudication.

V. Litigation and Regulatory Actions against the Associates of the Sponsor and Project Manager.

Except as disclosed below, as of the date of this Offer Document, there are no outstanding criminal litigation, regulatory actions or material civil litigation against Associates of the Sponsor and Project Manager.

Civil Litigation involving the Associate of the Sponsor

1. The Sponsor entered into a joint venture with GR Infrastructure Limited to constitute GR-Gawar (JV) (the "**Respondent**") for the purpose of tendering and execution of projects. Haryana State Road & Bridge Development Corporation Limited (the "**Applicant**") invited bids for the work of four laning of Rohtak-Bhiwani Road and Hissar road from Bahujamalpur in Rohtak, Haryana (the "**Project**"). The Applicant accepted the bid submitted by the Respondent and the parties executed an agreement for the Project (the "**Agreement**"). The completion of the Project was delayed, and the Applicant appointed the superintending engineer, Jhajjar who imposed liquidated damages on the Respondent. The matter was referred to the arbitral tribunal (the "**Tribunal**") passed an order dated December 26, 2020 in the favour of the Respondent and directed the Applicant to pay an amount ₹300.10 million with interest at 13.75% aggregating to an amount of ₹543.76 million and GST, along with post award interest at 9.40% on an aggregating sum of ₹543.76 million from December 27, 2020 since the delay was beyond the control of the Applicant and moreover the respondent had claimed additional expenses which were partially approved in the said award. The Tribunal further directed the Respondent return the duly discharged bank guarantee to the Claimant. An appeal was filed by the Respondent before the District and Sessions Court, Panchkula under Section 34 of the Arbitration and Conciliation Act, 1996 to set aside the award passed by the Tribunal. The parties have made the written submission, and the matter is currently pending.

2. Suwarna Buildcon Private Limited ("**Applicant**") filed an arbitration suit before the arbitrator in Pune ("**Arbitrator**") against Sadbhav Engineering Limited, Sadbhav Gadag Highway Private Limited, one of the associates of our Sponsor, and others ("**Respondents**"). The matter is currently pending.

3. Suwarna Buildcon Private Limited filed a suit against our Sponsor and one of its Associates, Sadbhav Gadag Highway Private Limited. For details, see "***- Civil Litigation involving the Sponsor***" on page 338.

4. Gawar SCC JV, one of the associates of our Sponsor, has submitted a claim amounting to ₹987 million against the State Highways Authority, Jharkand before an arbitration tribunal. The matter is currently pending.

5. Union of India (the "**Judgement Debtor**") through RITES Limited had issued a tender for upgradation of 2 lanes paved roads in Terai regio of Nepal Phase – 1 ("**Project**"). The Judgement Debtor engaged GR-Gawar ("**Decree Holder**") for the Project which was to be completed in thirty months. Owing to various defaults and delays, the completion of the Project was delayed. This contractual dispute between the parties was referred to the dispute review expert ("**DRE**") which allowed claims made by the Decree Holder amounting to Nepalese Rupees 298.72 million along with an interest of 12% per annum. Aggrieved by the decision of the DRE, the parties preferred resolution of the dispute through arbitration. A three-person arbitral tribunal ("**Arbitral Tribunal**") was constituted which awarded ₹264.64 million to the Decree Holder ("**Arbitral Award**"). The Arbitral Tribunal also stated that in the event of a delay in payment of the Arbitral Award money after April 3, 2024, the Decree Holder shall be entitled to a post-award interest at 12% per annum on the Arbitral Award with effect from January 4, 2024 till the date of actual payment. The Decree Holder filed an execution petition before the High Court of Delhi under Section 36 of the Arbitration and Conciliation Act, 1996 read with Order XXI of the Code of Civil Procedure, 1908. The matter is currently ongoing.

VI. Litigation and Regulatory Actions against the Investment Manager.

As of the date of this Offer Document, there are no outstanding criminal litigation, regulatory actions or material civil litigation against the Investment Manager.

VII. Litigation and Regulatory Actions against the Associates of the Investment Manager.

As of the date of this Offer Document, there are no outstanding criminal litigation, regulatory actions or material civil litigation against the Associates of the Investment Manager.

VIII. Litigation and Regulatory Actions against the Trustee.

Except as disclosed below, as of the date of this Offer Document, there are no outstanding criminal litigation, regulatory actions or material civil litigation against Trustee.

1. An administrative warning was issued by SEBI *vide* its letter dated November 14, 2013 read together with the letter dated January 1, 2014 in relation to the inspection of books and records of debenture trustee business.

2. An administrative warning was issued by SEBI *vide* its letter dated August 14, 2017 in relation to the inspection of books and records of debenture trustee business.

3. An administrative warning was issued by SEBI *vide* its letter dated May 31, 2019 in relation to the inspection of books and records of debenture trustee business.

4. An administrative warning and deficiency letter was issued by SEBI *vide* its letter dated May 31, 2022 in relation to the inspection of books and records of debenture trustee business.

5. An administrative was issued by SEBI *vide* its letter dated June 9, 2023 in relation to the inspection conducted by SEBI for one of the Trustee's infrastructure investment trust client.

6. An advisory was issued by SEBI *vide* its letter dated June 12, 2023 in relation to the inspection conducted by SEBI for one of the Trustee's real estate investment trust client.

7. An administrative warning and advisory, *vide* letters dated August 8, 2023, and September 12, 2023, respectively, was issued by SEBI in relation to thematic inspection on debenture trustees.

8. An administrative warning issued by SEBI vide letter dated September 28, 2023, in relation to non-submission of information to SEBI as required under Regulation 10(18)(a) of Securities and Exchange Board of India (Real Estate Investment Trusts) Regulations, 2014, as amended, by one of the Trustee's real estate investment trust client.

9. An administrative warning was issued by SEBI *vide* letter dated October 23, 2023, in relation to thematic inspection on debenture trustees with respect to creation of charge on the security for the listed debt securities as required under SEBI circular SEBI/HO/MIRSD/CRADT/CIR/P/2020/218 dated November 03, 2020.

10. A deficiency letter issued by SEBI *vide* letter dated January 11, 2024, in relation to thematic inspection of Real Estate Investment Trusts ("**REITs"**) – Compliance with REIT Regulations with respect to submission of quarterly reports by Manager of the REIT to the Trustee.

11. An administrative warning, deficiency letter and advisory issued by SEBI *vide* letter dated June 28, 2024 in relation to inspection of the Trustee for the inspection period from July 01, 2021 to August 30, 2023.

12. Administrative warning issued by SEBI vide letter dated November 14, 2024, in relation to Examination with respect to recording and verification of Cash flow information in the Securities and Covenant Monitoring (SCM) system by Axis Trustee Services Limited, (ATSL) for the secured listed ISINs.

13. An adjudication Order bearing number EAD/PM-AA/AO/17/2018-19 dated July 11, 2018, was issued by SEBI under Section 15-I of Securities and Exchange Board of India Act, 1992 read with Rule 5 of SEBI (Procedure for Holding Inquiry and imposing penalties by Adjudicating Officer) Rules, 1995, as amended.

14. A settlement Order bearing number EAD-3/JS/GSS/80/2018-19 dated April 2, 2019, issued by SEBI under SEBI (Settlement of Administrative and Civil Proceedings) Regulations, 2014 and SEBI (Settlement Proceedings) Regulations, 2018, both as amended from time to time.

15. An administrative warning was issued by SEBI *vide* letter dated March 31, 2022, to Prashant Joshi, one of the Director of the Trustee in relation to violation of Securities and Exchange Board of India (Prohibition of Insider Trading) Regulations, 2015 in the matter of Axis Bank Limited.

IX. Taxation Proceedings.

The details of all outstanding tax disputes involving the Project SPVs and against the Relevant Parties, on the basis of abovementioned, are set forth below:

Name of the Entity	Number of Proceedings	Amount Involved (₹ in million)
Direct Tax		
(i) Trust	Nil	-
(ii) Project SPVs	8	118.47[(1)]
(iii) Sponsor	2	52.66[(2)]
(iv) Investment Manager	Nil	-
(v) Associates of the Sponsor/ Project Manager/ Investment Manager/ InvIT (excluding the Project SPVs)	Nil	-
Indirect Tax		
(i) Trust	Nil	-
(ii) Project SPVs	18	108.96[*]
(iii) Sponsor	74	1,521.65[#]
(iv) Investment Manager	Nil	-
(v) Associates of the Sponsor/ Project Manager/ Investment Manager/ InvIT (excluding the Project SPVs)	13	300.45[***]

[(1)] *Out of the 8 proceedings, the amount involved in 7 proceedings are quantifiable to an amount aggregating to ₹118.47 million. The amount in the remaining 1 proceeding is not quantifiable.*

[(2)] *Out of the 2 proceedings, the amount involved in 1 proceeding is quantifiable to an amount aggregating to ₹52.66 million. The amount in the other 1 proceeding is not quantifiable.*

[*] *Out of the 18 proceedings, the amount involved in 4 proceedings are quantifiable to an amount aggregating to ₹108.96 million. The amount in the remaining 14 proceedings is not quantifiable.*

[#] *Out of the 74 proceedings, the amount involved in 32 proceedings are quantifiable to an amount aggregating to ₹1,521.65 million. The amount in the remaining 42 proceedings is not quantifiable.*

[***] *Out of the 13 proceedings, the amount involved in 7 proceedings are quantifiable to an amount aggregating to ₹300.45 million. The amount in the remaining 6 proceedings is not quantifiable.*

REGULATORY APPROVALS

*Provided below are the material approvals, consents, licenses, registrations and permissions from the government, various governmental agencies and other statutory and/or regulatory authorities with which the Trust can undertake the Offer and the Trust and the Project SPVs can undertake their respective current business activities, as applicable. Unless otherwise stated, these approvals are valid as of the date of this Offer Document. In the event that any of the approvals and licenses that are required for the Project SPVs' business operations expire in the ordinary course of business, the relevant Project SPV will apply for such renewal from time to time. For details in connection with the regulatory and legal framework within which the Trust and the Project SPVs operate, see "**Regulations and Policies in India**" on page 205.*

A. Approvals in relation to the Offer

1. Resolutions dated August 20, 2024, and December 5, 2024, passed by the board of directors of the Investment Manager in relation to the Offer and other incidental matters.

2. Resolutions dated October 4, 2024, passed by the board of directors of the Investment Manager in relation to the change in name of the Trust.

3. In principle listing approvals each dated October 24, 2024, issued by BSE and NSE, respectively.

4. In-principle approvals dated July 31, 2024 to GRJHPL, July 31, 2024 to GKBHPL, May 29, 2024 to GNHPL, August 5, 2024 to GKNHPL, August 23, 2024 to HHHPL, July 31, 2024 to GRSHPL, November 5, 2024 to GNHPL II, November 5, 2024 to GBHPL and, October 14, 2024 to DUHPL, granted by the NHAI in relation to the transfer of shareholding of GRJHPL, GKBHPL, GNHPL, GKNHPL, HHHPL, GRSHPL, GNHPL II, GBHPL and DUHPL, to the Trust and other related actions.

B. Approvals in relation to the Trust

1. Certificate of registration dated March 7, 2024 bearing registration number IN/INVIT/23-24/00029 issued by SEBI to the Trust under Regulation 3 of the SEBI InvIT Regulations, for registration of the Trust as an infrastructure investment trust.

2. Updated certificate of registration dated October 16, 2024, bearing registration number IN/InvIT/23-24/0029 issued by SEBI to the Trust in accordance with the SEBI InvIT Regulations, pursuant to change of name of the Trust to "Capital Infra Trust".

3. Resolution dated September 6, 2023 passed by the board of directors of Gawar Construction Limited approving the settlement of the Trust and other incidental matters.

4. Resolution dated September 6, 2023 passed by the board of directors of Gawar Construction Limited to act as the Sponsor of the Trust.

5. Resolution dated October 7, 2024 passed by the board of directors of Gawar Construction Limited in relation to the change in name of the Trust.

C. Material Project & Business- related Approvals in relation to the SPVs

Completion Certificates

1. Completion Certificate dated July 31, 2020 issued by MSV International Inc. (in association with MSV International Tech Private Limited), Independent Engineer to GRJHPL, certifying July 31, 2020 as the date of completion of commercial operations for four Lane of Rohna/ Hassangarh to Jhajjar section from km 44.80 to km 80.250 (Design Chainage) (Length 35.450 km) of NH- 334B in Haryana ("**Jhajjar Project**") on HAM.

2. Completion Certificate dated December 29, 2021 issued by Sterling Indo Tech Consultants Private Limited, Independent Engineer to GKBHPL certifying October 30, 2021 as the date of completion of commercial operations, for two lane with paved shoulder/ four lane of Khajuwala- Poogal Section (Design Chainage 0.000 to 30.812) and Poogal Dantour Jaggasar Gokul Goddu Ranjeetpura Charanwala Naukh- Bap Chainage 1.430 to 182.725) total length 212.107 km under Bharatmala Pariyojna in Rajasthan (**"Khajuwala Project**") on HAM.

3. Completion Certificate by Mahendra Kumar Jain, L.N. Malviya Infra Projects Private Limited, Independent Engineer to GNHPL certifying January 9, 2021 as the date of completion of commercial operations for 4/6 laning of Narnaul Bypass Crossing to Paniyala Mor (NH- 148B) (at NH-48 Junction) = 31.24 Km, Nizampur Link Road 2.76 Km & Narnaul Bypass Crossing to Pacheri Kalan = 11.30 Km (NH-11) in Haryana under Bharatmala Pariyojana ("**Narnaul Project**") on HAM.

4. Completion Certificate issued by Avadhesh Pratap Misra, Intercontinental Consultants and Technocrats Private Limited, (in association with MSPARK Futuristic & Associates), Independent Engineer to GKNHPL certifying September 5, 2023 as the date of commencement of commercial operations, for four Laning of Kiratpur to Nerchowk Section of NH-21 (from Km 12.750 to Km 26.500, Km 126.500 to Km 158.500 including ACC link road from Km 0.000 to Km 2.003) Greenfield Alignment (excluding Sunder Nagar Bypass) in Himachal Pradesh ("**Kiratpur Project**") on the HAM.

5. Provisional Completion Certificate dated May 22, 2023 issued by Intercontinental Consultants and Technocrats Private Limited, (in association with MSPARK Futuristic & Associates), Independent Engineer to HHHPL certifying April 27, 2023 as the provisional date of commencement of commercial operations, for four Laning of Rajauli- Bakhtiyarpur Section of NH- 31 (New NH- 20) from Km 54,405 to Km 101,630 (Package -II) for the stretch of 47.23 km ("**Hasanpur Project**") in Bihar on HAM.

6. Completion Certificate dated May 12, 2022 issued by Saurav Shekhar, SA Infrastructure Consultants Private Limited (in association with Shambhavi Techno Solutions Private Limited), Independent Engineer to GRSHPL certifying April 5, 2022 as the date of completion of commercial operations for Four lane configuration & strengthening of Uttar Pradesh/ Haryana Border to Rohna Section from Km 0.00 to Km 44.80 (Design Chainage) (Length -40.500 Km) of NH- 334B in Haryana ("**Rohna Project**") on HAM.

7. Provisional Completion Certificate dated December 8, 2021 issued by Anupam Gupta, of LEA Associates South Asia Private Limited, Independent Engineer to SNHL certifying October 27, 2019 as the provisional date of commencement of commercial operations for four laning of Rampur-Kathgodam section of NH 87 (New NH No. 9, 109) from Km 42.791(Design Chainage 43.446) 2km 88.000 (Design Chainage 93.226) (Package- II) in Uttarakhand under NHDP Phase- III for the stretch of 18.085 km ("**Nainital Project**") on HAM.

8. Provisional Completion Certificate issued by Dr. Gouranga Sathy, of TPF Getinsa Eurostudios S.L (in association with segmental Consulting & Infrastructure Advisory Private Limited), Independent Engineer to SBHPL certifying December 31, 2020 as the provisional date of commencement of commercial operations for two/ four laning of BRT Tiger Reserve Boundary to Bangalore Section of NH- 209 (existing chainange from 287.520 to 461.550) in Karnataka under NHDP Phase- IV for the stretch of 81.175 km ("**Bangalore Project**") on HAM.

9. Completion Certificate dated June 15, 2024 issued by L.N. Malviya Infra Projects Private Limited, Independent Engineer to DUHPL certifying January 16, 2024, as the date of completion of commercial operations for construction of four Laning of Dewas Ujjain Section of NH-148 NG from Design Ch. 0.000 to 19.733 & Construction of 4-Lane Ujjain Bypass from Design Ch. 19.733 to 26.900 & Construction of four Lane Dewas Bypass from Design Ch 0.000 to 14.520 (Part II) with a total Design length of 40.25 km out of the total of 41.42 km in Madhya Pradesh ("**Dewas Project**") on the Hybrid Annuity Mode.

Approvals for continuing commercial operations

The SPVs are required to obtain and maintain certain approvals, consents, licenses, registrations and permissions during the operations stage of their respective projects, as listed below:

I. Gawar Rohna Jhajjar Highway Private Limited ("GRJHPL")

1. Certificate of incorporation dated April 20, 2018 by Registrar of Companies, Central Registration Centre.

2. Directorate of Town and Country Planning, Haryana approval for setting up batching plant dated February 13, 2019.

3. General Arrangement Drawing approval from the Senior Divisional Engineer, Northern Railway, New Delhi dated October 24, 2018.

4. Permission of village panchayat and state government to borrow earth dated December 22, 2018.

5. Clearance from Pollution Control Board for setting up Batching Plant May 15, 2019.

6. Permission of forest division officer for cutting of trees dated October 1, 2018.

II. Gawar Khajuwala Bap Highway Private Limited ("GKBHPL")

1. Certificate of incorporation dated April 18, 2018 by Registrar of Companies, Central Registration Centre.

2. Approval of Public Health Engineering Division, Bikaner, Rajasthan for draining water from bore well dated January 16, 2019.

3. Consent to establish and operate of RMC & HMP by Pollution Control Board dated January 31, 2020.

4. Approval from village panchayat for establishing a plant dated April 18, 2019.

III. Gawar Narnaul Highway Private Limited ("GNHPL")

1. Certificate of incorporation dated February 8, 2019 by Registrar of Companies, Central Registration Centre.

2. Approval of Public Health Engineering Division, Narnaul for drawing STP treated water dated July 3, 2019.

3. Permission of forest division for cutting of trees dated November 19, 2019.

4. License to use of explosive by Directorate General of Mines and Safety dated March 1, 2016

5. Permission of Village Panchayat and the Pollution control board for installation of crushers dated January 30, 2017

6. Permission of the State Government for drawing water from river / reservoir dated July 3, 2019 by Public Health Engineering Division No. 3, Narnaul.

IV. Gawar Kiratpur Nerchowk Highway Private Limited ("GKNHPL")

1. Certificate of incorporation dated October 24, 2020 by Registrar of Companies, Central Registration Centre.

V. Hardiya Hasanpur Highway Private Limited ("HHHPL")

1. Certificate of incorporation dated September 22, 2020 by Registrar of Companies, Central Registration Centre.

2. Permission of forest division for cutting of trees dated June 1, 2021.

VI. Gawar Rohna Sonepat Highways Private Limited ("GRSHPL")

1. Certificate of incorporation dated April 1, 2019 by Registrar of Companies, Central Registration Centre.

2. Consent to Establish of Batching Plant by Haryana State Pollution Control Board dated May 23, 2019.

3. General Arrangement Drawing approval from the Senior Divisional Engineer, Northern Railway, New Delhi dated October 18, 2018.

4. Permission of the state government for drawing water from river/reservoir dated July 16, 2019 from Municipal Corporation Sonepat.

5. Consent to establish of hot mix plant (Asphalt plant) from the Haryana State Pollution Control dated March 3, 2020.

6. Consent to operate of hot mix plant (Asphalt plant) from the Haryana State Pollution Control dated July 9, 2020.

7. Permission of Village Panchayat for establishing plant dated November 20, 2019.

8. Permission of Village Panchayat and state government for Borrow earth dated January 31, 2020.

9. Permission of Forest division for cutting of trees dated June 25, 2020.

VII. Gawar Nainital Highways Private Limited ("GNHPL II")

1. Certificate of incorporation dated April 9, 2023 by Registrar of Companies, Central Registration Centre.

2. In-principle approval dated April 17, 2023 by NHAI for the substitution of SNHL by a special purpose vehicle of Gawar Construction Limited.

VIII. Gawar Bangalore Highways Private Limited ("GBHPL")

1. Certificate of incorporation dated November 28, 2022 by Registrar of Companies, Central Registration Centre.

2. In-principle approval dated December 30, 2022 by NHAI for the substitution of SBHPL by a special purpose vehicle of Gawar Construction Limited.

3. Certificate of registration for Employer under Building and Other Construction Workers (Regulation of Employment and Conditions of Service) Central Rules, 1998 dated May 19, 2023.

IX. Dewas Ujjain Highway Private Limited ("DUHPL")

1. Certificate of incorporation dated November 24, 2020 by Registrar of Companies, Central Registration Centre.

2. Permission of extraction of boulders dated September 27, 2021 by Registrar of Companies, Central Registration Centre.

In addition to those set out above, the Project SPVs have also obtained certain approvals, consents, licenses, registrations and permissions from the relevant governmental, statutory and regulatory authorities that are required during the construction of the respective Initial Portfolio Assets, such as consents to operate and establish issued by state pollution control boards, permissions for drawing groundwater and licenses to use explosives.

The SPVs have, save as set out above, also obtained the necessary approvals, consents, licenses, registrations and permissions from the relevant governmental, statutory and regulatory authorities that are required for their respective businesses and operations.

D. Approvals applied for, but not yet received

Except as disclosed below, as of the date of this Offer Document, there are no approvals required to be obtained by the Trust or the SPVs, for which applications have been made, but approvals have not been received.

1. Application for trademark registration under class 35 and 36 of the Trade Marks Act, 1999 pursuant to application bearing number 6665314 and 6665315. For details, see "***Risk Factor - We may not be able to obtain trademark registration or continue to use our intellectual property***" on page 36.

E. Approvals for which applications are yet to be made

As of the date of this Offer Document, there are no material approvals required to be obtained by the Trust or the SPVs for which applications are yet to be made.

F. Material Approvals which have expired and renewal yet to be applied for

Except as mentioned below, there are no material approvals which have expired and the renewal applications have not been made for:

1. ***GRJHPL***

   a) Clearance from Pollution Control Board for setting up Batch Plant dated May 15, 2019.

2. ***GRSHPL***

   a) Consent to establish from the Pollution Control Board for setting up Batching Plant.

   b) Consent to operate from the Pollution Control Board for setting up Batching Plant dated November 2, 2020

3. GKBHPL

   a) Consent to establish and operate stone crushing plant from the Pollution Control dated November 19, 2019.

b) Consent to establish and operate HMP and WMM Plant from the Pollution Control dated November 19, 2019.

SECURITIES MARKET IN INDIA

The information in this section has been extracted from documents available on the website of SEBI and the Stock Exchanges and has not been prepared or independently verified by the Parties to the Trust or the Lead Managers or any of their respective affiliates or advisors.

The Indian Securities Market

India has a long history of organized securities trading. The first stock exchange in India was established in 1875. BSE and NSE hold dominant positions among the stock exchanges in terms of the number of listed companies, market capitalization and trading activity.

Stock Exchange Regulation

Indian stock exchanges are regulated primarily by SEBI, as well as by the Government acting through the Ministry of Finance, Capital Markets Division, under the SCRA and the SCRR. Pursuant to its powers under the SCRA and the SEBI Act, SEBI notified the Securities Contract (Regulation) (Stock Exchanges and Clearing Corporations) Regulations, 2018 (the "**SECC Regulations**"), which regulate the recognition, ownership and internal governance of stock exchanges and clearing corporations in India together with providing for minimum capitalization requirements for stock exchanges. The SCRA, the SCRR and the SECC Regulations, together with various rules, bye-laws and regulations of the respective stock exchanges, regulate the recognition of stock exchanges, qualifications for membership thereof and the manner in which contracts are entered into, settled and enforced between members of the stock exchanges.

The SEBI Act empowers SEBI to regulate the Indian securities markets, including stock exchanges and intermediaries in the capital markets, promote and monitor self-regulatory organisations and prohibits fraudulent and unfair trade practices. SEBI has notified several regulations to regulate the securities market in India, including regulations relating to corporate governance requirements by listed companies, insider trading, substantial acquisition of shares and takeover of companies, buy-backs of securities, employee stock option schemes and sweat equity, stock brokers, merchant bankers, depositories, mutual funds, foreign portfolio investors, research analysts and other capital market participants.

Listing and Delisting of Units

The SEBI InvIT Regulations provide for the listing and delisting of infrastructure investment trusts on the Stock Exchanges.

BSE

The BSE was established in 1875 and was Asia's first stock exchange. In August 1957, it became the first stock exchange in India to obtain permanent recognition under the SCRA and also launched India's first equity index in 1986. The BSE provides a market for trading in equity, currencies, debt instruments, derivatives and mutual funds.

NSE

The NSE was recognized as a stock exchange under the SCRA in 1993 and commenced operations in the wholesale debt market segment in 1994. It was established to provide nationwide online, satellite-linked, screen-based trading facilities with electronic clearing and settlement for securities including government securities, debentures, public sector bonds and units. Presently, the products on the exchange are organized into three assets classes for trading, namely (i) equity and equity-linked products such as stocks, IDRs, ETFs and units of closed-ended mutual fund schemes, (ii) derivates and (iii) fixed income securities and debt products, including corporate bonds, sovereign gold bonds and other debt securities.

Internet-based Securities Trading and Services

Internet trading takes place through order routing systems, which route client orders to exchange trading systems for execution. Stockbrokers interested in providing this service are required to apply for permission to the relevant stock exchange and also have to comply with certain minimum conditions stipulated by SEBI. The NSE was the first exchange to grant approval to its members for providing internet-based trading services. Internet trading is possible on both the equity and derivatives segments of the NSE. Subsequently, the BSE also introduced the BSE On-Line Trading (BOLT) platform for internet-based trading in 1995.

The NSE operates on the National Exchange for Automated Trading (NEAT) system, a fully automated screen-based trading system which enables the exchange to support high trading volumes and reduce transaction costs.

Trading Hours

Trading on both NSE and BSE occurs from Monday to Friday, between 9:15 a.m. and 3:30 p.m. IST (excluding the 15 minutes pre-open session from 9:00 a.m. to 9:15 a.m. IST and a closing session between 3:30 p.m. and 4:00 p.m. IST). BSE and NSE are closed on public holidays.

Depositories

The Depositories Act provides a legal framework for the establishment of depositories to record ownership details and effect changes in ownership records through book entry. It also enables the dematerialization of securities and provides investors to hold securities in dematerialized form. Further, SEBI has framed regulations governing the registration of depositories and participants and their respective rights and obligations. The depository system has facilitated the operation of the Indian securities markets.

SELLING AND TRANSFER RESTRICTIONS

The distribution of this Offer Document and the offer, sale or delivery of the Units is restricted by law in certain jurisdictions. Persons who may come into possession of this Offer Document are advised to consult with their own legal advisors as to what restrictions may be applicable to them and to observe such restrictions. This Offer Document may not be used for the purpose of an offer or invitation in any circumstances. Due to the following restrictions, investors are advised to consult legal counsel prior to purchasing or subscribing to the Units or making any resale, pledge or transfer of the Units.

Set forth below are selling restrictions and transfer restrictions applicable to the Offer.

Republic of India

The Offer Document may not be distributed directly or indirectly in India or to residents of India and any Units may not be offered or sold directly or indirectly in India to, or for the account or benefit of, any resident of India except as permitted by applicable Indian laws and regulations.

The Units may not be offered or sold, directly or indirectly, and the Offer Document, any offering materials and any advertisements in connection with the offering of the Units may be distributed or published in or from any country or jurisdiction except under circumstances that will result in compliance with any applicable rules and regulations of any such country or jurisdiction. The Offer will be made in compliance with the applicable SEBI InvIT Regulations.

Australia

This Offer Document is not a disclosure document or a prospectus under Chapter 6D.2 of the Corporations Act 2001 (Cth) ("Corporations Act") and has not been lodged with the Australian Securities and Investments Commission and it does not purport to include the information required of a disclosure document under Chapter 6D.2 of the Corporations Act.

No offer will be made under this Offer Document to investors to whom disclosure is required to be made under Chapter 6D of the Corporations Act. Each purchaser of the Units offered in the Offer in Australia shall be deemed to represent and warrant that it is either a "sophisticated investor" or a "professional investor" within the meaning of those terms in the Corporations Act.

The Units acquired in the Offer in Australia must not be offered for sale in Australia in the period of 12 months after the date of the Allotment, except in circumstances where disclosure to investors under Chapter 6D of the Corporations Act would not be required pursuant to an exemption under Section 708 of the Corporations Act or otherwise or where the offer is pursuant to a disclosure document that complies with Chapter 6D of the Corporations Act. Each purchaser of the Units offered in the Offer in Australia shall be deemed to undertake to the Trust that it will not, for a period of 12 months from the date of issue of the Units, offer, transfer, assign or otherwise alienate those Units to investors in Australia except in circumstances where disclosure to investors is not required under Chapter 6D.2 of the Corporations Act or where or where the offer is pursuant to a disclosure document that complies with Chapter 6D of the Corporations Act.

British Virgin Islands

The Units are not being and may not be offered to the public or to any person in the British Virgin Islands for purchase or subscription by or on our behalf. The Units may be offered to companies incorporated under the BVI Business Companies Act, 2004 (British Virgin Islands) (each a "BVI Company"), but only where the offer will be made to, and received by, the relevant BVI Company entirely outside of the British Virgin Islands.

This Offer Document has not been, and will not be, registered with the Financial Services Commission of the British Virgin Islands. No registered document has been or will be prepared in respect of the Units for the purposes of the Securities and Investment Business Act, 2010 or the Public Offers Code of the British Virgin Islands.

Cayman Islands

No offer or invitation to subscribe for Units may be made to the public in the Cayman Islands to subscribe for any of the Units but an invitation or offer may be made to sophisticated persons (as defined in the Cayman Islands Securities Investment Business Act (the "SIBA"), high net worth persons (as defined in the SIBA) or otherwise in accordance with the SIBA. This Offer Document does not constitute an invitation or offer to the public in the Cayman Islands of the Units, whether by way of sale or subscription. The Units are not being offered or sold, and will not be offered or sold, directly or indirectly, to the public in the Cayman Islands.

People's Republic of China

This Offer Document may not be circulated or distributed in the People's Republic of China (excluding, for the purposes of this paragraph, the Hong Kong and Macau Special Administrative Regions and Taiwan Province) and the Units may not be

offered or sold directly or indirectly to any resident of the People's Republic of China, or offered or sold to any person for reoffering or re-sale directly or indirectly to any resident of the People's Republic of China.

Hong Kong

The Units have not been offered or sold and will not be offered or sold in Hong Kong, by means of any document other than (a) to "professional investors" as defined in the Securities and Futures Ordinance (Cap. 571) of Hong Kong (the "**SFO**") and any rules made under the SFO; or (b) in other circumstances which do not result in the document being a "prospectus" as defined in the Companies (Winding Up and Miscellaneous Provisions) Ordinance (Cap. 32) of Hong Kong (the "**CWUMPO**") or which do not constitute an offer to the public within the meaning of the CWUMPO.

No advertisement, invitation or document relating to the Units has been or will be issued for the purposes of the issue, whether in Hong Kong or elsewhere, which is directed at, or the contents of which are likely to be accessed or read by, the public of Hong Kong (except if permitted to do so under the securities laws of Hong Kong), other than with respect to Units which are or are intended to be disposed of only to persons outside Hong Kong or only to "professional investors" as defined in the SFO and any rules made under the SFO.

Japan

The Units have not been and will not be registered under the Financial Instruments and Exchange Act (Act No. 25 of 1948 as amended) of Japan (the "**FIEA**") and disclosure under the FIEA has not been and will not be made with respect to the Units. No Units have, directly or indirectly, been offered or sold, and may not, directly or indirectly, be offered or sold in Japan or to, or for the benefit of, any resident of Japan as defined in Article 6, Paragraph 1, Item 5 of the Foreign Exchange and Foreign Trade Act (Act No. 228 of 1949 as amended) of Japan (a "**Japanese Resident)** or to others for re-offering or re-sale, directly or indirectly in Japan or to, or for the benefit of, any Japanese Resident except (i) pursuant to an exemption from the registration requirements of the FIEA and (ii) in compliance with any other relevant laws, regulations and governmental guidelines of Japan.

In an offering of Units in Japan or to, or for the benefit of, a Japanese Resident, if an offeree does not fall under a "qualified institutional investor" (*tekikaku kikan toshika*), as defined in Article 2, Paragraph 3, Item 1 of the FIEA and Article 10, Paragraph 1 of the Cabinet Office Order on Definitions under Article 2 of the Financial Instruments and Exchange Act (Order of the Ministry of Finance No. 14 of 1993) of Japan (a "**Qualified Institutional Investor**"), Units will be offered to such offeree by a private placement to small number of investors (*shoninzu muke kan'yu*), as provided under Article 23-13, Paragraph 4 of the FIEA, and accordingly, the filing of a securities registration statement for a public offering pursuant to Article 4, Paragraph 1 of the FIEA has not been made.

In an offering of Units in Japan or to, or for the benefit of, a Japanese Resident, if an offeree falls under a Qualified Institutional Investor, Units will be offered to such offeree by a private placement to Qualified Institutional Investors (*tekikaku kikan toshika muke kan'yu*), as provided under Article 23-13, Paragraph 1 of the FIEA, and accordingly, the filing of a securities registration statement for a public offering pursuant to Article 4, Paragraph 1 of the FIEA has not been made. To subscribe for any Units, such offeree will be required to agree that it will be prohibited from selling, assigning, pledging or otherwise transferring any of such Units other than to another Qualified Institutional Investor.

Republic of Korea

The Units have not been and will not be registered under the Financial Investments Services and Capital Markets Act of Korea and the decrees and regulations thereunder (the "**FSCMA**"), and the Units have been and will be offered in Korea as a private placement under the FSCMA. None of the Units may be offered, sold or delivered directly or indirectly, or offered or sold to any person for re-offering or resale, directly or indirectly, in Korea or to any resident of Korea except pursuant to the applicable laws and regulations of Korea, including the FSCMA and the Foreign Exchange Transaction Law of Korea and the decrees and regulations thereunder (the "**FETL**"). Furthermore, the purchaser of the Units shall comply with all applicable regulatory requirements (including but not limited to requirements under the FETL) in connection with the purchase of the Units. By the purchase of the Units, the relevant holder thereof will be deemed to represent and warrant that if it is in Korea or is a resident of Korea, it purchased the Units pursuant to the applicable laws and regulations of Korea.

Malaysia

No prospectus or other offering material or document in connection with the offer and sale of the Units has been or will be registered with the Securities Commission of Malaysia ("**Commission**") for the Commission's approval pursuant to the Capital Markets and Services Act 2007. Accordingly, this Offer Document and any other document or material in connection with the offer or sale, or invitation for subscription or purchase, of the Units may not be circulated or distributed, nor may the Units be offered or sold, or be made the subject of an invitation for subscription or purchase, whether directly or indirectly, to persons in Malaysia other than (i) a closed end fund approved by the Commission; (ii) a holder of a Capital Markets Services Licence; (iii) a person who acquires the Units, as principal, if the offer is on terms that the Units may only be acquired at a consideration of not less than RM250,000 (or its equivalent in foreign currencies) for each transaction; (iv) an individual whose total net personal assets or total net joint assets with his or her spouse exceeds RM3 million (or its equivalent in foreign currencies),

provided that the net value of the primary residence of the individual (with his or her spouse) contribute not more than RM1 million of the total net assets; (v) an individual who has a gross annual income exceeding RM300,000 (or its equivalent in foreign currencies) per annum in the preceding twelve months; (vi) an individual who, jointly with his or her spouse, has a gross annual income of RM400,000 (or its equivalent in foreign currencies), per annum in the preceding twelve months; (vii) a corporation with total net assets exceeding RM10 million (or its equivalent in a foreign currencies) based on the last audited accounts; (viii) a partnership with total net assets exceeding RM10 million (or its equivalent in foreign currencies); (ix) a bank licensee or insurance licensee as defined in the Labuan Financial Services and Securities Act 2010; (x) an Islamic bank licensee or takaful licensee as defined in the Labuan Financial Services and Securities Act 2010; and (xi) any other person as may be specified by the Commission; provided that, in the each of the preceding categories (i) to (xi), the distribution of the Units is made by a holder of a Capital Markets Services Licence who carries on the business of dealing in securities. The distribution in Malaysia of this Offer Document is subject to Malaysian laws. This Offer Document does not constitute and may not be used for the purpose of public offering or an issue, offer for subscription or purchase, invitation to subscribe for or purchase any securities requiring the registration of a prospectus with the Commission under the Capital Markets and Services Act 2007.

Mauritius

The Units may not be offered or sold, directly or indirectly, to the public in Mauritius. Neither this Offer Document nor any offering material or information contained herein relating to the offer of the Units may be released or offered to the public in Mauritius or used in connection with any such offer. This Offer Document does not constitute an offer to sell the Units to the public in Mauritius and is not a prospectus as defined under the Securities Act 2005.

The Mauritius Financial Services Commission (the "FSC") does not assume any responsibility for the contents of this Offer Document and makes no representation as to the accuracy or completeness of any of the statements made or opinions expressed in this Offer Document and expressly disclaimsany liability whatsoever for any loss arising from or in reliance upon the whole or any part thereof. The FSC does not vouch for the financial soundness of the Offer or for the correctness of any statements made or opinions expressed with regard to it.

Sultanate of Oman

The information contained in this Offer Document does not constitute an offer of securities in Oman as contemplated by the Commercial Companies Law (Royal Decree 18/2019) or the Securities Law (Royal Decree 46/2022) or the Executive Regulations of the Capital Market Law (Decision No. 1/2009, as amended) or an offer to sell or the solicitation of any offer to buy non-Omani securities in Oman.

This Offer Document and the Units to which it relates may not be advertised, marketed, distributed or otherwise made available to any person in Oman without the prior consent of the Oman Capital Market Authority ("**CMA**") (or its successor, the Financial Services Authority ("**FSA**"), and any reference to the CMA shall include the reference to the FSA in accordance with Royal Decree 20/2024) and then only in accordance with any terms and conditions of such consent. In connection with the offering of Units, no prospectus has been filed with the CMA (or any successor entity thereof, such as the FSA). The offering and sale of Units described in the Offer Document will not take place inside Oman. The Offer Document is strictly private and confidential and is being issued to a limited number of sophisticated investors, and may neither be reproduced, used for any other purpose, nor provided to any person other than the intended recipient hereof.

Additionally, this Offer Document is not intended to lead to the making of any contract within the territory or under the laws of Oman.

The CMA (or any successor entity thereof, such as the FSA) takes no responsibility for the accuracy of the statements and information contained in this Offer Document or for the performance of the Trust with respect to the Units, nor shall it have any liability to any person for damage or loss resulting from reliance on any statement or information contained herein.

Qatar (excluding the Qatar Financial Centre)

This Offer Document did not, and was not intended to, constitute an invitation or an offer of securities in the State of Qatar (including the Qatar Financial Centre) and accordingly should not be construed as such. The Units have not been, and shall not be, offered, sold or delivered at any time, directly or indirectly, in the State of Qatar. Any offering of the Units shall not constitute a public offer of securities in the State of Qatar.

By receiving this document, the person or entity to whom it has been provided to understands, acknowledges and agrees that: (a) neither this Offer Document nor the Units have been registered, considered, authorised or approved by the Qatar Central Bank, the Qatar Financial Markets Authority, the Qatar Financial Centre Regulatory Authority or any other authority or agency in the State of Qatar; (b) neither the Trust nor the Lead Managers are authorised or licensed by the Qatar Central Bank, the Qatar Financial Markets Authority, the Qatar Financial Centre Regulatory Authority, or any other authority or agency in the State of Qatar, to market or sell the Units within the State of Qatar; (c) this Offer Document may not be provided to any person other than the original recipient and is not for general circulation in the State of Qatar; and (d) no agreement relating to the sale of the Units shall be consummated within the State of Qatar.

No marketing of the Units has been or will be made from within the State of Qatar and no subscription to the Units may or will be consummated within the State of Qatar. Any applications to invest in the Units shall be received from outside of Qatar. This Offer Document shall not form the basis of, or be relied on in connection with, any contract in Qatar. The persons representing the Lead Managers are, by distributing this document, not advising individuals resident in the State of Qatar as to the appropriateness of investing in or purchasing or selling securities or other financial products. Nothing contained in this Offer Document is intended to constitute investment, legal, tax, accounting or other professional advice in, or in respect of, the State of Qatar.

Qatar Financial Centre

Nothing in this Offer Document is intended to constitute, shall be treated as constituting or shall be deemed to constitute, any offer or sale of securities in the State of Qatar or in the Qatar Financial Centre or the inward marketing of securities or an attempt to do business, as a bank, an investment company or otherwise in the State of Qatar or in the Qatar Financial Centre other than in compliance with any laws applicable in the State of Qatar or in the Qatar Financial Centre governing the issue, offering and sale of securities under the laws of the State of Qatar and the Qatar Financial Centre.

This Offer Document and any underlying instruments or securities have not been and will not be filed with, reviewed or approved by the Qatar Central Bank, the Qatar Financial Markets Authority, the Qatar Exchange or any other relevant Qatar governmental body or securities exchange. The Trust has not been authorised or licenced by any Qatari governmental body or regulator to market, offer or sell the Units in the State of Qatar or in the Qatar Financial Centre.

This Offer Document is strictly private and confidential. This Offer Document is provided on an exclusive basis to the specifically intended recipient of such document, upon that person's request and initiative, and for the recipient's personal use only. It is being distributed to a limited number of qualified investors and must not be provided to any person other than the original recipient. It is not for general circulation in the State of Qatar or the Qatar Financial Centre and may not be reproduced or used for any other purpose. Any distribution of this document by the recipient to third parties in the State of Qatar or the Qatar Financial Centre is not authorised and shall be at the liability of such recipient.

Recourse against the Trust and/or its affiliates may be limited or difficult and may have to be pursued in a jurisdiction outside the State of Qatar and/or the Qatar Financial Centre.

Singapore

This Offer is made in reliance on the exemption under sections 274 and 275(1) and (1A) of the Securities and Futures Act 2001, of Singapore as modified and amended from time to time (the "**SFA**"). It is not made in or accompanied by a prospectus that is registered by the Monetary Authority of Singapore (the "**MAS**"). This Offer Document has not been registered as a prospectus with the MAS. Accordingly, this Offer Document and any other document or material in connection with the offer or sale, or invitation for subscription or purchase, of any Units, whether directly or indirectly, to persons in Singapore other than (a) to an institutional investor (as defined in Section 4A of the SFA, or (b) to a relevant person (as defined in Section 275(2) of the SFA) pursuant to Section 275(1) of the SFA, or any person pursuant to Section 275(1A) of the SFA, and in accordance with the conditions specified in Section 275 of the SFA.

It is a condition of the Offer that where the Units are subscribed for or acquired pursuant to an offer made in reliance on sections 274 or 275 of the SFA by a relevant person which is:

(i) a corporation (which is not an accredited investor (as defined in Section 4A of the SFA)) the sole business of which is to hold investments and the entire share capital of which is owned by one or more individuals, each of whom is an accredited investor; or

(ii) a trust (where the trustee is not an accredited investor) whose sole purpose is to hold investments and each beneficiary of the trust is an individual who is an accredited investor,

securities or securities-based derivatives contracts (each term as defined in Section 239(1) of the SFA) of that corporation or the beneficiaries' rights and interest (howsoever described) in that trust shall not be transferred within six (6) months after that corporation or that trust has acquired the Units pursuant to an offer made under Section 275 of the SFA except:

(i) to an institutional investor or to a relevant person defined in section 275(2) of the SFA, or (in the case of such corporation) where the transfer arises from an offer referred to in section 276(3)(c)(ii) of the SFA or (in case of a trust) where the transfer arises from an offer referred to in section 276(4)(c)(ii) of the SFA;

(ii) where no consideration is or will be given for the transfer;

(iii) where the transfer is by operation of law;

(iv) as specified in Section 276(7) of the SFA; or

(v) as specified in Regulation 37A of the Securities and Futures (Offers of Investments) (Securities and Securities-based Derivatives Contracts) Regulations 2018 of Singapore.

United Arab Emirates (excluding the Dubai International Financial Centre)

This Offer Document does not constitute or contain an offer of securities to the general public in the United Arab Emirates (the "**UAE**"). No offering, marketing, promotion, advertising or distribution (together, "**Promotion**") of this Offer Document or the Units may be made to the general public in the UAE unless: (a) such Promotion has been approved by the UAE Securities and Commodities Authority (the "**SCA**") and is made in accordance with the laws and regulations of the UAE, including SCA Board of Directors' Decision No. (13/R.M) of 2021 (the "**Rulebook**"), and is made by an entity duly licensed to conduct such Promotion activities in the UAE; or (b) such Promotion is conducted under one of the exemptions from licensing set out in the Rulebook or otherwise in accordance with the laws and regulations of the UAE. None of the SCA, the UAE Central Bank, the UAE Ministry of Economy or any other regulatory authority in the UAE has reviewed or approved the contents of this Offer Document nor does any such entity accept any liability for the contents of this Offer Document.

Dubai International Financial Centre

This Offer Document relates to an Exempt Offer in accordance with the Markets Rules (MKT) Module of the Dubai Financial Services Authority ("**DFSA**") Rulebook. This Offer Document is intended for distribution only to persons of a type specified in the Markets Rules Module of the DFSA Rulebook. It must not be delivered to, or relied on by, any other person. The DFSA has no responsibility for reviewing or verifying any documents in connection with Exempt Offers. The DFSA has not approved this Offer Document nor taken steps to verify the information set forth herein and has no responsibility for this Offer Document. The securities to which this Offer Document relates may be illiquid and/ or subject to restrictions on their resale. Prospective purchasers of the securities offered may be required to bear the financial risks of this investment for an indefinite period of time and should conduct their own due diligence on the securities. If you do not understand the contents of this Offer Document, you should consult an authorized financial advisor. In relation to its use in the DIFC, this Offer Document is strictly private and confidential and is being distributed to a limited number of investors and must not be provided to any person other than the original recipient and may not be reproduced or used for any other purpose. The interests in the securities may not be offered or sold directly or indirectly to the public in the DIFC.

United States

The Units offered in this Issue have not been and will not be registered under the U.S. Securities Act or the securities laws of any state of the United States and, unless so registered, may not be offered or sold within the United States, except pursuant to an exemption from, or in a transaction not subject to, the registration requirements of the U.S. Securities Act and applicable U.S. state securities laws. The Units are being offered and sold only outside the United States in "*offshore transactions*" as defined in, and in compliance with, Regulation S and the applicable laws of the jurisdictions where those offers and sales are made.

Each purchaser acknowledges and represents that:

i. it understands and agrees that the Units have not been and will not be registered under the Securities Act or with any securities regulatory authority of any state, territory or other jurisdiction of the United States and may not be offered, resold, pledged or otherwise transferred, except (1) in an offshore transaction complying with Rule 903 or Rule 904 of Regulation S, (2) pursuant to an exemption from the registration requirements of the Securities Act, or (3) pursuant to an effective registration statement under the Securities Act and (4) in accordance with all applicable securities laws of any state, territory or other jurisdiction of the United States;

ii. it understands that in the event Units are held in certificated form, such certificated Units will bear a legend substantially to the following effect:

"THE SECURITY EVIDENCED HEREBY HAS NOT BEEN AND WILL NOT BE REGISTERED UNDER THE UNITED STATES SECURITIES ACT OF 1933, AS AMENDED (THE "**SECURITIES ACT**"), ANY STATE SECURITIES LAWS IN THE UNITED STATES OR THE SECURITIES LAWS OF ANY OTHER JURISDICTION AND MAY NOT BE OFFERED, SOLD, PLEDGED OR OTHERWISE TRANSFERRED, EXCEPT: (A) IN AN OFFSHORE TRANSACTION IN ACCORDANCE WITH RULE 903 OR RULE 904 OF REGULATION S UNDER THE SECURITIES ACT; (B) PURSUANT TO AN EXEMPTION FROM THE REGISTRATION REQUIREMENTS OF THE SECURITIES ACT; OR (C) PURSUANT TO AN EFFECTIVE REGISTRATION STATEMENT UNDER THE SECURITIES ACT, IN EACH CASE IN ACCORDANCE WITH ANY APPLICABLE SECURITIES LAWS OF ANY STATE OF THE UNITED STATES. NO REPRESENTATION CAN BE MADE AS TO THE AVAILABILITY OF THE EXEMPTION PROVIDED UNDER THE SECURITIES ACT FOR RESALES OF THIS SECURITY";

iii. any resale made other than in compliance with the above stated restrictions shall not be recognised by the Trust;

iv. it agrees that it will give to each person to whom it transfers Units notice of any restrictions on transfer of such Units; and

v. it acknowledges that the Trust, the Sponsor and the Lead Managers and others will rely upon the truth and accuracy of the foregoing acknowledgements, representations and agreements and agrees that, if any of such acknowledgements, representations or agreements deemed to have been made by virtue of its purchase of Units are no longer accurate, it will promptly notify the Trust, the Sponsor and the Lead Managers, and if it is acquiring any Units as a fiduciary or agent for one or more accounts, it represents that it has sole investment discretion with respect to each such account and that it has full power to make the foregoing acknowledgements, representations and agreements on behalf of each such account.

Other Jurisdictions

The distribution of this Offer Document and the offer and sale of the Units may be restricted by law in certain jurisdictions. Persons into whose possession this Offer Document comes are required to inform themselves about, and to observe, any such restrictions to the extent applicable.

OFFER PROCEDURE

Below is a summary, intended to provide a general outline of procedures for bidding, application, payment, Allocation and Allotment. The procedure followed in this Offer may differ from other issues, and investors are presumed to have apprised themselves of the same from the Investment Manager or the Lead Managers.

Bidders are advised to inform themselves of any restrictions or limitations that may be applicable to them and are required to consult their respective advisers in this regard. Bidders that apply in the Offer will be required to confirm and will be deemed to have represented to the Trustee, the Investment Manager, the Sponsor Selling Unitholder, the Lead Managers and their respective directors, officers, agents, affiliates and representatives that they are eligible under all applicable laws, rules, regulations, guidelines and approvals to acquire the Units. Bidders are also advised to make their independent investigations submitted in accordance with applicable laws and do not exceed the investment limits or maximum number of Units that can be held by them under applicable law or as specified herein. The Investment Manager, the Sponsor Selling Unitholder, the Trustee, the Lead Managers, the Syndicate Members and their respective directors, officers, agents, affiliates and representatives accept no responsibility or liability for advising any Bidder on whether such Bidder is eligible to acquire the Units. The Investment Manager, the Trustee, the Lead Managers and Syndicate Members do not accept any responsibility for the completeness and accuracy of the information stated in this chapter and are not liable for any amendment, modification or change in the applicable law which may occur after the date hereof.

Authority for the Offer

The Trust is eligible for the Offer in accordance with Regulation 14(4) of the SEBI InvIT Regulations. The Offer was authorized and approved by the IM Board on August 20, 2024 and the Offer for Sale was authorized by the Sponsor Selling Unitholder pursuant to the resolution passed by its board of directors dated August 22, 2024.

For details on the authorization of the Sponsor Selling Unitholder in relation to the Offer, please see the section entitled "***The Offer***" on page 17.

The Investment Manager has received the in-principle approval of BSE and NSE for the listing of the Units on BSE and NSE *vide* letters dated October 24, 2024 and October 24, 2024, from the BSE and NSE respectively. The Investment Manager has filed a copy of the Draft Offer Document and this Offer Document and will file a copy of the Final Offer Document with SEBI and the Stock Exchanges.

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 Bids may not be made by persons in any such jurisdiction, except in compliance with the applicable laws of such jurisdiction. The Units shall not be offered or sold where such offer or sale would require registration, qualification or listing.

Bidders should note that Allotment to successful Bidders will only be in the dematerialized form. Application Forms which do not have the details of the Bidders' demat accounts including DP ID, PAN and Client ID will be treated as incomplete and rejected. Bidders will not have the option of receiving Allotment in physical form. On Allotment, the Units will be traded only on the dematerialized segment of BSE and NSE.

Offer Procedure

This section applies to all Bidders. All Bidders other than Anchor Investors shall mandatorily participate in the Offer through the ASBA process. Bidders applying in the Offer should carefully read the provisions applicable to them before submitting a Bid through the ASBA process. All Bidders are required to pay the full Bid Amount at the time of Bidding, by way of instructing the relevant SCSB to block the full Bid Amount at the time of Bidding, or in the case of Anchor Investors, by making payment by electronic methods.

By making a Bid (including any revision thereof), the Bidder will be deemed to have represented to the Investment Manager, the Trustee, the Lead Managers and the Syndicate Members that it is eligible to participate in the Offer and be Allotted Units under applicable law. Bidders are also advised to make their independent investigations and ensure that their Bids are submitted in accordance with applicable laws and do not exceed the investment limits or maximum number of Units that can be held by them specified herein or as required under the applicable law.

Book Building Procedure

The Offer is being made through the Book Building Process, wherein not more than 75% of the Offer shall be available for allocation to Institutional Investors on a proportionate basis, provided that the Investment Manager may, in consultation with the Lead Managers, allocate up to 60% of the Institutional Investor Portion to Anchor Investors on a discretionary basis, in accordance with the SEBI InvIT Regulations and the SEBI Guidelines. Further, not less than 25% of the Offer shall be available for allocation on a proportionate basis to Non-Institutional Investors, subject to valid Bids being received at or above the Offer Price. In case of under-subscription in any category, the unsubscribed portion in any category may be Allotted to Bidders in the

other category at the discretion of the Investment Manager, in consultation with the Lead Managers and the Designated Stock Exchange.

Bidders do not have the right to withdraw or lower their Bid (in terms of number of Units or the Bid Amount) at any stage.

Bid cum Application Form

Copies of the Bid cum Application Form and the abridged offer document will be available at the offices of the Lead Managers, the Syndicate Members, the principal place of business of the Trust and the Designated Intermediaries at the Bidding Centres. An electronic copy of the Bid cum Application Form will also be available on the websites of the SCSBs, NSE (www.nseindia.com) and BSE (www.bseindia.com). The Anchor Investor Application Forms will be made available at the principal place of business of the Trust and the registered office of the Investment Manager and the Lead Managers.

Bidders should use only the specified Bid cum Application Form bearing the stamp of a Designated Intermediary submitted at Bidding Centres (except in case of electronic Bid cum Application Forms), for the purpose of making a Bid in terms of this Offer Document. Bid cum Application Forms not being such specified stamp are liable to be rejected. Before being issued to Bidders, the Bid cum Application Form will be serially numbered.

All Bidders (other than Anchor Investors) shall mandatorily participate in the Offer only through the ASBA process. Anchor Investors are not permitted to participate in the Offer through the ASBA process. All Bidders (other than Anchor Investors) must provide bank account details and authorization to block funds in the relevant space provided in the Bid cum Application Form and Bid cum Application Forms that do not contain such details will be rejected.

UPI Bidders using the UPI Mechanism must provide the UPI ID in the relevant space provided in the ASBA Form. ASBA Forms for such UPI Bidders, that do not contain the UPI ID are liable to be rejected. UPI Bidders using the UPI Mechanism may also apply through the SCSBs and mobile applications using the UPI handles as provided on the website of SEBI. UPI Bidders using the UPI Mechanism may submit the Bid cum Application with SCSBs, Syndicate Members, Registered Stock Brokers, RTAs and Depository Participants along with details of their bank account for blocking of funds. The relevant intermediary is required to the upload the Bid on the Stock Exchange bidding platform and forward the Bid cum application Form to an SCSB for blocking of funds.

The Bid cum Application Form will contain information about the Bidder and the price and number of Units that the Bidder wishes to Bid for. Bidders will have the option to make a maximum of three Bids in the Bid cum Application Form and such options will not be considered multiple Bids.

On filing of the Final Offer Document with SEBI and the Stock Exchanges, the Bid cum Application Form will be treated as a valid application form for Allotment of the Units. On submission of the completed Bid cum Application Form to a Designated Intermediary or the Lead Managers (in case of Anchor Investors), the Bidder is deemed to have authorized the Investment Manager to make the necessary changes in this Offer Document as may be required under the SEBI InvIT Regulations, the SEBI Guidelines and other applicable laws, for filing the Final Offer Document with SEBI and the Stock Exchanges without prior or subsequent notice of such changes to the Bidder.

The prescribed colour of the Bid cum Application Forms for various categories is as follows:

Category	Colour of Bid cum Application Form including Bid cum Application Form*
Resident Indians	White
Non-Residents including Eligible NRIs and FPIs and multilateral and bilateral development financial institutions, excluding Anchor Investors	Blue
Anchor Investors *	White

* *Bid cum Application Forms for Anchor Investors will be made available at the principal place of business of the Trust and the registered office of the Lead Managers.*

Designated Intermediaries shall submit/deliver the Bid cum Application Forms of Bidders (other than Anchor Investors and ASBA Forms submitted by UPI Bidders using the UPI Mechanism) to the respective SCSBs where the Bidder has a bank account and shall not submit it to any non-SCSB Bank or Escrow Collection Bank (unless such Escrow Collection Bank is also an SCSB). For UPI Bidders using the UPI Mechanism, the Stock Exchanges shall share the Bid details (including UPI ID) with the Sponsor Bank(s) on a continuous basis to enable the Sponsor Bank(s) to initiate a UPI Mandate Request to such UPI Bidders for blocking of funds. Designated Intermediaries (other than SCSBs) shall not accept any ASBA Form from a UPI Bidder who is not Bidding using the UPI Mechanism.

Stock Exchanges shall validate the electronic bids with the records of the depository for DP ID/Client ID and PAN, on a real time basis through API integration and bring inconsistencies to the notice of the relevant Designated Intermediaries, for

rectification and re-submission within the time specified by Stock Exchanges. Stock Exchanges shall allow modification of either DP ID/Client ID or PAN ID (but not both), bank code and location code in the Bid details already uploaded. For UPI Bidders using UPI Mechanism, the Stock Exchanges shall share the Bid details (including UPI ID) with the Sponsor Bank(s) on a continuous basis through API integration to enable the Sponsor Bank(s) to initiate UPI Mandate Request to UPI Bidders for blocking of funds. The Sponsor Bank(s) shall initiate request for blocking of funds through NPCI to UPI Bidders, who shall accept the UPI Mandate Request for blocking of funds on their respective mobile applications associated with UPI ID linked bank account. The Sponsor Bank(s) will undertake a reconciliation of Bid responses received from Stock Exchanges and sent to NPCI and will also ensure that all the responses received from NPCI are sent to the Stock Exchanges platform with detailed error code and description, if any.

Who can Bid?

Each Bidder should check if it is eligible to Bid under applicable law. Furthermore, certain categories of Bidders may not be permitted to Bid in the Offer or hold Units in excess of the limits specified under applicable law. Each Bidder (other than Anchor Investor) is required to Bid for a Minimum Bid Size in the range of ₹10,000 and ₹15,000.

The Unitholders shall be qualified to invest or hold interest in highways projects of NHAI in India under applicable laws, including Foreign Exchange Management Act, 1999, read with rules and regulations thereunder, the foreign direct investment policy of India, as amended, the SEBI InvIT Regulations. Further, acquisition of control, directly or indirectly, of the board of directors of the Project SPVs require prior approval from NHAI from national security and public interest perspective under the respective Concession Agreements entered into by the Project SPVs with NHAI.

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 Bids may not be made by persons in any such jurisdiction, except in compliance with the applicable laws of such jurisdiction.

Participation by Associates and affiliates of the Lead Managers and Syndicate Members

The Lead Managers and the Syndicate Members are not entitled to Bid for Units in this Offer in any manner except towards fulfilling their underwriting obligations. However, associates and affiliates of the Lead Managers and Syndicate Members may Bid for Units in the Offer, either in the Institutional Investor Portion (excluding the Anchor Investor Portion) or in the Non-Institutional Investor Portion, where allocation will be on a proportionate basis, either on their own account or on behalf of their clients. All categories of investors, including associates or affiliates of the Lead Managers shall be treated equally for the purpose of allocation to be made on a proportionate basis. Neither the Lead Managers nor any associate of the Lead Managers, other than mutual funds sponsored by entities which are associate of the Lead Managers or insurance companies promoted by entities which are associate of the Lead Managers or pension funds of entities which are associate of the Lead Managers or Alternate Investment Funds (AIFs) sponsored by the entities which are associate of the Lead Managers or FPIs other than Category III sponsored by the entities which are associate of the Lead Managers can apply in the Offer under the Anchor Investor Portion.

Bids by Anchor Investors

The Investment Manager, in consultation with the Lead Managers may allocate up to 60% of the Institutional Investor Portion on a discretionary basis to the Anchor Investors, in accordance with the SEBI InvIT Regulations and the SEBI Guidelines. The Institutional Investor Portion will be reduced in proportion to the allocation under the Anchor Investor Portion. Only Institutional Investors are eligible to invest in the Anchor Investor Portion. In the event of under-subscription in the Anchor Investor Portion, the balance Units will be added to the Institutional Investor Portion. In accordance with the SEBI InvIT Regulations and the SEBI Guidelines, the key terms for participation in the Anchor Investor Portion are provided below.

(i) Anchor Investors are not permitted to participate in the Offer through the ASBA process. Anchor Investor Application Forms will be made available for the Anchor Investor Portion at the principal place of business of the Trust, and the registered offices of the Investment Manager and the Lead Managers.

(ii) A Bid by an Anchor Investor must be for a minimum of such number of Units so that the Bid Amount is at least ₹100 million. A Bid cannot be submitted for more than 60% of the Institutional Investor Portion.

(iii) The Bidding for Anchor Investors will open one Working Day before the Bid/ Offer Opening Date and Allocation to Anchor Investors will be completed on the same day.

(iv) The Investment Manager, in consultation with the Lead Managers, will finalize allocation to the Anchor Investors on a discretionary basis, provided that the minimum number of Allottees in the Anchor Investor Portion will not be less than:

- two, where the allocation under Anchor Investor Portion is up to ₹2,500 million; and

- five, where the allocation under Anchor Investor Portion is over ₹2,500 million.

(v) Allocation to Anchor Investors will be completed on the Anchor Investor Bidding Date. The number of Units allocated to Anchor Investors and the Anchor Investor Allocation Price, will be made available on the websites of the Stock Exchanges, the Sponsor, the Investment Manager and the Lead Managers, prior to the Bid/Offer Opening Date.

(vi) If the Offer Price is higher than the Anchor Investor Allocation Price, the additional amount being the difference between the Offer Price and the Anchor Investor Allocation Price will be payable by the Anchor Investors within two Working Days of the Bid/ Offer Closing Date. If the Offer Price is lower than the Anchor Investor Allocation Price, Allotment to successful Anchor Investors will be at the higher price, i.e., the Anchor Investor Allocation Price and the amount in excess of the Offer Price paid by Anchor Investors will not be refunded to them.

(vii) The Units Allotted in the Anchor Investor Portion will be locked in for a period of 30 days from the date of Allotment.

(viii) Bids made by Institutional Investors under both the Anchor Investor Portion and the Institutional Investor Portion will not be considered as multiple Bids.

(ix) The Investment Manager, in consultation with the Lead Managers, reserves the right to reject any Bid received from Anchor Investors without assigning any reasons.

(x) Neither the Lead Managers nor any their associates, other than mutual funds sponsored by entities which are associates of the Lead Managers, insurance companies promoted by entities which are associates of the Lead Managers or pension funds of entities which are associates of the Lead Managers or AIFs sponsored by the entities which are associates of the Lead Managers or FPIs other than category III sponsored by the entities which are associates of the Lead Managers, shall apply under the Anchor Investors Portion.

All Non-Resident Investors including Eligible NRIs and FPIs should note that refunds, dividends and other distributions, if any, will be payable in Indian Rupees only and net of bank charges and / or commission. **There is no reservation for NRIs, FPIs and FVCIs and all Bidders will be treated on the same basis with other categories for the purpose of allocation.**

Anchor Investors cannot withdraw or lower the size of their Bids (in terms of number of Units or the Bid Amount) at any stage after submission of the Bid.

Bids by SEBI registered VCFs and AIFs

The SEBI VCF Regulations prescribe, amongst others, the investment restrictions on VCFs registered with SEBI under the said regulations. Further, the SEBI AIF Regulations prescribe, amongst others, the investment restrictions on AIFs. Further, VCFs which have not re-registered as an AIF under the SEBI AIF Regulations shall continue to be regulated by the SEBI VCF Regulations until the existing fund or scheme managed by the fund is wound up and such funds shall not launch any new scheme after the notification of the SEBI AIF Regulations. Additionally, VCFs and AIFs are subject to certain investment restrictions, including with respect to the percentage of investible funds held in each investee entity. Under the SEBI AIF Regulations, Category I and II AIFs are permitted to invest not more than 25% of the investable funds in one "investee company" (which includes the Trust) and Category III AIFs are permitted to invest not more than 10% of the investable funds in one "Investee company". Allotments made to VCFs and AIFs in the Offer are subject to the rules and regulations that are applicable to each of them respectively.

Bids by Banking Companies

Bids may be made by banks as permitted by the RBI and are subject to conditions specified in the Prudential Guidelines – Banks' investment in units of REITs and Trusts dated April 18, 2017. In case of Bids made by banking companies registered with the RBI, certified copies of (i) the certificate of registration issued by the RBI, and (ii) the approval of such banking company's investment committee are required to be attached to the Application Form. Banks may participate in public issuances by Trusts within the overall ceiling of 20% of their net worth permitted for direct investments in shares, convertible bonds/ debentures, units of equity-oriented mutual funds and exposures to VCFs, subject to the following conditions: (i) Banks should put in place a board approved policy on exposures to the Trust which lays down an internal limit on such investments within the overall exposure limits in respect of the real estate sector and infrastructure sector; (ii) Banks shall not invest more than 10% of the unit capital of the Trust; (iii) Banks should ensure adherence to the prudential guidelines issued by RBI from time to time on Equity investments by Banks, Classification and Valuation of Investment Portfolio, Basel III Capital requirements for Commercial Real Estate Exposures and Large Exposure Framework, as applicable. Failing this, the Investment Manager, in consultation with the Lead Managers, reserves the right to reject the Bid.

Bids by LLPs

In case of Bids made by limited liability partnerships registered under the Limited Liability Partnership Act, 2008, a certified copy of certificate of registration issued under the Limited Liability Partnership Act, 2008, must be attached to the Bid cum Application Form. Failing this, the Bid(s) may be rejected.

Bids by Provident Funds/Pension Funds

On March 2, 2015, the Ministry of Finance issued a notification allowing investments by non-government provident funds, superannuation funds and gratuity funds up to 5% in infrastructure investment trusts, as specified. On May 29, 2015, the Ministry of Labour and Employment issued a notification allowing investments by provident funds up to 5% in infrastructure investment trusts, as specified. The Pension Fund Regulatory and Development Authority issued circulars dated June 3, 2015 and September 2, 2015, respectively, allowing investments by national pension funds up to 5% in infrastructure investment trusts, as specified. However such investments by provident funds and pension funds will be subject to, amongst others, the sponsor having a minimum of AA or equivalent rating from at least two credit rating agencies registered with SEBI. In case of Bids made by provident funds/ pension funds (registered with the Pension Fund Regulatory and Development Authority established under section 3(1) of the Pension Fund Regulatory and Development Authority Act, 2013), subject to applicable laws, with minimum corpus of ₹ 250 million, a certified copy of certificate from a chartered accountant certifying the corpus of the provident fund/pension fund must be attached to the Bid cum Application Form. Failing this, the Bid(s) may be rejected.

Bids by NPS Schemes

The Pension Fund Regulatory and Development Authority issued circulars dated June 3, 2015 and September 2, 2015, respectively, allowing investments by national pension fund schemes ("**NPS Schemes**") up to 5% in infrastructure investment trusts, as specified. However, in accordance with the circular dated May 4, 2017 (effective from May 8, 2017), as amended by the circular dated May 8, 2018, issued by PFRDA, such investments by NPS Schemes will be subject to, amongst others, such securities having a minimum of AA or equivalent rating in the applicable rating scale from at least two credit rating agencies registered with SEBI. In case of Bids made by NPS Schemes, subject to applicable laws, with minimum corpus of ₹250 million, a certified copy of certificate from a chartered accountant certifying the corpus of the provident fund/pension fund must be attached to the Bid cum Application Form. Failing this, the Investment Manager, in consultation with the Lead Managers, reserves the right to reject the Bid.

Bids by Insurance Companies

Bids may be made by insurance companies as permitted by the Insurance Regulatory and Development Authority of India in terms of the Master Circular – Investments, 2016 and the circular issued by the IRDAI titled 'Investment in Units of Real Estate Investment Trusts (REIT) & Infrastructure Investment Trusts (Trust)' and dated March 14, 2017. In case of Bids made by insurance companies registered with the IRDAI, a certified copy of the certificate of registration issued by IRDAI must be attached to the Bid cum Application Form. Failing this, the Investment Manager, in consultation with the Lead Managers, reserves the right to reject the Bid. An insurer can invest not more than 3% of respective fund size of the insurer or not more than 5% of the units issued by a single Trust, whichever is lower.

Bids by Mutual Funds

Bids may be made by mutual funds under all its schemes, existing and future, subject to the investment conditions and other restrictions prescribed under the Securities and Exchange Board of India (Mutual Funds) Regulations, 1996 (including, the circular on mutual funds dated February 28, 2017 and any other circulars, notifications and guidelines issued thereunder). A mutual fund may invest in the Units subject to the following:

(a). No mutual fund under all its schemes shall own more than 10% of the units; and

(b). A mutual fund scheme shall not invest:

  (i). more than 10% of its net asset value in the units issued by Trusts; and

  (ii). More than 5% of its net asset value in the units,

provided that the limits mentioned in sub-clauses (i) and (ii) above shall not be applicable for investments in case of index fund or sector or industry specific scheme pertaining to Trusts.

Bids by Eligible NRIs

In accordance with Schedule IV of the FEMA Rules, Eligible NRIs, including companies, trusts and partnership firms incorporated outside India which are owned and controlled by NRIs, are permitted to purchase units issued by an 'investment vehicle' without any limit, either on the stock exchange or outside it. The FEMA Rules define an 'investment vehicle' to mean an entity registered and regulated under the regulations framed by the SEBI or any other authority designated for that purpose, including a Trust governed by the SEBI.

Investments by Eligible NRIs in the Units shall be on a non-repatriation basis and shall be deemed to be domestic investment at par with investments made by residents of India.

Bids by FPIs

Foreign Portfolio Investors (other than individuals, corporate bodies and family offices) are permitted to participate in the Offer subject to compliance with Schedule VIII of FEMA Rules. In case of Bids by FPIs the payment should be paid as inward remittance from abroad through banking channels or out of funds held in NRE, SNRR or FCNR(B) account maintained in accordance with the Foreign Exchange Management (Deposit) Regulations, 2016, along with documentary evidence in support of the remittance. In case of Bids made by FPIs, a verified true copy of the certificate of registration issued by the designated depository participant under the SEBI FPI Regulations is required to be attached along with the Application Form, failing which the Investment Manager, in consultation with the Lead Managers, reserves the right to reject the Bid.

It is hereby clarified that bids received from FPIs bearing the same PAN shall be treated as multiple Bids and are liable to be rejected, except for Bids from FPIs that utilize the multiple investment manager structure in accordance with the operational guidelines for FPIs and designated Depository Participants issued to facilitate implementation of SEBI FPI Regulations (such structure referred to as "**MIM Structure**"), provided such Bids have been made with different beneficiary account numbers, Client IDs and DP IDs. Accordingly, it should be noted that multiple Bids received from FPIs, who do not utilize the MIM Structure, and bear the same PAN, are liable to be rejected. In order to ensure valid Bids, FPIs making multiple Bids using the same PAN, and with different beneficiary account numbers, Client IDs and DP IDs, are required to provide a confirmation in the Bid cum Application Forms that the relevant FPIs making multiple Bids utilize the MIM Structure. In the absence of such confirmation from the relevant FPIs, such multiple Bids shall be rejected.

Please note that, the maximum Bid by any Bidder including a QIB Bidder other than Sponsor, its related parties and its associates, will not be more than 25% of the total unit capital of the Trust. Further, multiple Bids by a FPI Bidder utilising the MIM Structure shall be aggregated for determining the permissible maximum Bid.

Bids by SCSBs

SCSBs participating in the Offer are required to comply with the terms of the SEBI circulars dated September 13, 2012 (CIR/CFD/DIL/12/2012) and January 2, 2013 (CIR/CFD/DIL/1/2013). Such SCSBs are required to ensure that for making applications on their own account using ASBA, they should have a separate account in their own name with any other SCSBs. Further, such account shall be used solely for the purpose of making application in public issues and clear demarcated funds should be available in such account for such applications.

Bids under Power of Attorney

In case of Bids made pursuant to a power of attorney by Institutional Investors or bodies corporate, a certified copy of the power of attorney or the relevant resolution or authority, as the case may be, along with a certified copy of the memorandum of association and articles of association and/or bye laws must be submitted along with the Bid cum Application Form. Failing this, the Bid is liable to be rejected.

The Investment Manager, in consultation with the Lead Managers, in its absolute discretion, reserves the right to relax the above condition of simultaneous lodging of the power of attorney along with the Bid cum Application Form.

Allotments, if any, made to FVCIs in the Offer are subject to the respective rules and regulations that are applicable to each of them.

The above information is given for the benefit of the Bidders. Each Bidder should check whether it is eligible to apply under applicable law and ensure that any prospective Allotment to it in the Offer is in compliance with the investment restrictions under applicable law. Certain categories of Bidders may not be allowed to Bid in the Offer or hold Units exceeding certain limits specified under applicable law.

The Parties to the Trust, the Sponsor Selling Unitholder and the Lead Managers are not liable for any amendments or modification or changes in applicable laws or regulations, which may occur after the date of this Offer Document. Bidders are advised to make their independent investigations and ensure that any single Bid from them does not exceed the applicable investment limits or maximum number of the Units that can be held by them under applicable law or regulation or as specified herein.

Maximum and Minimum Bid Size

(i) Each Bidder (other than an Anchor Investor) is required to Bid for a Minimum Bid Size in the range of ₹10,000 and ₹15,000 and in multiples of [●] thereafter.

(ii) No Bidder shall Bid for such number of Units which exceeds the Offer Size.

(iii) The maximum Bid by any Bidder including Institutional Investors other than Sponsor, its related parties and its associates, will not be more than 25% of the total unit capital of the Trust, subject to limits for each category of Bidders as specified in the section titled *"**Offer Procedure**"* on Page 360.

The price and quantity options submitted by a Bidder in the Bid cum Application Form may be treated as optional bids from the Bidder and may not be cumulated. After determination of the Offer Price, the highest number of Units Bid for by a Bidder at or above the Offer Price may be considered for Allotment and the rest of the Bid(s), irrespective of the Bid Amount may automatically become invalid.

Information for the Bidders:

(i) The Offer Document will be filed by the Investment Manager with SEBI and the Stock Exchanges at least five Working Days before the Bid/Offer Opening Date.

(ii) After the filing of the Offer Document with SEBI and the Stock Exchanges, the Lead Managers/ Investment Manager shall make a pre-Offer advertisement on the websites of the Trust, the Sponsor, the Investment Manager and the Stock Exchanges.

(iii) Any Bidder (who is eligible to invest in the Units) may obtain the abridged offer document or the Bid cum Application Form or both from the principal place of business of the Trust or from any Designated Intermediary at the Bidding Centres. Anchor Investor Application Forms will be made available at the principal place of business of the Trust and the registered office of the Investment Manager and the Lead Managers.

(iv) The Bid/Offer Period shall be for a minimum of three Working Days. In case the Price Band is revised, the Bid/Offer Period shall be extended for a minimum period of one Working Day, subject to the total Bid/Offer Period not exceeding 30 Working Days. In case of *force majeure*, banking strike or similar circumstances, the Bid/Offer Period may be extended for a minimum period of three Working Days, subject to the total Bid/Offer Period not exceeding 30 Working Days. The revised Price Band and Bid/Offer Period will be widely disseminated by notification to the SCSBs and Stock Exchanges, and also by indicating the change on the websites of the Trust, the Lead Managers, the Sponsor, the Investment Manager and the Stock Exchanges and at the terminals of the members of the Syndicate. In accordance with the SEBI InvIT Regulations and the SEBI Guidelines, the Price Band cannot be revised more than two times.

(v) The Designated Intermediaries will accept Bids during the Bid/Offer Period in accordance with the terms of the Offer Document, provided that the Lead Managers will accept the Bids from Anchor Investors only on the Anchor Investor Bidding Date.

(vi) The Bids should be submitted on the prescribed Bid cum Application Form only. Bids by ASBA Bidders will be accepted by the Designated Intermediaries at the Bidding Centres in accordance with applicable law and any circulars issued by SEBI in this regard. Bid cum Application Forms should bear the stamp of a Designated Intermediary. Bid cum Application Forms (except electronic Bid cum Application Forms) which do not bear the stamp of a Designated Intermediary are liable to be rejected.

(vii) The Bidding Centres will acknowledge the receipt of the Bid cum Application Forms by stamping and returning to the Bidder the Acknowledgement Slip. This Acknowledgement Slip will serve as the duplicate of the Bid cum Application Form for the records of the Bidder.

Instructions for completing the Bid Cum Application Form

Bidders may note that Bid cum Application Forms not filled completely or correctly as per instructions provided in the Offer Document and the Bid cum Application Form are liable to be rejected.

Bids must be:

(i) made only in the prescribed Bid cum Application Form or Revision Form, as applicable;

(ii) completed in full, in BLOCK LETTERS in ENGLISH and in accordance with the instructions contained here and in the Bid cum Application Form. Incomplete Bid cum Application Forms or Revision Forms are liable to be rejected. Bidders 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. Bidders should note that the members of the Syndicate and/or the SCSBs (as appropriate) will not be liable for errors in data entry due to incomplete or illegible Bid cum Application Forms; and

(iii) in a single name or in joint names (not more than three, and in the same order as their Depository Participant details).

Bidders should also note that:

(i) information provided by Bidders will be uploaded in the online system by the Designated Intermediaries and the electronic data will be used to make allocation/Allotment. Bidders are advised to ensure that the details are correct and legible;

(ii) only the First Bidder is required to sign the Bid cum Application Form. Bidders should ensure that 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; and

(iii) if the ASBA Account holder is different from the ASBA Bidder, the Bid cum Application Form should also be signed by the account holder as provided in the Bid cum Application Form.

General Instructions

Dos:

(i) Check if you are eligible to apply as per the terms of the Offer Document and under Applicable Laws and approvals;

(ii) Ensure that you have Bid within the Price Band;

(iii) Read all the instructions carefully and complete the relevant Bid cum Application Form;

(iv) Ensure that the details about the PAN, DP ID, Client ID and UPI ID (where applicable) are correct, and the Beneficiary Account is activated, as Allotment will be in dematerialized form only;

(v) Ensure that the Bids are submitted at the Bidding Centres only on the Bid cum Application Forms bearing the stamp of a Designated Intermediary;

(vi) Ensure that if you are the Bidder you have mentioned the correct ASBA Account number (for all Bidders other than UPI Bidders using the UPI Mechanism) in the Bid cum Application Form (with a maximum length of 45 characters) and such ASBA account belongs to you and no one else. Further, UPI Bidders using the UPI Mechanism must also mention their UPI ID and shall use only his/her own bank account which is linked to his/her UPI ID;

(vii) UPI Bidders using the UPI Mechanism through the SCSBs and mobile applications shall ensure that the name of the bank appears in the list of SCSBs which are live on UPI, as displayed on the SEBI website. UPI Bidders shall ensure that the name of the app and the UPI handle which is used for making the application appears on the list displayed on the SEBI website. An application made using incorrect UPI handle or using a bank account of an SCSB or bank which is not mentioned on the SEBI website is liable to be rejected;

(viii) Ensure that your Bid is submitted at a Bidding Centre of a Designated Intermediary. Further, ensure that the Bid cum Application Form is signed by the ASBA Account holder if the Bidder is not the ASBA Account holder;

(ix) Ensure that the full Bid Amount is paid for Bids submitted by Anchor Investors and funds equivalent to the Bid Amount are blocked by the SCSBs in case of Bids submitted through the ASBA process;

(x) Ensure that you have correctly checked the authorization/undertaking box in the Bid cum Application Form, or have otherwise provided an authorization to the SCSB via the electronic mode for the Designated Branch to block funds in the ASBA Account equivalent to the Bid Amount mentioned in the Bid cum Application Form at the time of submission of the Bid;

(xi) Instruct your respective banks to not release the funds other than in relation to the Offer, blocked in the ASBA Accounts;

(xii) Ensure that you request for and have received an Acknowledgement Slip for all your Bid options;

(xiii) Ensure that you receive an Acknowledgement Slip from the Designated Intermediary for the submission of your Bid cum Application Form;

(xiv) Submit revised Bids at the same Bidding Centre of a Designated Intermediary, through which the original Bid was placed and obtain a revised Acknowledgement Slip, as the case may be;

(xv) Except for Bids (i) on behalf of the Central or State Governments and the officials appointed by the courts, who, in terms of the SEBI circular dated June 30, 2008, may be exempt from specifying their PAN for transacting in the securities market, and (ii) Bids by persons resident in the state of Sikkim, who, in terms of a SEBI circular dated July 20, 2006, may be exempted from specifying their PAN for transacting in the securities market, all Bidders should mention their PAN allotted under the IT Act. The exemption for the Central or the State Government and officials appointed by the courts and for Bidders residing in the state of Sikkim is subject to (a) the Demographic Details

received from the respective depositories confirming the exemption granted to the beneficiary owner by a suitable description in the PAN field and the beneficiary account remaining in "active status"; and (b) in the case of residents of Sikkim, the address as per the Demographic Details evidencing the same. All other applications in which the PAN is not mentioned will be rejected;

(xvi) In cases where the PAN is same, such Bids will be treated as multiple applications. Bidders should not submit the GIR number instead of the PAN as the Bid is liable to be rejected on this ground. With effect from August 16, 2010, the demat accounts of Bidders for whom PAN details have not been verified shall be "suspended for credit" and no credit of Units pursuant to the Offer will be made into the accounts of such Bidders;

(xvii) Ensure that your PAN is linked with Aadhaar and are in compliance with Central Board of Direct Taxes notification dated February 13, 2020 and press release dated June 25, 2021 and September 17, 2021, CBDT circular no.7 of 2022, dated March 30, 2022 and March 28, 2023, and any subsequent press releases in this regard;

(xviii) Ensure that the Demographic Details (as defined below) are updated, true and correct in all respects;

(xix) In case of joint Bids, the Bid cum Application Form should contain the name of only the First Bidder whose name should also appear as the first holder of the beneficiary account held in joint names. Ensure that the signature of the First Bidder in case of joint Bids, is included in the Bid cum Application Forms;

(xx) Ensure that the name(s) given in the Bid cum Application Form is exactly the same as the name(s) in which the beneficiary account is held with the Depository Participant;

(xxi) Ensure that the category and the Bidder status is indicated;

(xxii) Bidders (except UPI Bidders using the UPI Mechanism) should instruct their respective banks to release the funds blocked in the ASBA Account under the ASBA process. UPI Bidders using the UPI Mechanism, should ensure that they approve the UPI Mandate Request generated by the Sponsor Bank(s) to authorise blocking of funds equivalent to Bid Amount and subsequent debit of funds in case of Allotment, in a timely manner;

(xxiii) Ensure that in case of Bids under power of attorney or by limited companies, corporates, trusts, etc., relevant documents are submitted;

(xxiv) UPI Bidders using the UPI Mechanism shall ensure that details of the Bid are reviewed and verified by opening the attachment in the UPI Mandate Request and then proceed to authorize the UPI Mandate Request using his/her UPI PIN. Upon the authorization of the mandate using his/her UPI PIN, the UPI Bidders may be deemed to have verified the attachment containing the application details of the UPI Bidders using the UPI Mechanism in the UPI Mandate Request and have agreed to block the entire Bid Amount and authorized the Sponsor Bank(s) to issue a request to block the Bid Amount mentioned in the ASBA Form in his/her ASBA Account;

(xxv) UPI Bidders using the UPI Mechanism should mention valid UPI ID of only the Bidder (in case of single account) and of the first Bidder (in case of joint account) in the ASBA Form;

(xxvi) UPI Bidders using the UPI Mechanism, who have revised their Bids subsequent to making the initial Bid, should also approve the revised UPI Mandate Request generated by the Sponsor Bank(s) to authorise blocking of funds equivalent to the revised Bid Amount in their account and subsequent debit of funds in case of allotment in a timely manner;

(xxvii) Ensure that Bids submitted by any person outside India are in compliance with applicable foreign and Indian laws; and

(xxviii) With respect to Bids by SCSBs, ensure that you have a separate account in your own name with any other SCSB having clear demarcated funds for applying under the ASBA process and that such separate account (with any other SCSB) is used as the ASBA Account with respect to your Bid.

The Bid cum Application Form is liable to be rejected if the above instructions, as applicable, are not complied with.

Dont's:

(i) Do not Bid for lower than the Minimum Bid Size;

(ii) Do not submit a Bid without payment of the entire Bid Amount;

(iii) Do not Bid less than the Floor Price or higher than the Cap Price;

(iv) Do not Bid on another Bid cum Application Form after you have submitted a Bid;

(v) If you are a UPI Bidder and are using the UPI Mechanism, do not submit more than one Form from each UPI ID;

(vi) Do not pay the Bid Amount in cash, by money order or postal order and in relation to ABSA Bidders, in any other mode other than blocked amounts in the ASBA Accounts;

(vii) Do not send Bid cum Application Forms by post and only submit the same to a Designated Intermediary at a Bidding Centre;

(viii) Do not fill up the Bid cum Application Form such that the Units Bid for exceed, the Offer Size or investment limits, or the maximum number of Units that can be held or the maximum amount permissible under applicable laws or under the terms of the Offer Document;

(ix) Do not submit more than five Bid cum Application Forms per ASBA Account;

(x) Do not submit the GIR number instead of the PAN as the Bid is liable to be rejected on this ground;

(xi) Do not submit incorrect details of DP ID, Client ID and PAN or give details for which demat account is suspended or for which such details cannot be verified by the Registrar;

(xii) Do not instruct your respective banks to release the funds blocked in the ASBA Account under the ASBA process, other than in relation to the Offer;

(xiii) Do not submit the Bid for an amount more than funds available in your ASBA Account;

(xiv) Do not submit Bids on plain paper or on incomplete or illegible Bid cum Application Forms or on Bid cum Application Forms in a colour prescribed for another category of Bidders;

(xv) Do not submit a Bid in case you are not eligible to acquire Units under applicable law or your relevant constitutional documents or otherwise;

(xvi) Do not Bid if you are not competent to contract under the Indian Contract Act, 1872 (other than minors having valid depository accounts as per demographic details provided by the Depository;

(xvii) Anchor Investors should not Bid through the ASBA process; and

(xviii) Do not withdraw your Bid or lower the size of your Bid (in terms of quantity of the Units or the Bid Amount) at any stage.

Method and Process of Bidding

(i) The Investment Manager and the Lead Managers will declare the Bid/Offer Opening Date and Bid/Offer Closing Date at the time of filing the Offer Document with SEBI and the Stock Exchanges.

(ii) Post filing of the Offer Document with SEBI and the Stock Exchanges, the Lead Managers/ Investment Manager shall make a pre-Offer advertisement on the websites of the Sponsor, the Investment Manager and the Stock Exchanges.

(iii) The Price Band will be decided by the Investment Manager in consultation with the Lead Managers and shall be disclosed at least two Working Days prior to the Bid/Offer Opening Date on the websites of the Trust, the Sponsor, the Investment Managers and the Stock Exchanges and in the newspapers where the pre-Offer advertisement was published.

(iv) The Lead Managers will accept Bids from the Anchor Investors on the Anchor Investor Bidding Date, *i.e.* one Working Day prior to the Bid/Offer Opening Date. Bidders, except Anchor Investors, who are interested in subscribing to the Units should approach any of the Designated Intermediaries at Bidding Centres to register their Bids during the Bid/Offer Period. The Designated Intermediaries will accept Bids from all Bidders and will have the right to vet the Bids during the Bid/Offer Period in accordance with the terms of the Syndicate Agreement and/or the Offer Document. The Bid/Offer Period will be for at least three Working Days and not exceeding 30 Working Days (*including* the days for which the Offer is open in case of revision in Price Band). If the Price Band is revised, the revised Price Band and the Bid/Offer Period will disclosed on the websites of the Trust, the Sponsor, the Investment Managers, Lead Managers, Syndicate Members, SCSBs and the Stock Exchanges and in the newspapers where the pre-Offer advertisement will be published.

(v) UPI Bidders may submit the Bid cum Application form with the Designated Intermediaries and use their bank account linked with UPI ID for the purpose of blocking funds. The Designated Intermediaries shall upload the Bid on the Stock Exchange bidding platform and the application amount would be blocked through the UPI Mechanism.

(vi) Each Bid cum Application Form will give the Bidder the choice to Bid for up to three optional prices within the Price Band and specify the demand (*i.e.*, the number of Units Bid for) in each option. The price and demand options submitted by the Bidder in the Bid cum Application Form will be treated as optional demands from the Bidder and will not be cumulated. In case of an upward revision in the Price Band, in the event the Bidder does not either revise the Bid or make additional payment and the Offer Price is higher than the Cap Price prior to revision, the number of Units Bid for will be adjusted downwards for the purpose of Allotment, such that no additional payment will be required from the Bidder and the Bidder shall be deemed to have approved such revised Bid. The Bidder can Bid at any price within the Price Band. The Bidder has to Bid for the desired number of Units at a specific price.

(vii) No Bidder shall either withdraw or lower its Bid at any stage.

(viii) After determination of the Offer Price, the maximum number of Units Bid for by a Bidder at or above the Offer Price will be considered for allocation/Allotment and the rest of the Bid(s), irrespective of the Bid Amount, will become automatically invalid.

(ix) Except in relation to the Bids received from the Anchor Investors, the Designated Intermediary will enter each Bid option into the electronic bidding system as a separate Bid and generate an Acknowledgement Slip, and SCSBs will generate an Acknowledgement Slip for each price and demand option and will, on demand, give the same to the Bidder. Therefore, a Bidder can receive up to three Acknowledgement Slips for each Bid cum Application Form.

(x) On receipt of the Bid cum Application Form (whether in physical or electronic mode) the Designated Branch of the SCSB will verify if sufficient funds equal to the Bid Amount are available in the ASBA Account, as mentioned in the ASBA Bid cum Application Form, prior to uploading such Bids with the Stock Exchanges. If sufficient funds are not available in the ASBA Account, the Designated Branch of the SCSB will reject such Bids and will not upload such Bids with the Stock Exchanges. If sufficient funds are available in the ASBA Account, the SCSB will block an amount equivalent to the Bid Amount mentioned in the ASBA Bid cum Application Form and will enter each Bid option into the electronic bidding system as a separate Bid.

(xi) Along with the Bid cum Application Form, all Bidders will make payment in the manner described under the paragraph titled "**– *Payment Instructions***" in this section.

Bidders' Depository Account and Bank Account Details

Bidders should note that on the basis of Bidders' PAN, DP ID and Client ID provided by them in the Bid cum Application Form and as entered into the electronic bidding system of the Stock Exchanges by the Members of the Syndicate and the SCSBs as the case may be, the Registrar will obtain from the Depository the demographic details including the Bidders' address, occupation and bank account details (including the nine-digit Magnetic Ink Character Recognition ("**MICR**") code as appearing on a cheque leaf (the "**Demographic Details**"), from the Depository. The Demographic Details will be used for giving refunds and allocation advice (including through physical refund warrants, direct credit, NACH, NEFT and RTGS) to Anchor Investors. Hence, Bidders are advised to immediately update their bank account details, PAN and Demographic Details as appearing on the records of the Depository Participant and ensure that they are true and correct. Accordingly, Bidders should carefully fill in their depository account details in the Bid cum Application Form.

By signing the Bid cum Application Form, the Bidder is deemed to have authorized the Depositories to provide to the Registrar, on request, the required Demographic Details as available in their records.

Bids with no corresponding record available with the Depositories matching the three parameters (namely, PAN (in case of joint Bids, PAN of First Bidder), the DP ID and Client ID), are liable to be rejected.

Payment mechanism for ASBA Bidders

The ASBA Bidders will specify the ASBA Account in the Bid cum Application Form and the SCSB will block an amount equivalent to the Bid Amount in the ASBA Account so specified. The SCSB will keep the Bid Amount in the relevant ASBA Account blocked until finalization of the Basis of Allotment and consequent transfer of the Bid Amount to the Public Offer Account, or until withdrawal/failure of the Offer or until rejection of the Bid, as the case may be.

In the event of rejection of the Bid cum Application Form, failure of the Offer or for unsuccessful Bid cum Application Forms, the Registrar will give instructions to the SCSB to unblock the Bid Amount in the relevant ASBA Account and the SCSBs will unblock the Bid Amount on receipt of such instruction.

Payment Instructions

The Investment Manager and the Syndicate will open Escrow Accounts with one or more Escrow Collection Bank in whose favour Anchor Investors will issue payment instruments. The payment instruments for payment into the Escrow Accounts should be drawn in favour of:

In case of resident Anchor Investors: "Capital Infra Trust – Escrow Account – Anchor R"

In case of non-resident Anchor Investors: "Capital Infra Trust – Escrow Account – Anchor NR"

The Investors should note that the escrow mechanism is not prescribed by SEBI and has been established as an arrangement amongst the Investment Manager, the Trustee (acting on behalf of the Trust), the Syndicate, the Escrow Collection Bank and the Registrar to facilitate collections from Investors.

The Escrow Collection Bank will act in terms of this Offer Document and the Cash Escrow and Sponsor Bank Agreement. The monies deposited in the Escrow Accounts will be held for the benefit of the Anchor Investors until the Designated Date. On the Designated Date, the Escrow Collection Banks will transfer the funds from the Escrow Accounts as per the terms of the Cash Escrow and Sponsor Bank Agreement into the Public Offer Account with the Escrow Collection Banks and the Refund Account. The Escrow Collection Banks will not exercise any lien whatsoever over the monies deposited therein and will hold the monies therein in trust for the Anchor Investors. The balance amount after transfer to the Public Offer Account will be transferred to the Refund Account. Payments of refund to the Anchor Investors will be made from the Refund Account as per the terms of the Cash Escrow and Sponsor Bank Agreement and this Offer Document.

Payments should be made by Anchor Investors only in electronic mode through direct credit/NEFT/NACH/RTGS. Cheques or bank drafts, cash, money orders or postal orders will not be accepted and is liable to be rejected.

Payment Mechanism for UPI Bidders

In relation to UPI Bidders, the Sponsor Bank shall initiate a UPI Mandate Request on the UPI Bidder, i.e., request the UPI Bidder to authorize blocking of funds equivalent to application amount and subsequent debit of funds in case of Allotment. The request raised by the Sponsor Bank would be electronically received by the UPI Bidder as an SMS / intimation on their mobile number / mobile application associated with the UPI ID linked bank account. The UPI Bidder shall be able to view the details of the request in their UPI application and authorize the transaction. In UPI, the SCSBs / UPI applications eligible for public issues shall send SMS alerts to UPI Bidders for all ASBA applications and may also provide invoices in the inbox as an additional feature to verify the UPI mandate details. After reviewing the details properly, the UPI Bidder shall be required to authorize the mandate, which shall be a one-time mandate for each application in the Offer. The payment accompanied with any upward revision of the Bid shall be adjusted against the payment made at the time of the original Bid or previously revised Bid.

Other Instructions

Joint Bids in case of Individuals

Bids may be made in single or joint names (not more than three). In the case of joint Bids, all payments will be made out in favour of the Bidder whose name appears first in the Bid cum Application Form or Revision Form. All communications will be addressed to the First Bidder and will be dispatched to his or her address as per the Demographic Details received from the Depository.

Multiple Bids

A Bidder should submit only one Bid for the total number of the Units required. Two or more Bids will be deemed to be multiple Bids if the sole or First Bidder is the same. However, a Bidder can revise the Bid through the Revision Form.

In case of a mutual fund, subject to investment conditions as per applicable law, a separate Bid can be made in respect of each scheme of the mutual fund registered with SEBI and such Bids in respect of more than one scheme of the mutual fund will not be treated as multiple Bids, provided that the Bids clearly indicate the scheme concerned for which the Bid is made. Bids by QIBs under the Anchor Investor Portion and Institutional Investor Portion (excluding Anchor Investor Portion) will not be considered as multiple Bids.

More than one ASBA Bidder may Bid for Units using the same ASBA Account, provided that the SCSBs will not accept a total of more than five Bid cum Application Forms from ASBA Bidders with respect to any single ASBA Account.

The Investment Manager, in consultation with the Lead Managers, reserves the right to reject, in its absolute discretion, all or any multiple Bids in any or all categories. A check will be carried out for the same PAN. In cases where the PAN is same, such Bids will be treated as multiple applications.

Right to Reject Bids

In case of QIBs Bidding in the Institutional Investor Portion and Anchor Investors, the members of the Syndicate may reject Bids provided that such rejection will be made at the time of acceptance of the Bid and the reasons for rejecting such Bids will be provided to such Bidder in writing. The Members of the Syndicate may also reject Bids if all information required is not provided and the Bid cum Application Form is incomplete in any respect.

Grounds for Technical Rejections

Bidders are advised that incomplete or illegible Bid cum Application Forms will be rejected by Designated Intermediaries. Bidders are advised to note that Bids are liable to be rejected on technical grounds including the following:

(i) The amounts mentioned in the Bid cum Application Form does not tally with the amount payable for the value of the Units Bid for;

(ii) Application on plain paper;

(iii) In case of partnership firms, Units may be registered in the names of the individual partners and no firm as such will be entitled to apply;

(iv) Bid by persons not competent to contract under the Indian Contract Act, 1872, as amended, including minors;

(v) PAN not stated (except for Bids on behalf of the Central or State Government, residents of Sikkim and the officials appointed by the courts);

(vi) GIR number furnished instead of PAN;

(vii) Where PAN details are not verified by demat accounts, i.e. where the demat account is "suspended for credit";

(viii) Bids for lower value of Units than specified for that category of Bidders;

(ix) Bids at a price less than the Floor Price;

(x) Bids at a price over the Cap Price;

(xi) Submission of more than five Bid cum Application Forms per ASBA Account;

(xii) Bids for a value of less than ₹0.01 million and Bids by UPI Bidders for a value of more than ₹ 0.50 million;

(xiii) Bidder category not specified;

(xiv) Multiple Bids as described in this Offer Document;

(xv) In case of Bids under power of attorney or by limited companies, corporate, trust etc., relevant documents not being submitted;

(xvi) Bids accompanied by cash, stock invest, money order or postal order;

(xvii) Signature of sole and/or the First Bidder (in case of joint Bids) is missing;

(xviii) The Bid cum Application form not being signed by the ASBA Account holder, if the ASBA Account holder is different from the Bidder;

(xix) Bid cum Application Form does not have the stamp of a Designated Intermediary (except for electronic ASBA Bids), as the case may be;

(xx) Bid cum Application Forms are not submitted within the time prescribed as per the Bid cum Application Form, Bid/Offer Opening Date advertisement and this Offer Document and as per the instructions in this Offer Document and the Bid cum Application Forms;

(xxi) Inadequate funds in the ASBA Account to block the Bid Amount specified in the Bid cum Application Form at the time of blocking such Bid Amount in the ASBA Account;

(xxii) Authorisation for blocking funds in the ASBA Account not provided;

(xxiii) Bids for amounts greater than the maximum permissible amounts prescribed by Applicable Law;

(xxiv) Bids by OCBs;

(xxv) Bids by persons prohibited from buying, selling or dealing in the Units directly or indirectly by SEBI or any other regulatory authority;

(xxvi) Bids by persons who are not eligible to acquire Units under applicable law or their relevant constitutional documents or otherwise; and

(xxvii) Bids that do not comply with the securities laws of their respective jurisdictions.

IN CASE THE DP ID, CLIENT ID, PAN AND UPI ID (WHERE APPLICABLE) MENTIONED IN THE BID CUM APPLICATION FORM AND ENTERED INTO THE ELECTRONIC BIDDING SYSTEM OF THE STOCK EXCHANGES BY THE LEAD MANAGERS/THE DESIGNATED INTERMEDIARIES DO NOT MATCH WITH THE DP ID, CLIENT ID AND PAN AVAILABLE IN THE RECORDS WITH THE DEPOSITORIES THE APPLICATION IS LIABLE TO BE REJECTED.

Electronic Registration of Bids

(i) The Designated Intermediaries will register the Bids received, except Bids received from Anchor Bidders, using the online facilities of the Stock Exchanges. Details of Bids in the Anchor Investor Portion will not be registered on the online facilities of the Stock Exchanges. The Lead Managers, the Investment Manager and the Registrar are not responsible for any acts, mistakes or errors or omission and commissions in relation to (i) the Bids accepted by Designated Intermediaries, (ii) the Bids uploaded by Designated Intermediaries, (iii) the Bids accepted but not uploaded by the Designated Intermediaries or (iv) Bids accepted and uploaded without blocking funds in the ASBA Accounts. It will be presumed that for the Bids uploaded by the SCSBs, the Bid Amount has been blocked in the relevant ASBA Account.

(ii) The Stock Exchanges will offer a screen-based facility for registering such Bids for the Offer. This facility will be available on the terminals of the Designated Intermediaries during the Bid/Offer Period. The Designated Intermediaries can also set up facilities for offline electronic registration of Bids subject to the condition that it will upload the offline data file into the on-line facilities for book building on a regular basis.

(iii) On the Bid/Offer Closing Date, the Designated Intermediaries will upload the Bids until such time as may be permitted by the Stock Exchanges. This information will be available with the Lead Managers on a regular basis. In order to ensure that the data uploaded is accurate, the Syndicate may be permitted one Working Day after the Bid/Offer Closing Date to amend some of the data fields (currently DP ID, Client ID and PAN) entered by them in the electronic bidding system, after which the Registrar will proceed with the Allotment of the Units. Bidders are cautioned that a high inflow of Bids is typically experienced on the last Working Day of the Bidding, which may lead to some Bids received on the last Working Day not being uploaded due to lack of sufficient uploading time. Such Bids that could not uploaded will not be considered for allocation. Bids will only be accepted on Working Days (excluding any public holiday).

(iv) Based on the aggregate demand and price for Bids registered on the electronic facilities of the Stock Exchanges a graphical representation of consolidated demand and price will be made available at the Bidding Centres and on the websites of each of the Stock Exchanges during the Bid/Offer Period.

(v) At the time of registering each Bid, the Designated Intermediaries will enter the following details of the Bidder in the electronic system:

- Name of the infrastructure investment trust;
- Bid cum Application Form number;
- Bidder Category – QIB, Eligible NRI, FPI, etc;
- PAN of the first applicant;
- DP ID;
- UPI ID (for UPI Bidders);
- Client ID;
- Number of Units Bid for; and
- Price option.

(vi) A system generated Acknowledgement Slip will be given to the Bidder (only on demand) as a proof of the registration of each of the Bidding options. It is the Bidders' responsibility to obtain the Acknowledgement Slip from Designated Intermediaries. The registration of the Bid by Designated Intermediaries does not guarantee that the Units will be allocated/Allotted. Such Acknowledgement Slip will be non-negotiable and by itself will not create any obligation of any kind.

(vii) In relation to Bids by UPI Bidders, once the Bid details are entered on the Stock Exchange platform, the Stock Exchange shall validate the PAN and demat account combination details of the Bidder with the Depository. The Depository shall validate the PAN and demat account details on a near real time basis and send responses to the Stock Exchanges which would be shared by the Stock Exchanges with the Designated Intermediaries through its platforms for corrections, if any. Once Bid details are uploaded on the platforms of the Stock Exchanges, the Stock Exchanges shall send an SMS to the UPI Bidder on their mobile number associated with demat account regarding submission of their Bid cum Application Form at the end of the day during the Bidding period. For the last day of Bidding, the SMS may be sent the next Working Day.

(viii) The permission given by the Stock Exchanges to use their network and software of the online IPO system should not in any way be deemed or construed to mean that the compliance with various statutory and other requirements by the Investment Manager and/or the Lead Managers are cleared or approved by the Stock Exchanges; nor does it in any manner warrant, certify or endorse the correctness or completeness of any of the compliance with the statutory and other requirements nor does it take any responsibility for the financial or other soundness of the Trust, the management of the Investment Manager or the Trustee or any project of the Trust nor does it in any manner warrant, certify or endorse the correctness or completeness of any of the contents of this Offer Document; nor does it warrant that the Units will be listed or will continue to be listed on the Stock Exchanges.

Build-up of the book and revision of Bids

(i) Bids received from various Bidders through the Designated Intermediaries will be electronically uploaded to the Stock Exchanges mainframe on a regular basis.

(ii) The book gets built up at various price levels. This information will be available with the Lead Managers at the end of the Bid/Offer Period.

(iii) During the Bid/Offer Period, any Bidder who has registered his or her interest in the Units at a particular price level is free to revise the Bid upwards within the Price Band using the printed Revision Form, which is a part of the Bid cum Application Form.

(iv) Upward revisions can be made in both the desired number of Units and the Bid Amount by using the Revision Form. Apart from mentioning the revised options in the Revision Form, the Bidder must also mention the details of all the options in his or her Bid cum Application Form or its previous Revision Form. For example, if a Bidder has Bid for three options in the Bid cum Application Form and such Bidder is changing only one of the options in the Revision Form, he must still fill the details of the other two options that are not being revised, in the Revision Form. The Members of the Syndicate and the Designated Branches will not accept incomplete or inaccurate Revision Forms.

(v) The Bidder can make this upward revision any number of times during the Bid/Offer Period. However, for any revision(s) in the Bid, the Bidders will have to use the services of the same Designated Intermediary through which such Bidder had placed the original Bid. Bidders are advised to retain copies of the blank Revision Form and the revised Bid must be made only in such Revision Form or copies thereof.

(vi) If revision of the Bids results in an incremental amount, the relevant SCSB will block the additional Bid Amount. The Registrar will reconcile the Bid data and consider the revised Bid data for preparing the Basis of Allotment.

(vii) When a Bidder revises his or her Bid, he or she will surrender the earlier Acknowledgement Slip and will, on demand, receive a revised Acknowledgement Slip from the Designated Intermediary. It is the responsibility of the Bidder to request for and obtain the revised Acknowledgement Slip, which will act as proof of his or her having revised the previous Bid.

Price Discovery and Allocation

(i) Based on the Bids received and demand generated at various price levels, the Investment Manager, in consultation with the Lead Managers, will finalize the Offer Price and the Anchor Investor Offer Price.

(ii) Allocation to Anchor Investors will be at the discretion of the Investment Manager in consultation with the Lead Managers, subject to compliance with the SEBI InvIT Regulations, the SEBI Guidelines and other Applicable Laws. In the event of under-subscription in the Anchor Investor Portion, the balance Units will be added to the Institutional

Investor Portion. The number of Units allocated to Anchor Investors and the Anchor Investor Allocation Price, will be made available in public domain by the Lead Managers before the Bid/Offer Opening Date.

(iii) In case of under-subscription in any category, the unsubscribed portion in either the Institutional Investor category or the Non-Institutional Investor Portion may be allotted to applicants in the other categories.

(iv) Allocation to Non-Residents, including Eligible NRIs and FPIs will be subject to applicable law.

(v) The Investment Manager in consultation with the Lead Managers reserves the right to withdraw the Offer any time after the Bid/Offer Opening Date but before the Allotment, without assigning any reasons whatsoever.

(vi) No Bidders can withdraw or lower their Bids at any time.

Sponsor Contribution

In compliance with Regulations 12(3) and 12(3A) of the SEBI InvIT Regulations and the SEBI Guidelines the Sponsor shall not less than 15% of the total outstanding units of the Trust on a post-Offer basis.

Issuance of Allotment Advice

(i) Upon approval of the Basis of Allotment by the Designated Stock Exchange, the Registrar shall send to the Syndicate a list of the Bidders who have been Allotted Units in the Offer.

(ii) The Registrar will then dispatch an Allotment Advice to the Bidders who have been Allotted Units in the Offer. The dispatch of an Allotment Advice shall be deemed a valid, binding and irrevocable contract for the Bidder.

(iii) The issuance of Allotment Advice is subject to "***Notice to Anchor Investors: Allotment Reconciliation and Confirmation of Allocation Note***" below.

Notice to Anchor Investors: Allotment Reconciliation and Confirmation of Allocation Note ("CAN")

(i) A physical book will be prepared by the Registrar on the basis of the Bid cum Application Forms received from Anchor Investors. Based on the physical book and at the discretion of the Investment Manager in consultation with the Lead Managers, selected Anchor Investors will be sent a CAN or, if required, the revised CAN.

(ii) **In the event that the Offer Price is higher than the Anchor Investor Allocation Price**: Anchor Investors will be sent a revised CAN within one day of the Pricing Date indicating the number of Units allocated to such Anchor Investor and the pay-in date for payment of the balance amount. Anchor Investors are then required to pay any additional amounts, being the difference between the Offer Price and the Anchor Investor Allocation Price, as indicated in the revised CAN within the pay-in date referred to in the revised CAN. Thereafter, the Allotment Advice will be issued to such Anchor Investors.

(iii) **In the event the Offer Price is lower than the Anchor Investor Allocation Price:** Anchor Investors who have been Allotted Units will directly receive Allotment Advice and will not receive a refund for the difference between the Offer Price and the Anchor Investor Allocation Price, as applicable.

Designated Date and Allotment

On the Designated Date, the Registrar to the Offer shall instruct the SCSBs to transfer funds represented by allocation of Units from ASBA Accounts into Public Offer Account. The balance amount after transfer to the Public Offer Account shall be unblocked by the relevant SCSB. Whilst the Investment Manager shall ensure all steps for the completion of the necessary formalities for the listing and the commencement of trading of the Units on the Stock Exchanges are completed within 6 Working Days of the Bid/Offer Closing Date, the timetable may be extended due to various factors, such as extension of the Bid/Offer Period by the Investment Manager, revision of the Price Band or any delay in receiving the final listing and trading approval from the Stock Exchanges. The commencement of trading of the Units will be entirely at the discretion of the Stock Exchanges and in accordance with the Applicable Laws.

Bidders are advised to instruct their Depository Participant to accept the Units that may be Allotted to them in this Offer.

Basis of Allotment

For other than Anchor Investors

(i) The Allotment to Bidders other than Anchor Investors shall be on proportionate basis within the specified investor categories and the number of Units Allotted shall be rounded off to the nearest integer, subject to minimum Allotment per successful Bidder in case of oversubscription as per the SEBI InvIT Regulations and the SEBI Guidelines.

(ii) In case of under-subscription in any investor category, the unsubscribed portion in either the Institutional Investor category or the Non-Institutional Investor category may be allotted to applicants in the other category.

(iii) The aggregate allocation to Institutional Investors will not be more than 75% of the Offer.

(iv) The aggregate allocation to Non-Institutional Investors shall not be less than 25% of the Offer.

(v) The identity of Institutional Investors shall not be made public.

(vi) In relation to UPI Bidders, the RTA shall prepare the basis of Allotment based on information of Bidding and blocking received from the Stock Exchange and after undertaking reconciliation of the Bid data and block confirmations corresponding to the Bids by all Investor category applications (with and without the use if UPI). Upon approval of the basis of Allotment, the RTA shall share the 'debit' file with the Sponsor Bank and SCSBs, as applicable, for credit of funds in the Public Offer Account and unblocking of excess funds in the UPI Bidder's account. The Sponsor Bank, based on the mandate approved by the Bidder at the time of blocking of funds, shall raise the debit / collect request from the Bidder's bank account, whereupon funds will be transferred from investor's account to the public issue account and remaining funds, if any, will be unblocked without any manual intervention by investor or their bank.

For Anchor Investor Portion

Allocation to Anchor Investors at the Anchor Investor Allocation Price will be at the discretion of the Investment, in consultation with the Lead Managers, subject to compliance with the following requirements:

- not more than 60% of the Institutional Investor Portion will be available for allocation to Anchor Investors;
- allocation to Anchor Investors will be on a discretionary basis and subject to a minimum number of two Anchor Investors for allocation up to ₹ 2,500 million and minimum number of five Anchor Investors for allocation more than ₹ 2,500 million. The identity of the Anchor Investors shall be made public.

The number of Units Allocated to Anchor Investors and the Anchor Investor Allocation Price will be made available on the websites of the Stock Exchanges, the Sponsor, the Investment Manager and the Lead Managers, prior to the Bid/Offer Opening Date.

Method of Proportionate Basis of Allotment in the Offer

Except in relation to Anchor Investors, in the event of the Offer being over-subscribed, the Investment Manager and the Sponsor Selling Unitholder will finalize the Basis of Allotment in consultation with the Designated Stock Exchange. The Designated Stock Exchange along with the Lead Managers and the Registrar will be responsible for ensuring that the Basis of Allotment is finalized in a fair and proper manner.

Except in relation to Anchor Investors, the Allotment will be made on a proportionate basis as explained below, subject to minimum Allotment per successful Bidder in case of oversubscription in accordance with the SEBI InvIT Regulations and the SEBI Guidelines:

(i) Bidders will be categorized according to the number of Units applied for.

(ii) The total number of Units to be allotted to each category as a whole will be arrived at on a proportionate basis, which is the total number of Units applied for in that category (number of Investors in the category multiplied by the number of Units applied for) multiplied by the inverse of the over-subscription ratio.

Number of Units to be allotted to the successful Bidders will be arrived at on a proportionate basis, which is total number of Units applied for by each Bidder in that category multiplied by the inverse of the over-subscription ratio.

Units in Dematerialized Form with NSDL or CDSL

As per the SEBI InvIT Regulations and SEBI Guidelines, the Allotment will be only in dematerialized form.

In this context, two agreements have been signed amongst the Trustee (on behalf of the Trust), the respective Depositories and the Registrar:

(i) Agreement dated July 11, 2024, between NSDL, the Trust (acting through Investment Manager) and the Registrar.

(ii) Agreement dated July 19, 2024, between CDSL, the Trust (acting through Investment Manager) and the Registrar.

(iii) Bids from any Bidder without relevant details of his or her depository account are liable to be rejected.

(iv) A Bidder applying for Units must have at least one valid beneficiary account with either of the Depository Participants of either NSDL or CDSL prior to making the Bid.

(v) Allotment to a successful Bidder will be credited in electronic form directly to the beneficiary account (with the Depository Participant) of the Bidder.

(vi) Bid cum Application Forms or Revision Forms containing incomplete or incorrect details under the heading "Bidder's Depository Account Details" are liable to be rejected.

(vii) Units in electronic form can be traded only on the stock exchanges having electronic connectivity with NSDL and CDSL. The Stock Exchanges where the Units are proposed to be listed have electronic connectivity with CDSL and NSDL.

Communications

All future communications in connection with Bids made in this Offer should be addressed to the Registrar quoting the full name of the sole or First Bidder, Bid cum Application Form number, PAN, Bidders depository account details, number of Units applied for, date of Bid cum Application Form, name and address of the member of the Syndicate where the Bid was submitted and cheque or draft number and issuing bank thereof or with respect to ASBA Bids, the bank account number in which an amount equivalent to the Bid Amount was blocked.

Bidders can contact the Compliance Officer or the Registrar in case of any pre-Offer or post-Offer related problems such as non-receipt of letters of allotment, credit of allotted Units in the respective beneficiary accounts, refund orders etc. In case of ASBA Bids submitted with the Designated Intermediaries, Bidders can contact the relevant Designated Intermediary. The Trust is currently registered on SCORES with registration number IN/InvIT/23-24/0029 and shall comply with the SEBI circular SEBI/HO/OIAE/IGRD/CIR/P/2023/156 dated September 20, 2023 in relation to redressal of investor grievances through SCORES.

Payment of Refunds

Payment of refunds will be made in the manner described below.

Mode of Refunds

For Anchor Investors

For Anchor Investors, any payment of refund will be made electronically through NACH, Direct Credit, RTGS or NEFT. For all other Anchor Investors, including those who have not updated their bank particulars with the MICR code, refund orders through speed or registered post for refund orders of ₹ 1,500 and above. Such refunds will be made by cheques, pay orders or demand drafts drawn on the Refund Bank and payable at par at places where Bids are received. Any bank charges for cashing such cheques, pay orders or demand drafts at other centres will be payable by the respective Investors. Please note that refunds through the abovementioned modes shall be credited only to the bank account from which the Bid Amount was remitted.

Refunds for ASBA Bidders

In the case of ASBA Bidders, the Registrar will instruct the relevant SCSBs to unblock the funds in the relevant ASBA Accounts to the extent of the Bid Amounts specified in the Bid cum Application Forms for withdrawn, rejected or unsuccessful or partially successful ASBA Bids, within 6 Working Days of the Bid/Offer Closing Date.

Refunds for UPI Bidders

For UPI Bidders, Units would be credited to the Bidder's account after confirmation of receipt of funds in the Public Offer Account. The Bidder will be notified for full / partial Allotment. For partial Allotment, the remaining funds shall be unblocked. For no Allotment, the UPI mandate would be revoked and application amount would be unblocked for the Bidder. The Registrar shall ensure refund of application amount or excess application amount in the bank account of the Bidder as stated in its demat account.

Disposal of Applications and Application Moneys

With respect to Bidders other than ASBA Bidders, the Investment Manager will ensure dispatch of Allotment Advice, refund orders (except for Anchor Investors who receive refunds through electronic transfer of funds) and give benefit to the beneficiary

account with Depository Participants and submit the documents pertaining to the Allotment to the Stock Exchanges after the Allotment.

In case of Anchor Investors who receive refunds through NACH, NEFT, direct credit or RTGS, the refund instructions will be given to the clearing system within 6 Working Days from the Bid/Offer Closing Date. A suitable communication will be sent to the Anchor Investors receiving refunds through this mode within 6 Working Days from the Bid/Offer Closing Date, giving details of the bank where refunds will be credited along with amount and expected date of electronic credit of refund.

Refund Orders or instructions to the SCSBs

With respect to Anchor Investors, the Investment Manager will ensure dispatch of Allotment Advice and refund orders (except for Anchor Investors who receive refunds through electronic transfer of funds), give benefit to the beneficiary account with the Depository Participants and submit documents pertaining to the Allotment to the Stock Exchanges after the Allotment.

In the case of ASBA Bidders, the Registrar will instruct the relevant SCSBs to unblock the funds in the relevant ASBA Accounts to the extent of the Bid Amounts specified in the Bid cum Application Forms for withdrawn, rejected or unsuccessful or partially successful ASBA Bids, within 6 Working Days of the Bid Closing Date.

Interest in case of delay in dispatch of Allotment Letters or Refund Orders/instruction to SCSB by the Registrar

Allotment, including the credit of Allotted Units to the beneficiary accounts of the Depository Participants, will be made not later than 6 Working Days of the Bid/Offer Closing Date. If Allotment letters/refund orders have not been dispatched to the Bidders or if, in a case where the refund or portion thereof is made in electronic manner through direct credit, NEFT, RTGS or NACH, or unblocking of ASBA Accounts or the refund instructions have not been issued to the clearing system in the disclosed manner and/or demat credits are not made to Bidders within 6 Working Days from the Bid/ Offer Closing Date, the Investment Manager will be liable to pay interest at 15% per annum, as prescribed under the SEBI InvIT Regulations and other applicable law.

The Trust, the Investment Manager and the Sponsor Selling Unitholder shall not have recourse to the Offer Proceeds until the final approval for listing and trading of the Units from all the Stock Exchanges where listing is sought has been received.

Withdrawal of the Offer

The Investment Manager and the Sponsor Selling Unitholder, in consultation with the Trustee and the Lead Managers, reserves the right not to proceed with the Offer at any time after the Bid/Offer Opening Date but before Allotment. If the Investment Manager and the Sponsor Selling Unitholder, in consultation with the Lead Managers, withdraw the Offer, they will issue a public notice within two days or such other time as may be prescribed by SEBI in this regard, providing reasons for not proceeding with the Offer. The Lead Managers, through the Registrar, will notify the SCSBs to unblock the ASBA Accounts within one Working Day or such other time as may be prescribed by SEBI, from the day of receipt of such notification. The notice of withdrawal will be made available on the websites of the Stock Exchanges, the Trust, the Sponsor, the Investment Manager and will also be issued in the same newspapers where the pre-Offer advertisements have appeared.

If the Investment Manager and the Sponsor Selling Unitholder withdraws the Offer after the Bid/Offer Closing Date and thereafter determine that they will proceed with a further public offering of Units, they will file a fresh draft offer document with SEBI or the Stock Exchanges, as the case may be.

Notwithstanding the foregoing, the Offer is also subject to obtaining (i) the final listing and trading approvals of the Stock Exchanges, which the Investment Manager will apply for only after Allotment; and (ii) the final approval of the Final Offer Document after it is filed with SEBI and the Stock Exchanges.

In the event the Trust does not receive listing permission from the Stock Exchanges or in the event of withdrawal of the observation letter issued by SEBI, the Units shall not be eligible for listing and the Trust and the Sponsor Selling Unitholders shall be liable to refund the subscription monies, if any, to the respective Bidders immediately, along with interest at the rate of 15% per annum, from the date of Allotment.

Minimum Subscription and Minimum Allotment

In case the Trust does not receive (i) the minimum subscription of at least 90% of the Fresh Issue; or (ii) subscription for at least 10% of the total outstanding Units by public Unitholders, on a post-Offer basis or in accordance with SEBI InvIT Regulation; or (iii) if the number of prospective Allottees (other than the Sponsor, its related parties and Associates) is less than 20, the entire subscription money shall be refunded.

Undertakings of Investment Manager

The Investment Manager hereby undertakes on behalf of the Trust that at any given time, there shall be only one denomination for the Units and that it shall comply with such disclosure and accounting norms specified by the SEBI from time to time.

PROJECTIONS OF REVENUE FROM OPERATIONS AND CASH FLOWS FROM OPERATING ACTIVITIES

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Report on Examination of Prospective Financial Information

To

The Board of Directors of Gawar Investment Manager Private Limited ('the Investment Manager') in its capacity as Investment Manager of Capital Infra Trust (formerly known as National Infrastructure Trust).

Dear Sirs,

1. We have examined the accompanying Statement of Projections of ''Revenue from Operations' and 'Cash Flow from Operating Activities' ('**Prospective Financial Information**') and the basis and notes to these projections ('together referred to as '**Projections**') along with significant assumptions underlying the Projections and other explanatory information ('**Projection Assumptions**') of Capital Infra Trust (formerly known as National Infrastructure Trust) (hereinafter referred to as "**Trust**") and the following subsidiaries of Gawar Construction Limited ('Sponsor'), collectively referred to as 'Project SPV Group' and individually referred to as 'Project SPV',:

   a) Gawar Rohna Jhajjar Highway Private Limited
   b) Gawar Khajuwala BAP Highway Private Limited
   c) Gawar Narnaul Highway Private Limited
   d) Gawar Rohna Sonepat Highways Private Limited
   e) Hardiya Hasanpur Highway Private Limited
   f) Gawar Kiratpur Nerchowk Highway Private Limited
   g) Dewas Ujjain Highway Private Limited
   h) Gawar Bangalore Highways Private Limited
   i) Gawar Nainital Highways Private Limited

   which are proposed to be transferred from the Sponsor to the Trust pursuant to the proposed public issue of Units of the Trust ('**Public Issue**'), for the financial years ending 31 March 2025, 31 March 2026, 31 March 2027. We have carried out such examination in accordance with Standard on Assurance Engagement 3400, 'The Examination of Prospective Financial Information', issued by the Institute of Chartered Accountants of India. The preparation and presentation of the Projections including the underlying assumptions as set out in note 2 and note 3 to the Prospective Financial Information is the responsibility of Investment Manager and has been approved by the Board of Directors of the Investment Manager. Our responsibility is to examine the evidence supporting the Project Assumptions (excluding the hypothetical assumptions) and other information in the Projection. Our responsibility does not include verification of Projections. Therefore, we do not vouch for the accuracy of the same.

Report on Examination of Prospective Financial Information (Cont'd)

2. These Projections have been prepared for the purpose of inclusion in the offer document and final offer document ('**Offer Documents**') in connection with the proposed Public Issue in accordance with the requirements of Securities and Exchange Board of India (Infrastructure Investment Trusts) Regulations, 2014 (as amended) including any guidelines and circulars issued thereunder (the 'InvIT Regulations').These projections have been prepared by the Board of Directors of the Investment Manager using a set of assumptions that include hypothetical assumptions about future events and management's actions that are not necessarily expected to occur. Consequently, users are cautioned that this projection may not be appropriate for purposes other than that described above.

3. We have carried our examination of the prospective financial information on test basis. Based on our examination of the evidence supporting the assumptions, nothing has come to our attention which causes us to believe that the Projection Assumptions do not provide a reasonable basis for the Projections.

4. Further, in our opinion, the Projections are properly prepared on the basis of the assumptions as set out in note 2 and note 3 to the Projections and on a consistent basis with the accounting policies used for the preparation of the historical special purpose combined financial statements included in Offer Documents. Even if the events anticipated under the hypothetical assumptions described above occur, actual results are still likely to be different from the Projections since other anticipated events frequently do not occur as expected and the variation may be material. The actual results may therefore differ materially from those forecasted and projected. For the reasons set out above, we do not express any opinion as to the possibility of achievement of the Projections.

5. This report is addressed to and is provided to the Investment Manager solely for the inclusion in the Offer Documents in connection with the proposed offering of the Trust and may not be suitable for any other purpose. Our report should not be used, referred to or distributed for any other purpose or to any other party without our prior written consent. 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.

For **Walker Chandiok & Co LLP**
Chartered Accountants
Firm's Registration No.: 001076N/N500013

Manish Agrawal
Partner
Membership No.: 507000

UDIN*:* 24507000BKDHSK5578

Place: New Delhi
Date: 05 December, 2024

Capital Infra Trust (formerly known as National Infrastructure Trust)
Statement of Projections of Revenue from Operations and Cash flow from Operating Activities
(All amounts in ₹ millions unless otherwise stated)

Statement of Projections of Revenue from Operations

Particulars	For the financial year ended 31 March 2025	For the financial year ended 31 March 2026	For the financial year ended 31 March 2027
A. Consolidated projected revenue from operations:			
Capital Infra Trust (formerly known as National Infrastructure Trust)	10,444.26	6,953.56	6,864.60
B. Project wise projected revenue from operations*:			
Gawar Rohna Jhajjar Highway Private Limited ("GRJHPL")	366.81	384.20	569.40
Gawar Khajuwala BAP Highway Private Limited ("GKBHPL")	463.51	493.89	454.25
Gawar Narnaul Highway Private Limited ("GNHPL")	595.35	548.36	747.01
Gawar Rohna Sonepat Highways Private Limited ("GRSHPL")	564.71	527.14	752.16
Hardiya Hasanpur Highway Private Limited. ("HHHPL")	861.41	1,016.45	872.08
Gawar Kiratpur Nerchowk Highway Private Limited ("GKNHPL")	3,081.99	1,752.02	1,355.25
Dewas Ujjain Highway Private Limited ("DUHPL")	844.48	593.43	473.19
Gawar Bangalore Highways Private Limited ("GBHPL")	1,849.45	1,201.53	1,234.74
Gawar Nainital Highways Private Limited (GNHPL-II")	1,816.55	436.54	406.52
Capital Infra Trust (formerly known as National Infrastructure Trust) (Standalone)	-	-	-

Statement of Projections of Cash flow from Operating Activities

Particulars	For the financial year ended 31 March 2025	For the financial year ended 31 March 2026	For the financial year ended 31 March 2027
A. Consolidated projected cash flows from operating activities			
Capital Infra Trust (formerly known as National Infrastructure Trust)	6,162.25	6,799.30	6,575.85
B. Project wise projected cash flows from operating activities:			
Gawar Rohna Jhajjar Highway Private Limited	620.88	499.66	291.81
Gawar Khajuwala BAP Highway Private Limited	660.39	577.96	563.84
Gawar Narnaul Highway Private Limited	913.37	746.09	505.61
Gawar Rohna Sonepat Highways Private Limited	964.91	799.49	489.33
Hardiya Hasanpur Highway Private Limited	817.20	742.64	889.69
Gawar Kiratpur Nerchowk Highway Private Limited	1,347.57	1,786.61	2,128.14
Dewas Ujjain Highway Private Limited	387.80	613.70	712.44
Gawar Bangalore Highways Private Limited	349.04	622.23	588.06
Gawar Nainital Highways Private Limited	176.05	550.37	546.29
Capital Infra Trust (formerly known as National Infrastructure Trust)(Standalone)	(74.96)	(139.45)	(139.36)

* The above numbers are after considering inter- entity elimination.

The above statement should be read with summary of significant assumptions and other explanatory information.

For and on behalf of the Board of Directors of
Gawar Investment Manager Private Limited
(acting as Investment Manager to Capital Infra Trust (formerly known as National Infrastructure Trust))

Rakesh Kumar	**Bant Singh Singla**	**Manish Satnaliwala**
Director	Director	Chief Executive Officer
DIN:-02082036	DIN:-08620341	
Place: Gurugram	**Place:** Gurugram	**Place:** Gurugram
Date: 05 December 2024	**Date: 05 December 2024**	**Date: 05 December 2024**

Amit Kumar	**Shubham Jain**
Chief Financial Officer	Company Secretary
	ICSI M No. A57893
Place: Gurugram	**Place:** Gurugram
Date: 05 December 2024	**Date: 05 December 2024**

Capital Infra Trust (formerly known as National Infrastructure Trust)
Statement of Projections of Revenue from Operations and Cash flow from Operating Activities
Summary of significant assumptions and other explanatory information

1. General information

Capital Infra Trust (formerly known as National Infrastructure Trust (the "Trust")) is a trust constituted by "Trust Deed" dated 25 September 2023, established and registered under the Registration Act, 1908 and under the Securities Exchange Board of India (Infrastructure Investment Trust) Regulations, 2014 ("InvIT Regulations"). The Trust is settled by Gawar Construction Limited (referred as the "Sponsor"). The Trustee for the Trust is Axis Trustee Services Limited (the "Trustee"). The Investment Manager for the Trust is Gawar Investment Manager Private Limited (the "Investment Manager" or the "Management").

2. Basis of preparation of projections

The projection of revenue from operations and cash flow from operating activities of the Trust and the following subsidiaries of the Sponsor, namely:

a) Gawar Rohna Jhajjar Highway Private Limited;
b) Gawar Khajuwala BAP Highway Private Limited;
c) Gawar Narnaul Highway Private Limited;
d) Gawar Rohna Sonepat Highways Private Limited;
e) Hardiya Hasanpur Highway Private Limited;
f) Gawar Kiratpur Nerchowk Highway Private Limited;
g) Dewas Ujjain Highway Private Limited;
h) Gawar Bangalore Highways Private Limited;
i) Gawar Nainital Highways Private Limited

(individually referred to as "Project SPV" or "SPV" and together referred to as "SPV Group" or 'Project SPVs'), for the financial years ended 31 March 2025, 31 March 2026 and 31 March 2027 ('FY 25, FY 26 and FY 27' respectively) (the "Projections") have been compiled solely for inclusion in the offer document and final offer document ('Offer Documents') prepared by the Investment Manager in connection with the proposed public issue of units of the Trust ('Public Issue'). The Trust and Project SPVs on a combined basis have been referred to as the "Trust Group". Therefore, the use of the Projections is not appropriate and should not be used or relied upon for any purpose other than described above.

The Projections have been prepared based on the accounting policies used for preparation of the Special Purpose Combined Financial Statements of the Project SPV Group as required by the InvIT Regulations, which are prepared in accordance with in accordance with Indian Accounting Standards as defined in Rule 2(1)(a) of the Companies (Indian Accounting Standards) Rules, 2015 read with InvIT Regulations and the Guidance Note on Combined and Carve-Out Financial Statements issued by the Institute of Chartered Accountants of India ("Guidance Note").

Though the aforesaid Projections are prepared under the Ind AS framework, they do not provide for all the detailed disclosures as required under Ind AS.

The Projected cash flow from operating activities for the Project SPVs and Trust Group have been calculated using the direct method under Ind AS 7 - Statement of Cash Flows and is computed by deducting the projected operating expenses and income taxes from the projected revenue from operations and adjusted for related projected working capital changes and non-cash expenses (if any). Projected cash flow from operating activities do not include any items pertaining to financing or investing nature.

The Projections are presented in India Rupees which is also the functional currency of the Project SPV Group. All values are rounded to the nearest millions, unless otherwise indicated. Certain amounts that are required to be disclosed and do not appear due to rounding-off are expressed as 0.00.

The Projections have been prepared based on the assumption that once the proposed initial public issue of units of the Trust is complete, the Trust will acquire equity interests in the Project SPVs on or before 31 December 2024 and that the net proceeds of the issue will be used to provide loans to the SPV Group for repayment/ pre-payment of outstanding loans from banks (including any accrued interest and prepayment penalty, if applicable) availed by SPV Group, repayment of unsecured loans availed by the Project SPVS from the Sponsor and for issue related expenses to be incurred by Sponsor/Investment Manager.

The Projections include the following information:

a) Projections of revenue from operations and cash flow from operating activities for the Project SPVs for the financial years ended 31 March 2025, 31 March 2026 and 31 March 2027;

b) Projections of revenue from operations and cash flow from operating activities of Trust Group for the financial years ended 31 March 2025, 31 March 2026 and 31 March 2027; and

c) Summary of significant assumptions and other explanatory information.

The accounting year end of the Trust is 31 March of each year. Accordingly, the Projections are prepared for the financial years ended 31 March 2025, 31 March 2026 and 31 March 2027. However, the assumed date of acquisition 31 December 2024 may be postponed and accordingly, the actual result in the first financial period of the Trust may be different from the projection period in the Projections.

The Projections contain forecasts and projections that relate to future events, which are, by their nature, subject to significant risks and uncertainties. The future events referred to involve risks, uncertainties and other factors which may cause the actual results or performance to be materially different from the Projections.

3. Significant assumptions

The Projections have been prepared based on the significant assumptions summarised below. These are Investment Manager's best estimate assumptions and have been prepared by the Investment Manager solely for inclusion in the Offer Documents in connection with the proposed initial public issue of units of the Trust in accordance with the requirements of the InvIT Regulations. The Investment Manager considers the assumptions to be appropriate and reasonable as at the date of the report. However, the investors should consider these assumptions as well as the Projections and make their own assessment of the future performance of the Trust.

3.1 Revenue from operations:

Trust (Standalone)

The Trust revenue from operations comprises of interest income on loan given to Project SPVs and dividend income from Project SPVs which gets eliminated at consolidated level.

SPV Group

SPV group constructs or upgrades infrastructure (construction) used to provide to public service and operates and maintains that infrastructure (operation service) for a specified period of time as per the concession agreement. Such arrangement consists of contracts on hybrid annuity Model (HAM) basis whereby the concessionaire provides unconditional right to receive fixed annuity after the construction period including interest thereon at prevailing bank rate plus 3% p.a. Revenue from operations of the SPV Group primarily consist of construction income, operation and maintenances (O&M) income, major maintenance income and interest income on financial assets receivable from NHAI.

(a) Construction income/ cost :

All the SPVs have received Provisional Commercial Operation Date (PCOD) certificate from the respective authorities. Further, Commercial Operation Date (COD) has been received for all SPVS except for HHHPL, GBHPL, GNHPL. As per concession agreement and PCOD issued to each SPV, the balance construction work has to be completed post PCOD. Accordingly, the Investment Manager has estimated that the balance work will be completed in financial year 2024-25 as per their estimate of the required time limit and hence, construction income has been considered in financial year 2024-25 towards completion of balance work for HHHPL, GBHPL, GNHPL. The above amount is as per EPC agreement entered between the SPVs and Sponsor.

SPV has entered fixed price EPC agreement with Sponsor and accordingly, construction cost has been considered as per EPC agreement in financial year 2024-25 toward completion of balance work. Such cost may undergo change upon finalisation of final completion cost in accordance with its concession agreement.

(b) Interest income on financial assets receivable from NHAI :

SPV group constructs or upgrades infrastructure (construction) used to provide to public service and operates and maintains that infrastructure (operation service) for a specified period of time as per the concession agreement. Such arrangement consists of Design-Build-Operate-Transfer (DBOT) contracts on HAM basis whereby the concessionaire provides unconditional right to receive fixed annuity after the construction period including interest thereon.

Considering above, SPV group has recognised financial asset to the extent that it has an unconditional contractual right to receive fixed annuity including interest thereon as per the requirement of Appendix C to Ind AS 115 –Service Concession Arrangements whereby Finance Income to be recognised on the financial assets is based on effective interest rate. The key inputs of the financial asset model comprises of revenue inflows (annuity), projected expenses to earn the revenue, estimations on cost to build and maintain the asset, interest obligations based on financing pattern and other operational efficiencies. These inputs are based on circumstances existing and management judgement/ assumption on the future expectations based on current situations. Judgements includes estimates on changes in interest rates, cost inflation, government policy changes, etc. which are reviewed periodically by the management.

Revenue projections do not include any other income (operating or otherwise) or income from interest / dividend from short term investments as these sources of revenue have not been material historically and not likely to be material in projected future as part of operating revenue.

(c) Operation and maintenance and major maintenance income/ cost:

Operation and maintenance and major maintenance income has been estimated after taking into considering operation and maintenances cost, major maintenance cost and other related cost expected to be incurred as per the O&M agreements and reports provided by the Independent Technical Consultant (the "Technical Due Diligence Report") . Further, project management fees are considered based on amount expected to be incurred and charged by Sponsor to the SPVs post acquisition by Trust.

Trust(Standalone)

(i) Investment Manager Fees

The Investment Manager will be paid management fee of an amount equivalent to 1.10 % of the aggregate cash flow of the SPV group on an annual (pro-rata) basis, in accordance with the Investment Management Agreement entered between Axis Trustee Services Limited (Trustee) and Gawar Investment Manager Private Limited (Investment Manager).

(ii) Other Trust Expenses:

Trust is required to incur other expenses including Trustee fees, Annual listing fees and other operating expenses including Annual General Meeting cost, Audit Fees, Valuation Expenses, Unitholders meeting cost, SEBI compliance cost, Depository Charges, Rating fee. These amounts are escalated at rate of 5% per annum.

SPV Group

(i) Operation and maintenance cost:

The operation and maintenance cost includes routine maintenance costs, insurance costs, electricity charges, manpower costs, independent engineer's cost, and administrative charges, including, but not limited to, road and site work expenses, employee benefit expenses and other operating and maintenance costs. These costs are projected based on the Investment Manager's estimates of costs assumptions considering the inputs and other factors from the technical due diligence report for the respective SPVs.

(ii) Periodic maintenance cost:

The periodic maintenance cost includes periodic/major maintenance cost which are projected based on the estimates of costs taken from the reports provided by the Technical consultants (the "Technical Report") for each of the project SPV's. Escalation of 5% every year is considered in periodic maintenance cost.

(iii) Management expenses

The management expenses are mainly projected based on the terms and conditions of the relevant agreements, estimates and / or based on management's experience and judgement. The nature for the recurring management expenses are described below:

Project Management expenses

The Project manager is entitled to project management fees for the performance of Management, and Operation and Maintenance Services. The estimates taken by management have been approved by the Board of Directors of Investment Manager of the Trust in their meeting held on 20 August 2024.

3.2 Corporate Social Responsibility ('CSR') expense

CSR expense has been computed @ 2% of average profits for last 3 immediately preceding financial years.

3.3 Changes in working capital

Trust (Standalone)

Changes in working capital for the Trust has been considered as Nil during the projected period.

SPV Group

The changes in working capital are the difference in the net working capital amount from one accounting period to the next. Net working capital is defined as Receivable under service concession, trade receivable, other financial and non-financial assets minus trade payable, other financial and non-financial liabilities. Receivable under service concession are based on estimated receivables as per the financial models. Other components i.e. trade receivable, other financial and non-financial assets minus trade payable, other financial and non-financial liabilities are based on Investment manager estimation and assumed to remain constant over the period of projections.

3.4 Direct Taxes paid (net of refunds)

Trust (Standalone)

It has been assumed that Trust will receive interest income and / or dividends from the SPV Group which is considered exempt under the Income Tax Act, 1961 ('IT Act'). No income other than above has been assumed in the Trust. Hence, no income tax expense / cash flow is assumed during the Projection period. The transaction of receipt of interest / dividend income will stands eliminated in the Statement of Profit and Loss and in the Cashflow Statement of the Trust Group.

SPV Group

Current income tax is 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 India where the SPV Group operates and generates taxable income. Expected tax losses arise during the projected period, if any, have been carried forward and considered for set-off as per the provisions of Chapter VI of the Income Tax Act, 1961. It has been assumed that SPV Group shall discharge their tax liability on the same basis in the future years as well, subject to the effect of any change in the organisation structure.

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 SPV Group will pay normal income tax during the specified period. All SPVS (except for GBHPL and GNHPL) have been paying taxes under section 115 BAA of Income Tax Act, accordingly MAT provisions are not applicable.

3.5 Indirect Taxes:

GST on annuities, Interest on annuities, O&M payments etc have been considered at 18% i.e. prevailing GST rate as at date.

3.6 Other assumptions

The Investment Manager has made the following additional assumptions in preparing the Projections:

i) The Projections have been disclosed for InvIT assets that are proposed to be owned by the InvIT pursuant to the proposed public issue of units of the Trust. The Projections have been prepared assuming the proposed Trust structure will be adopted from 31 December 2024. The actual structure would come into existence at a later date after the proposed initial public issue of units of the Trust.

ii) The initial portfolio of SPV group is assumed to remain unchanged throughout the Projection period. No further assets (apart from SPV group) are assumed to be acquired or no assets are assumed to be divested during the projections period.

iii) It has been assumed that no outflows on account of any litigation related matters including current pending litigations/contingent liabilities is expected to become due during the Projection Period.

iv) It has been assumed that no liability or liquidated damages on account of default in concession agreement shall devolve upon the Trust/SPV group during the Projections Period.

v) There will be no material change in taxation legislation or other applicable legislation.

vi) The relevant tax exemptions, tax remissions, and preferential tax treatments granted remain valid and applicable and that the terms and conditions thereto are complied with.

vii) No change in fair value of all financial instruments has been assumed during the projection period.

viii) The Projections have been prepared using Ind AS standards and interpretations that are effective for the Ind AS financial statements for the six month period ended 30 September 2024 and on the basis of current management estimates in respect of relevant future revenues, expenses, income taxes and cash flows. The Statement of Projections do not take into account the impact of any new Ind AS standards or interpretation not effective as on 30 September 2024. Ind AS standards or interpretations issued but not effective or not issued as on 30 September 2024 which may become effective during the Projections period may have an impact on the Projections and to that extent the actual figures may vary from the Projections.

ix) The data considered is based on independent technical due diligence report and may differ from that considered therein.

x) The Projections are based on assumptions and are subject to a number of factors and on the basis of current management estimates in respect of relevant future revenues, expenses, income taxes and cash flows. Investors should be aware that future events cannot be predicted with any certainty and there may be deviations from the figures projected in the Projections.

For and on behalf of the Board of Directors of
Gawar Investment Manager Private Limited
(acting as Investment Manager to Capital Infra Trust (formerly known as National Infrastructure Trust))

Rakesh Kumar	**Bant Singh Singla**	**Manish Satnaliwala**
Director	Director	Chief Executive Officer
DIN:-02082036	DIN:-08620341	
Place: Gurugram	**Place:** Gurugram	**Place:** Gurugram
Date: 05 December 2024	**Date:** 05 December 2024	**Date:** 05 December 2024

Amit Kumar	**Shubham Jain**
Chief Financial Officer	Company Secretary
	ICSI M No. A57893
Place: Gurugram	**Place:** Gurugram
Date: 05 December 2024	**Date:** 05 December 2024

OFFER STRUCTURE

Initial public offer of up to [●] Units by the Trust for cash at price of ₹ [●] per Unit aggregating up to ₹15,780.00 million comprising a fresh issue of up to [●] Units aggregating up to ₹10,770.00 million by the Trust and an offer for sale of up to [●] Units aggregating up to ₹ 5,010.00 million by the Sponsor Selling Unitholder. This Offer is being made through the Book Building Process. This Offer shall constitute at least 10% of the total outstanding Units on a post-Offer basis.

Particulars	Institutional Investors [(1)]	Non-Institutional Investors
Number of Units available for Allotment/Allocation [(2)]	Not more than [●] Units	Not less than [●] Units
Percentage of Offer size available for Allotment/Allocation	Not more than 75% of the Offer [(1)]	Not less than 25% of the Offer
Basis of Allotment/ allocation if respective category is oversubscribed	Proportionate	Proportionate
Minimum Bid	Such number of Units that the Bid Amount exceeds ₹[●] and in multiples of [●] Units thereafter	Such number of Units that the Bid Amount exceeds ₹[●] and in multiples of [●] Units thereafter
Maximum Bid	Such number of Units (in multiples of [●] Units) not exceeding the Offer, size subject to applicable limits	Such number of Units (in multiples of [●] Units) not exceeding the Offer size, subject to applicable limits
Mode of Allotment	Compulsorily in dematerialised form	Compulsorily in dematerialised form
Bid Lot	[●] Units and in multiples of [●] Units thereafter	[●] Units and in multiples of [●] Units thereafter
Allotment Lot	[●] Units and in multiples of [●] Units thereafter	[●] Units and in multiples of [●] Units thereafter
Trading Lot	[●]	[●]
Who can apply [(3)]	i. QIBs; or ii. family trusts or intermediaries registered with SEBI, with net-worth of more than ₹5,000 million, as per the last audited financial statements	Bidders other than Institutional Investors, eligible to apply in this Offer
Terms of payment	Full Bid Amount shall be blocked by the SCSBs in the bank account of the ASBA Bidder that is specified in the Bid cum Application Form [(4)]	For individual Non-Institutional Investors Bidding with a Bid Amount of up to ₹ 0.50 million or less and Bidding through the UPI Mechanism: Full Bid Amount shall be blocked by the Sponsor Bank in the bank account of the Non-Institutional Investor that is specified in the Bid cum Application Form; Full Bid Amount shall be blocked by the SCSBs in the bank account of the ASBA Bidder that is specified in the Bid cum Application Form

(1) The Investment Manager, in consultation with the Lead Managers may allocate up to 60% of the Institutional Investor Portion to Anchor Investors on a discretionary basis.

(2) Subject to valid Bids being received at or above the Offer Price. This Offer will be made through the Book Building Process wherein not more than 75% of the Offer will be available for allocation on a proportionate basis to Institutional Investors, provided that the Investment Manager, in consultation with the Lead Managers may allocate up to 60% of the Institutional Investor Portion to Anchor Investors on a discretionary basis.

(3) In case of joint Bids, the Bid cum Application Form should contain only the name of the First Bidder whose name should also appear as the first holder of the beneficiary account held in joint names. The signature of only the First Bidder would be required in the Bid cum Application Form and such First Bidder would be deemed to have signed on behalf of the joint holders. Bidders are advised to consult their own advisors with respect to any restrictions or limitations that may be applicable to them, including any restrictions or limitations in relation to their ability to invest in the Units. By making a Bid (including any revision thereof), the Bidder will be deemed to have represented to the Investment Manager, the Trustee, the Lead Managers and the Syndicate Members that it is eligible to participate in the Offer and be Allotted Units under applicable law.

(4) Bid Amount shall be payable by the Anchor Investors at the time of submission of the Bid cum Application Forms. The balance, if any, shall be paid within the pay-in date specified in the CAN.

In case of under-subscription in any investor category, the unsubscribed portion in either the Institutional Investor Portion or the Non-Institutional Investor Portion may be Allotted to Applicants in the other category at the discretion of the Investment Manager, in consultation with the Lead Managers and the Designated Stock Exchange.

Indicative Offer Timeline

Event	Indicative Date
Bid/Offer Opening Date	Tuesday, January 7, 2025[(1)]
Bid/ Offer Closing Date	Thursday, January 9, 2025
Finalisation of Basis of Allotment	On or about Tuesday 14, 2025
Closing Date[(2)]	On or about Wednesday, January 15, 2025

Designated Date	On or about Wednesday, January 15, 2025
Initiation of refunds	On or about Thursday, January 16, 2025
Listing Date	On or about Friday, January 17, 2025

(1) The Investment Manager may, in consultation with the Lead Managers, consider participation by Anchor Investors in accordance with the SEBI InvIT Regulations and SEBI Guidelines. The Anchor Investor Bidding Date shall be one Working Day prior to the Bid/ Offer Opening Date.

(2) The date on which Allotment of the Units pursuant to this Issue shall be made.

The above timetable is indicative and does not constitute any obligation or liability on the Trust, the Investment Manager, the Sponsor Selling Unitholder, the Trustee or the Lead Managers.

Whilst the Investment Manager shall ensure all steps for the completion of the necessary formalities for the listing and the commencement of trading of the Units on the Stock Exchanges are completed within 6 Working Days of the Bid/Offer Closing Date, the timetable may be extended due to various factors, such as extension of the Bid/Offer Period by the Investment Manager, revision of the Price Band or any delay in receiving the final listing and trading approval from the Stock Exchanges. The commencement of trading of the Units will be entirely at the discretion of the Stock Exchanges and in accordance with applicable law.

Except in relation to the Bids received from the Anchor Investors, Bids and any revision in Bids could be accepted only between 10.00 a.m. and 5.00 p.m. (IST) during the Bid/Offer Period (except the Bid/Offer Closing Date) at the Bidding Centres and the Designated Branches mentioned on the Bid cum Application Form. Bidders are not allowed to withdraw or lower their Bid (in terms of number of Units or the Bid Amount) at any stage. Bidders can make upward revisions in their Bids, subject to applicable law. It is clarified that Bids not uploaded on the electronic bidding system would be rejected. Due to limitation of the time available for uploading the Bids on the Bid/ Offer Closing Date, Investors are advised to submit their Bids one day prior to the Bid/Offer Closing Date and, in any case, no later than 1.00 p.m. IST on the Bid/Offer Closing Date. Any time mentioned in this Offer Document is IST. Bidders are cautioned that, in the event a large number of Bids are received on the Bid/Offer Closing Date, some Bids may not get uploaded due to lack of sufficient time. Such Bids that cannot be uploaded will not be considered for allocation under the Offer. Bids were accepted only on business days i.e. Monday to Friday (excluding any public holiday). None among the Trust, the Investment Manager, the Sponsor Selling Unitholder, the Trustee or any member of the Syndicate is liable for any failure in uploading the Bids due to faults in any software/hardware system or otherwise.

In case of any discrepancy between the data entered in the electronic book and the data contained in the physical Bid cum Application Form, for a particular Bidder, the details as per the Bid file received from the Stock Exchanges may be taken as the final data for the purpose of Allotment.

The Investment Manager, in consultation with the Lead Managers, reserves the right to revise the Price Band during the Bid/ Offer Period. In case the Price Band is revised, the Offer Period shall be extended for a minimum period of one Working Day, subject to the total Bid/ Offer Period not exceeding 30 days. The revised Price Band and Bid/ Offer Period will be widely disseminated by notification to the SCSBs and Stock Exchanges, and also by indicating the change on the websites of the Trust, the Lead Managers, the Sponsor, the Investment Manager and the Stock Exchanges and at the terminals of the members of the Syndicate. In accordance with the SEBI InvIT Regulations and the SEBI Guidelines, the Price Band cannot be revised more than two times during the Bid/ Offer Period.

MATERIAL CONTRACTS AND DOCUMENTS FOR INSPECTION

The following contracts, which are or may be deemed material have been entered or are to be entered into in due course. These contracts and also the documents for inspection referred to hereunder, may be inspected at the principal place of business of the Trust, from 10:00 A.M. to 5:00 P.M., on all Working Days from the date of this Offer Document until the Bid/ Offer Closing Date. Subject to compliance with applicable law, any of the contracts or documents mentioned in this Offer Document 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.

1. Original Trust Deed entered into between Gawar Construction Limited (as the Sponsor) and the Trustee dated September 25, 2023.

2. Amendment to the Trust Deed entered into between Gawar Construction Limited (as the Sponsor) and the Trustee dated October 10, 2024.

3. SEBI registration certificate for the Trust bearing registration number IN/INVIT/23-24/00029 dated March 7, 2024 as an infrastructure investment trust.

4. Updated SEBI registration certificate for the Trust bearing registration number IN/InvIT/23-24/0029 dated October 16, 2024, under the name of "Capital Infra Trust" as an infrastructure investment trust.

5. Investment management agreement dated November 10, 2024, entered into between the Trustee (on behalf of the Trust) and Investment Manager.

6. Amendment to the Investment management agreement dated October 7, 2024, entered into between the Trustee (on behalf of the Trust) and Investment Manager.

7. Project management agreement dated August 23, 2024, entered into between the Trustee (on behalf of the Trust), the Investment Manager, Project Manager and the Project SPVs.

8. Amendment to the Project Management Agreement dated December 6, 2024, entered between the Trustee (on behalf of the Trust), the Project Manager, the Investment Manager and the Project SPVs.

9. Offer Agreement dated August 26, 2024, entered into among the Trustee (on behalf of the Trust), the Investment Manager, the Sponsor, and the Lead Managers.

10. Amendment to the Offer Agreement dated December 10, 2024, entered into among the Trustee (on behalf of the Trust), the Investment Manager, the Sponsor, and the Lead Managers.

11. Cash Escrow and Sponsor Bank Agreement dated December 24, 2024, entered into among the Trustee (on behalf of the Trust), the Investment Manager, the Sponsor Selling Unitholder, the Escrow Collection Banks, the Public Offer Account Banks, the Refund Banks, the Registrar to the Offer, the Syndicate Members and the Lead Managers.

12. Syndicate Agreement dated December 26, 2024, entered into among the Lead Managers, the Syndicate Members, the Trustee (on behalf of the Trust), the Investment Manager, the Sponsor Selling Unitholder and the Registrar to the Offer.

13. Share and Unit Escrow Agreement dated December 24, 2024, entered into among the Trustee (on behalf of the Trust), the Investment Manager, the Trustee, the Sponsor Selling Unitholder and the Share and Unit Escrow Agent.

14. Registrar Agreement dated August 23, 2024, entered into among the Registrar to the Offer, the Trustee (on behalf of the Trust), the Investment Manager and the Sponsor.

15. Amendment to the Registrar Agreement dated December 6, 2024, entered into among the Registrar to the Offer, the Trustee (on behalf of the Trust), the Investment Manager and the Sponsor.

16. Agreement dated July 11, 2024, between NSDL, the Trust (acting through the Investment Manager) and the Registrar to the Offer.

17. Agreement dated July 19, 2024, between CDSL, the Trust (acting through the Investment Manager) and the Registrar to the Offer.

18. Share Purchase Agreements dated December 26, 2024, entered into between the Trustee (on behalf of the Trust), the Investment Manager, the Sponsor and DUHPL.

19. Share Purchase Agreements dated December 26, 2024, entered into between the Trustee (on behalf of the Trust), the Investment Manager, the Sponsor and GBHPL.

20. Share Purchase Agreements dated December 26, 2024, entered into between the Trustee (on behalf of the Trust), the Investment Manager, the Sponsor and GKBHPL.

21. Share Purchase Agreements dated December 26, 2024, entered into between the Trustee (on behalf of the Trust), the Investment Manager, the Sponsor and GKNHPL.

22. Share Purchase Agreements dated December 26, 2024, entered into between the Trustee (on behalf of the Trust), the Investment Manager, the Sponsor and GNHPL.

23. Share Purchase Agreements dated December 26, 2024, entered into between the Trustee (on behalf of the Trust), the Investment Manager, the Sponsor and GNHPL II.

24. Share Purchase Agreements dated December 26, 2024, entered into between the Trustee (on behalf of the Trust), the Investment Manager, the Sponsor and GRJHPL.

25. Share Purchase Agreements dated December 26, 2024, entered into between the Trustee (on behalf of the Trust), the Investment Manager, the Sponsor and GRSHPL.

26. Share Purchase Agreements dated December 26, 2024, entered into between the Trustee (on behalf of the Trust), the Investment Manager, the Sponsor and HHHPL.

27. ROFO Agreement dated December 24, 2024, between the Sponsor, the Trustee (on behalf of the Trust) and the Investment Manager.

28. Concession Agreement dated June 2, 2016, entered into between SNHL and NHAI, to be read with endorsement agreement dated July 14, 2023 entered into by and among NHAI, SNHL, GNHPL and IndusInd Bank Limited.

29. Concession Agreement dated December 8, 2016, entered into between SBHPL and NHAI, to be read with endorsement agreement dated February 13, 2023 entered into by and among NHAI, SBHPL, GBHPL and State Bank of India.

30. Concession Agreement dated September 28, 2018, entered into between GKBHPL and NHAI.

31. Concession Agreement dated February 28, 2019, entered into between GNHPL and NHAI.

32. Concession Agreement dated May 9, 2018, entered into between GRJHPL and NHAI, further amended by amendment to concession agreement dated February 13, 2019.

33. Concession Agreement dated May 27, 2019, entered into between GRSHPL and NHAI.

34. Concession Agreement dated October 28, 2020, entered into between HHHPL and NHAI.

35. Concession Agreement dated November 26, 2020, entered into between GKNHPL and NHAI.

36. Concession Agreement dated December 11, 2020, entered into between DUHPL and NHAI.

37. On-Lending Agreement dated [●] to be entered into among the Trust (acting through the Investment Manager), the Trust's agent and each of the Projects SPVs.

38. Certified copies of the memorandum and articles of association of the Investment Manager, as amended from time to time.

39. Unsecured loan agreement dated October 5, 2018 as amended on July 10, 2020, entered into between the Sponsor and GRJHPL.

40. Unsecured loan agreement dated March 5, 2021 as amended on April 27, 2023 entered into between the Sponsor and HHHPL.

41. Unsecured loan agreement dated March 20, 2023 entered into between the Sponsor and GBHPL.

42. Unsecured loan agreement dated July 25, 2019 as amended on January 9, 2021 entered into between the Sponsor and GNHPL

43. Unsecured loan agreement dated April 22, 2021 as amended on June 7, 2023 entered into between the Sponsor and GKNHPL.

44. Unsecured loan agreement dated February 22, 2019 as amended on January 20, 2021 entered into between the Sponsor and GKBHPL.

45. Unsecured loan agreement dated October 22, 2019 as amended on January 29, 2022 entered into between the Sponsor and GRSHPL.

46. Unsecured loan agreement dated May 4, 2021 as amended on July 5, 2023 entered into between the Sponsor and DUHPL

47. Unsecured loan agreement dated July 14, 2023 entered into between the Sponsor and GNHPL II.

48. Board resolutions of the Investment Manager dated August 20, 2024, authorising this Offer.

49. Board resolutions of the Investment Manager dated December 5, 2024, amending this Offer.

50. Consents from the (i) Lead Managers to the Offer; (ii) Legal counsel to the Trust, the Investment Manager and the Sponsor as to Indian law; (iii) Legal counsel as to the Lead Managers as to Indian law; (iv) Valuer; (v) Technical Consultant; (vi) Registrar to the Offer; (vii) Escrow Collection Banks; (viii) Refund Bank; (ix) Public Offer Account Bank and (x) the Compliance Officer (xi) Syndicate Members, as referred to in their respective capacities.

51. Special Purpose Combined Financial Statements and the report dated November 8, 2024, thereon.

52. Projections of Revenue from Operations and Cash Flow from Operating Activities and the report dated December 5, 2024 thereon.

53. The report on statement of tax benefits dated August 24, 2024, from H.K. Dua & Co., Chartered Accountants.

54. Due diligence certificate dated August 26, 2024, addressed to SEBI from the Lead Managers.

55. In principle listing approvals each dated October 24, 2024, issued by BSE and NSE, respectively along with Annexure to the in principle listing approval by NSE.

DECLARATION

The Investment Manager hereby declares and certifies that all relevant provisions of the SEBI InvIT Regulations, SEBI Guidelines, SEBI Act and all regulations and guidelines issued by the GoI or SEBI (as the case may be) have been complied with and no statement made in this Offer Document is contrary to the provisions of the SEBI InvIT Regulations, the SCRA, the SEBI Guidelines, 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 Offer Document are material, true, correct, not misleading and are adequate in order to enable the investors to make an informed decision.

SIGNED BY THE DIRECTOR OF GAWAR INVESTMENT MANAGER PRIVATE LIMITED

Name: Yudhvir Singh Malik
Designation: Chairman and Independent Director

Date: December 27, 2024
Place: Gurugram

DECLARATION

The Investment Manager hereby declares and certifies that all relevant provisions of the SEBI InvIT Regulations, SEBI Guidelines, SEBI Act and all regulations and guidelines issued by the GoI or SEBI (as the case may be) have been complied with and no statement made in this Offer Document is contrary to the provisions of the SEBI InvIT Regulations, the SCRA, the SEBI Guidelines, 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 Offer Document are material, true, correct, not misleading and are adequate in order to enable the investors to make an informed decision.

SIGNED BY THE DIRECTOR OF GAWAR INVESTMENT MANAGER PRIVATE LIMITED

Name: Rakesh Kumar
Designation: Director

Date: December 27, 2024
Place: Gurugram

DECLARATION

The Investment Manager hereby declares and certifies that all relevant provisions of the SEBI InvIT Regulations, SEBI Guidelines, SEBI Act and all regulations and guidelines issued by the GoI or SEBI (as the case may be) have been complied with and no statement made in this Offer Document is contrary to the provisions of the SEBI InvIT Regulations, the SCRA, the SEBI Guidelines, 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 Offer Document are material, true, correct, not misleading and are adequate in order to enable the investors to make an informed decision.

SIGNED BY THE DIRECTOR OF GAWAR INVESTMENT MANAGER PRIVATE LIMITED

Name: Neeraj Sheoran
Designation: Director

Date: December 27, 2024
Place: Mumbai

DECLARATION

The Investment Manager hereby declares and certifies that all relevant provisions of the SEBI InvIT Regulations, SEBI Guidelines, SEBI Act and all regulations and guidelines issued by the GoI or SEBI (as the case may be) have been complied with and no statement made in this Offer Document is contrary to the provisions of the SEBI InvIT Regulations, the SCRA, the SEBI Guidelines, 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 Offer Document are material, true, correct, not misleading and are adequate in order to enable the investors to make an informed decision.

SIGNED BY THE DIRECTOR OF GAWAR INVESTMENT MANAGER PRIVATE LIMITED

Name: Bant Singh Singla
Designation: Director

Date: December 27, 2024
Place: Gurugram

DECLARATION

The Investment Manager hereby declares and certifies that all relevant provisions of the SEBI InvIT Regulations, SEBI Guidelines, SEBI Act and all regulations and guidelines issued by the GoI or SEBI (as the case may be) have been complied with and no statement made in this Offer Document is contrary to the provisions of the SEBI InvIT Regulations, the SCRA, the SEBI Guidelines, 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 Offer Document are material, true, correct, not misleading and are adequate in order to enable the investors to make an informed decision.

SIGNED BY THE DIRECTOR OF GAWAR INVESTMENT MANAGER PRIVATE LIMITED

Name: Satish Chandra
Designation: Independent Director

Date: December 27, 2024
Place: Chandigarh

DECLARATION

The Investment Manager hereby declares and certifies that all relevant provisions of the SEBI InvIT Regulations, SEBI Guidelines, SEBI Act and all regulations and guidelines issued by the GoI or SEBI (as the case may be) have been complied with and no statement made in this Offer Document is contrary to the provisions of the SEBI InvIT Regulations, the SCRA, the SEBI Guidelines, 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 Offer Document are material, true, correct, not misleading and are adequate in order to enable the investors to make an informed decision.

SIGNED BY THE DIRECTOR OF GAWAR INVESTMENT MANAGER PRIVATE LIMITED

Name: Vijayalakshmi R. Iyer
Designation: Independent Director

Date: December 27, 2024
Place: Dubai

DECLARATION

The Sponsor hereby declares and certifies that all relevant provisions of the SEBI InvIT Regulations, SEBI Guidelines, SEBI Act and all regulations and guidelines issued by the GoI or SEBI (as the case may be) have been complied with and no statement made in this Offer Document is contrary to the provisions of the SEBI InvIT Regulations, the SCRA, the SEBI Guidelines, 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 Offer Document are material, true, correct, not misleading and are adequate in order to enable the investors to make an informed decision.

SIGNED BY THE DIRECTOR OF GAWAR CONSTRUCTION LIMITED

Name: Rakesh Kumar
Designation: Director

Date: December 27, 2024
Place: Gurugram

DECLARATION

The Sponsor hereby declares and certifies that all relevant provisions of the SEBI InvIT Regulations, SEBI Guidelines, SEBI Act and all regulations and guidelines issued by the GoI or SEBI (as the case may be) have been complied with and no statement made in this Offer Document is contrary to the provisions of the SEBI InvIT Regulations, the SCRA, the SEBI Guidelines, 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 Offer Document are material, true, correct, not misleading and are adequate in order to enable the investors to make an informed decision.

SIGNED BY THE DIRECTOR OF GAWAR CONSTRUCTION LIMITED

Name: Ravinder Kumar
Designation: Director

Date: December 27, 2024
Place: Gurugram

DECLARATION

The Sponsor hereby declares and certifies that all relevant provisions of the SEBI InvIT Regulations, SEBI Guidelines, SEBI Act and all regulations and guidelines issued by the GoI or SEBI (as the case may be) have been complied with and no statement made in this Offer Document is contrary to the provisions of the SEBI InvIT Regulations, the SCRA, the SEBI Guidelines, 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 Offer Document are material, true, correct, not misleading and are adequate in order to enable the investors to make an informed decision.

SIGNED BY THE DIRECTOR OF GAWAR CONSTRUCTION LIMITED

Name: Ram Kishan
Designation: Whole-time Director

Date: December 27, 2024
Place: Hisar

DECLARATION

The Sponsor hereby declares and certifies that all relevant provisions of the SEBI InvIT Regulations, SEBI Guidelines, SEBI Act and all regulations and guidelines issued by the GoI or SEBI (as the case may be) have been complied with and no statement made in this Offer Document is contrary to the provisions of the SEBI InvIT Regulations, the SCRA, the SEBI Guidelines, 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 Offer Document are material, true, correct, not misleading and are adequate in order to enable the investors to make an informed decision.

SIGNED BY THE DIRECTOR OF GAWAR CONSTRUCTION LIMITED

Name: Bant Singh Singla
Designation: Director

Date: December 27, 2024
Place: Gurugram

DECLARATION

The Sponsor hereby declares and certifies that all relevant provisions of the SEBI InvIT Regulations, SEBI Guidelines, SEBI Act and all regulations and guidelines issued by the GoI or SEBI (as the case may be) have been complied with and no statement made in this Offer Document is contrary to the provisions of the SEBI InvIT Regulations, the SCRA, the SEBI Guidelines, 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 Offer Document are material, true, correct, not misleading and are adequate in order to enable the investors to make an informed decision.

SIGNED BY THE DIRECTOR OF GAWAR CONSTRUCTION LIMITED

Name: Phoolwati
Designation: Director

Date: December 27, 2024
Place: Gurugram

DECLARATION

The Sponsor hereby declares and certifies that all relevant provisions of the SEBI InvIT Regulations, SEBI Guidelines, SEBI Act and all regulations and guidelines issued by the GoI or SEBI (as the case may be) have been complied with and no statement made in this Offer Document is contrary to the provisions of the SEBI InvIT Regulations, the SCRA, the SEBI Guidelines, 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 Offer Document are material, true, correct, not misleading and are adequate in order to enable the investors to make an informed decision.

SIGNED BY THE DIRECTOR OF GAWAR CONSTRUCTION LIMITED

Name: Bhupinder Singh
Designation: Independent Director

Date: December 27, 2024
Place: Panchkula

DECLARATION

The Sponsor hereby declares and certifies that all relevant provisions of the SEBI InvIT Regulations, SEBI Guidelines, SEBI Act and all regulations and guidelines issued by the GoI or SEBI (as the case may be) have been complied with and no statement made in this Offer Document is contrary to the provisions of the SEBI InvIT Regulations, the SCRA, the SEBI Guidelines, 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 Offer Document are material, true, correct, not misleading and are adequate in order to enable the investors to make an informed decision.

SIGNED BY THE DIRECTOR OF GAWAR CONSTRUCTION LIMITED

Name: Sumedha Kataria
Designation: Independent Director

Date: December 27, 2024
Place: Delhi

DECLARATION

The Sponsor Selling Unitholder hereby declares and certifies that all relevant provisions of the SEBI InvIT Regulations, SEBI Guidelines, SEBI Act and all regulations and guidelines issued by the GoI or SEBI (as the case may be) have been complied with and no statement made in this Offer Document is contrary to the provisions of the SEBI InvIT Regulations, the SCRA, the SEBI Guidelines, the SEBI Act, or rules, regulations, and guidelines issued thereunder (as the case may be). The Sponsor Selling Unitholder further certifies that all the statements and disclosures in this Offer Document are material, true, correct, not misleading and are adequate in order to enable the investors to make an informed decision.

SIGNED BY GAWAR CONSTRUCTION LIMITED
(*as the Sponsor Selling Unitholder*)

Name: Rakesh Kumar
Designation: Director

Date: December 27, 2024
Place: Gurugram

ANNEXURE I - VALUATION REPORT

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Prepared for:
Capital Infra Trust ("the Trust")

Gawar Investment Manager Private Limited ("the Investment Manager")

Valuation as per SEBI (Infrastructure Investment Trusts) Regulations, 2014 as amended

Fair Enterprise Valuation

Valuation Date: 30th September 2024

Report Date: 08th November, 2024

Mr. S Sundararaman,
Registered Valuer,
IBBI Registration No - IBBI/RV/06/2018/10238

RV/SSR/R/2025/21 Date: 08th November, 2024

Capital Infra Trust (Erstwhile National Infrastructure Trust)
(acting through Axis Trustee Services Limited [in its capacity as "the Trustee" of the Trust])
Unit No. 1401-1403, 14th Floor,
Tower B, SAS Tower,
Medicity, Sector 38,
Gurugram, Haryana -122001.

Gawar Investment Manager Private Limited
(acting as the Investment Manager to Capital Infra Trust)
Unit No. 1401-1403, 14th Floor,
Tower B, SAS Tower,
Medicity, Sector 38,
Gurugram, Haryana -122001.

Sub: Financial Valuation as per SEBI (Infrastructure Investment Trusts) Regulations, 2014, as amended ("the SEBI InvIT Regulations")

Dear Sir(s)/ Madam(s),

I, Mr. S. Sundararaman ("**Registered Valuer**" or "**RV**" or "**I**" or "**My**" or "**Me**") bearing IBBI registration number IBBI/RV/06/2018/10238, have been appointed vide letter dated 15th October, 2024 (EL Ref. No.: RV/SSR/EL/1015) as an independent valuer, as defined under the SEBI InvIT Regulations, by **Gawar Investment Manager Private Limited** ("**GIMPL**" or "**the Investment Manager"**) acting as the investment manager for **Capital Infra Trust (Erstwhile National Infrastructure Trust)**("**the Trust**" or **"the InvIT**" or **"CIT"**), an infrastructure investment trust, registered with the Securities Exchange Board of India with effect from 7th March 2024, bearing registration number IN/InvIT/23-24/00029 and Axis Trustee Services Limited **("the Trustee")** acting on behalf of the Trust for the purpose of the financial valuation of the special purpose vehicles (defined below and hereinafter together referred as "**the SPVs"**) of Gawar Construction Limited **("the Sponsor" or "GCL" or "Transferor")** as per the requirements of the Securities and Exchange Board of India (Infrastructure Investment Trusts) Regulations, 2014, as amended from time to time ("**SEBI InvIT Regulations**").

The SPVs will be forming part of the Initial Portfolio of Assets and are proposed to be transferred to the Trust as per the extant provisions of the SEBI InvIT Regulations, where GIMPL is acting as the Investment Manager and GCL is acting as the Sponsor within the meaning of SEBI InvIT Regulations.

Following Special Purpose Vehicles are proposed to be transferred to the Trust:

Sr. No.	Name of the SPV	Term
1	Gawar Narnaul Highway Private Limited	GNHPL
2	Gawar Khajuwala Bap Highway Private Limited	GKBHPL
3	Hardiya Hasanpur Highway Private Limited	HHHPL
4	Gawar Rohna Jhajjar Highway Private Limited	GRJHPL
5	Gawar Kiratpur Nerchowk Highway Private Limited	GKNHPL
6	Gawar Rohna Sonepat Highways Private Limited	GRSHPL
7	Dewas Ujjain Highway Private Limited	DUHPL
8	Gawar Bangalore Highways Private Limited	GBHPL
9	Gawar Nainital Highways Private Limited	GNHPL II

(Hereinafter all the nine companies mentioned above are together referred to as "**the SPVs"**)

I understand that the InvIT, acting through the Trustee, shall acquire the equity held by the Transferor or/and other shareholders in its SPVs mentioned above, following which units will be issued to the Transferor by the Trust, which are to be listed on BSE and NSE consequent to the proposed Initial Public Offer **("the Proposed Transaction").**

In this regard, the Investment Manager and the Trustee intend to undertake the fair enterprise valuation of the SPVs as on 30th September 2024 as per the provisions of the SEBI InvIT Regulations. I am enclosing the Report providing opinion on the fair enterprise value of the SPVs as defined hereinafter on a going concern basis as at 30th September 2024 ("**Valuation Date**").

Enterprise Value ("**EV**") is described as the total value of the equity in a business plus the value of its debt and debt related liabilities, minus any Cash and Cash Equivalents to meet those liabilities. The attached Report details the valuation methodologies used, calculations performed and the conclusion reached with respect to this valuation.

I was further requested by the Investment Manager to provide the adjusted enterprise value of the SPVs as at 30th September 2024, where the adjusted enterprise value ("**Adjusted EV**") is derived as EV as defined above plus **Cash and Cash Equivalents** (including Investments and FD with Banks) **("Cash and Cash Equivalents")** of the SPVs as at 30th September 2024.

This Report has been prepared solely for the purpose of inclusion as part of the Offer Document ("**OD**") and such other documents as may be required in accordance with the independent valuation required as per the SEBI InvIT Regulations.

I have relied on explanations and information provided by the Investment Manager. Although, I have reviewed such data for consistency, those are not independently investigated or otherwise verified. My team and I have no present or planned future interest in the Trust, the SPVs or the Investment Manager except to the extent of this appointment as an independent valuer and the fee for this Valuation Report ("**Report**") which is not contingent upon the values reported herein. The valuation analysis should not be construed as investment advice, specifically, I do not express any opinion on the suitability or otherwise of entering into any financial or other transaction with the Trust.

The analysis must be considered as a whole. Selecting portions of any analysis or the factors that are considered in this Report, without considering all factors and analysis together could create a misleading view of the process underlying the valuation conclusions. The preparation of a valuation is a complex process and is not necessarily susceptible to partial analysis or summary description. Any attempt to do so could lead to undue emphasis on any particular factor or analysis.

The information provided to me by the Investment Manager in relation to the SPVs included but not limited to historical financial statements, forecasts/projections, other statements and assumptions about future matters like forward-looking financial information prepared by the Investment Manager. The forecasts and projections as supplied to me are based upon assumptions about events and circumstances which are yet to occur.

I have not tested individual assumptions or attempted to substantiate the veracity or integrity of such assumptions in relation to the forward-looking financial information, however, I have made sufficient enquiry to satisfy myself that such information has been prepared on a reasonable basis.

Notwithstanding anything above, I cannot provide any assurance that the forward looking financial information will be representative of the results which will actually be achieved during the cash flow forecast period.

The valuation provided by RV and the valuation conclusion are included herein and the Report complies with the SEBI InvIT Regulations and guidelines, circular or notification issued by the Securities and Exchange Board of India ("**SEBI**") thereunder.

Please note that all comments in the Report must be read in conjunction with the caveats to the Report, which are contained in Section 11 of this Report. This letter, the Report and the summary of valuation included herein can be provided to Trust's advisors and may be made available for the inspection to the public and with the SEBI, the stock exchanges and any other regulatory and supervisory authority, as may be required.

I draw your attention to the limitation of liability clauses in Section 11 of this Report. This letter should be read in conjunction with the attached Report.

Yours faithfully,

S. Sundararaman
Registered Valuer
IBBI Registration No.: IBBI/RV/06/2018/10238
Asset Class: Securities or Financial Assets
Place: Chennai
UDIN: 24028423BKGABR3481

Definition, Abbreviation & Glossary of terms

Abbreviations	Meaning
Capex	Capital Expenditure
CCIE	Conciliation Committee of Independent Experts
CCIL	Clearing Corporation of India Limited
CCM	Comparable Companies Multiples
COD	Commercial Operation Date
DBOT	Design Build, Operate and Transfer
CTM	Comparable Transactions Multiples
DCF	Discounted Cash Flow
EBITDA	Earnings Before Interest, Taxes, Depreciation and Amortization
ERP	Equity Risk Premium
EV	Enterprise Value
FCFF	Free Cash Flow to the Firm
FDI	Foreign Direct Investment
FY	Financial Year Ended 31st March
GAD	General Arrangement Drawing
Government of NCT	Government of National Capital Territory
HAM	Hybrid Annuity Model
HSRBDCL	Haryana State Road & Bridge Development Corporation Limited
Ind AS	Indian Accounting Standards
INR	Indian Rupee
Investment Manager/ GIMPL	Gawar Investment Manager Private Limited
IVS	ICAI Valuation Standards 2018
Kms	Kilometers
MMR	Major Maintenance and Repairs
Mn	Million
MoRTH	Ministry of Road Transport and Highways
NAV	Net Asset Value Method
NH	National Highway
NHAI	National Highways Authority of India
NHDP	National Highways Development Project
NS-EW	North- South and East-West Corridors
O&M	Operation & Maintenance
PPP	Public Private Partnership
RFID	Radio Frequency Identification
RV	Registered Valuer
ROW	Right of Way
ROB	Railway over Bridge
SBHPL	Sadbhav Bangalore Highway Private Limited
SEBI	Securities and Exchange Board of India
SEBI InvIT Regulations	SEBI (Infrastructure Investment Trusts) Regulations, 2014, as amended
SIPL	Sadbhav Infrastructure Project Limited
SNHPL	Sadbhav Nainital Highway Private Limited
Sponsor/ GCL	Gawar Construction Limited

SPV	Special Purpose Vehicle
Trustee	Axis Trustee Services Limited

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1. Executive Summary

1.1. Background

The Trust

1.1.1. Capital Infra Trust (Erstwhile National Infrastructure Trust) was established on 25th September 2023 as an irrevocable trust pursuant to the trust deed under the provisions of the Indian Trusts Act, 1882. The Trust is registered as an Indian infrastructure investment trust with the Securities and Exchange Board of India ("**SEBI**"), pursuant to the SEBI (Infrastructure Investment Trusts) Regulations, 2014, as amended from time to time, with effect from 7th March 2024, bearing registration number IN/InvIT/23-24/00029. The Trust has proposed to acquire the SPVs and would be responsible for holding the SPVs in trust and for the benefit of the unitholders, undertaking the activities and other duties specified as per the SEBI InvIT Regulations.

1.1.2. Capital Infra Trust (Erstwhile National Infrastructure Trust) is an infrastructure investment trust established to acquire, manage and invest in a portfolio of infrastructure assets across sectors and/or securities of companies engaged in the infrastructure sector.

1.1.3. Axis Trustee Services Limited ("**the Trustee**") has been appointed as the Trustee of the Trust.

The Sponsor

1.1.4. Gawar Construction Limited ("**the Sponsor**" or "**GCL**") has floated an infrastructure investment trust under the SEBI InvIT Regulations called "**Capital Infra Trust**" (Erstwhile National Infrastructure Trust).

1.1.5. Gawar Construction Limited was established in 1997 and restructured as a limited company in 2008. It is an infrastructure development and construction company in India, with over 15 years of experience, primarily engaged in the construction of road and highway projects across 19 states in India for various government/ semi-government bodies and statutory authorities including National Highway Authority of India (NHAI), Ministry of Road Transport & Highways (MoRTH), Military Engineering Services (MES) and Central Public Works Department (CPWD). The Sponsor has since 2008 undertaken over 100 road construction projects.

1.1.6. Equity shareholding of the Sponsor as on 30th Spetember 2024 is as under:

Sr. No.	Particulars	No. of shares	%
1	Mr. Ravinder Kumar	72,65,000	49.5%
2	Mr. Rakesh Kumar	27,15,000	18.5%
3	Mr. Chhabil Dass	10,000	0.1%
4	Mrs. Phoolwati Devi	800	0.0%
5	Mrs. Uma Rani	100	0.0%
6	Nandrupa Developers Private Limited (Formerly known as Gawar Construction Company Pvt Ltd)	38,16,300	26.0%
7	Mr. Neeraj Sheoran	8,79,100	6.0%
	Total	**1,46,86,300**	**100%**

Source: Investment Manager

The Investment Manager

1.1.7. Gawar Investment Manager Private Limited has been appointed as the Investment Manager to the Trust by the Trustee and will be responsible to carry out the duties of such person as mentioned under the SEBI InvIT Regulations.

1.1.8. Shareholding of the Investment Manager as on 30th September 2024 is as under:

Sr. No.	Particulars	No. of shares	%
1	Gawar Construction Limited	1,39,99,900	100.0%
2	Ravinder Kumar	100	0.0%
	Total	**1,40,00,000**	**100.0%**

Source: Investment Manager

Financial Assets to be Valued

1.1.9. The SPVs under consideration are valued at Enterprise Value and Adjusted Enterprise Value:

Sr. No.	Name of the SPV
1	Gawar Narnaul Highway Private Limited (GNHPL)
2	Gawar Khajuwala Bap Highway Private Limited (GKBHPL)
3	Hardiya Hasanpur Highway Private Limited (HHHPL)
4	Gawar Rohna Jhajjar Highway Private Limited (GRJHPL)
5	Gawar Kiratpur Nerchowk Highway Private Limited (GKNHPL)
6	Gawar Rohna Sonepat Highways Private Limited (GRSHPL)
7	Dewas Ujjain Highway Private Limited (DUHPL)
8	Gawar Bangalore Highways Private Limited (GBHPL)
9	Gawar Nainital Highways Private Limited (GNHPL II)

(Together referred to as "**the SPVs**")

Purpose of Valuation

1.1.10. I understand that the InvIT, acting through the Trustee, shall acquire the equity held by the Transferor or/and other shareholders in its SPVs mentioned above, following which units will be issued to the Transferor by the Trust, which are to be listed on BSE and NSE consequent to the proposed Initial Public Offer **("the Proposed Transaction")**.

1.1.11. In this regard, the Investment Manager has appointed me, S. Sundararaman ("**Registered Valuer**" or "**RV**" or "**I**" or "**My**" or "**Me**") bearing IBBI registration number IBBI/RV/06/2018/10238 to undertake fair valuation of the SPVs at the enterprise level as per the extant provisions of the SEBI InvIT Regulations issued by SEBI. Enterprise Value ("**EV**") is described as the total value of the equity in a business plus the value of its debt and debt related liabilities, minus any Cash and Cash Equivalents to meet those liabilities.

1.1.12. Further, on the request of the Investment Manager, I have calculated Adjusted Enterprise Value of the SPVs which is derived as the EV as defined above plus Cash and Cash Equivalents of the SPVs as at the Valuation Date.

1.1.13. I declare that:

i. I am competent to undertake the financial valuation in terms of the SEBI InvIT Regulations;

ii. I am not an associate of the Sponsor(s) or Investment Manager or Trustee and I have not less than five years of experience in valuation of infrastructure assets;

iii. I am independent and have prepared the Report on a fair and unbiased basis;

iv. I have valued the SPVs based on the valuation standards as specified / applicable as per SEBI InvIT Regulations.

1.1.14. This Report covers all the disclosures required as per the SEBI InvIT Regulations and the Valuation of the SPVs is impartial, true and fair and in compliance with the SEBI InvIT Regulations.

1.2. Scope of Valuation

1.2.1. Nature of the Asset to be Valued

The RV has been mandated by the Investment Manager to arrive at the Enterprise Value ("EV") of the SPVs. Enterprise Value is described as the total value of the equity in a business plus the value of its debt and debt related liabilities, minus any Cash and Cash Equivalents to meet those liabilities.

Further, on the request of the Investment Manager, I have calculated Adjusted Enterprise Value of the SPVs which is derived as the EV as defined above plus Cash and Cash Equivalents of the SPVs as at the valuation date.

1.2.2. Valuation Base

Valuation Base means the indication of the type of value being used in an engagement. In the present case, I have determined the fair value of the SPVs at the enterprise level. Fair Value Bases defined as under:

Fair Value

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 valuation date. It is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction in the principal (or most advantageous) market at the measurement date under current market conditions (i.e. an exit price) regardless of whether that price is directly observable or estimated using another valuation technique. Fair value or Market value is usually synonymous to each other except in certain circumstances where characteristics of an asset translate into a special asset value for the party(ies) involved.

1.2.3. Valuation Date

Valuation Date is the specific date at which the value of the assets to be valued gets estimated or measured. Valuation is time specific and can change with the passage of time due to changes in the condition of the asset to be valued. Accordingly, valuation of an asset as at a particular date can be different from other date(s).

The Valuation Date considered for the fair enterprise valuation of the SPVs is 30th September 2024 ("**Valuation Date**"). The attached Report is drawn up by reference to accounting and financial information as on 30th September 2024. The RV is not aware of any other events having occurred since 30th September 2024 till date of this Report ("**Report Date**") which he deems to be significant for his valuation analysis, except for any events disclosed by the Investment Manager during the valuation exercise.

1.2.4. Premise of Value

Premise of Value refers to the conditions and circumstances how an asset is deployed. In the present case, RV has determined the fair enterprise value of the SPVs on a Going Concern Value defined as under:

Going Concern Value

Going Concern value is the value of a business enterprise that is expected to continue to operate in the future. The intangible elements of going concern value result from factors such as having a trained work force, an operational plant, necessary licenses, systems, and procedures in place etc.

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1.3. Summary of Valuation

I have assessed the fair enterprise value of each of the SPVs on a stand-alone basis by using the Discounted Cash Flow ("**DCF**") method under the income approach. Following table summarizes my explaination on the usage or non usage of different valuation methods:

Valuation Approach	Valuation Methodology	Used	Explanation
Cost Approach	Net Asset Value	No	NAV does not capture the future earning potential of the business. Hence NAV method is considered only for background reference.
Income Approach	Discounted Cash Flow	Yes	The revenue of all the SPVs is mainly derived from the annuity fees that are typically pre-determined with the relevant government authority and cannot be modified to reflect prevailing circumstances, other than annual adjustments to account for inflation and interest rate changes as applicable, as specified in the concession agreements. Accordingly, since all the SPVs are generating income based on pre-determined agreements / mechanism and since the Investment Manager has provided me the financial projections for the balance tenor of the concession agreements, DCF Method under the income approach has been considered as the appropriate method for the present valuation exercise.
Market Approach	Market Price	No	The equity shares of the SPVs are not listed on any recognized stock exchange in India. Hence, I was unable to apply the market price method.
	Comparable Companies	No	In the absence of any exactly comparable listed companies with characteristics and parameters similar to that of the SPVs, I am unable to consider this method for the current valuation.
	Comparable Transactions	No	In the absence of adequate details about the Comparable Transactions, I was unable to apply the CTM method.

Under the DCF Method, the Free Cash Flow to Firm ("**FCFF**") has been used for the purpose of valuation of each of the SPVs. In order to arrive at the fair EV of the individual SPVs under the DCF Method, I have relied on Special Purpose Combined Financial Statements as at 30th September 2024 prepared in accordance with the Indian Accounting Standards (Ind AS) and the financial projections of the respective SPVs prepared by the Investment Manager as at the Valuation Date based on their best judgement.

The discount rate considered for the respective SPVs for the purpose of this valuation exercise is based on the Weighted Average Cost of Capital ("**WACC**") for each of the SPVs. As all the SPVs under considerations have executed projects under the HAM model, the operating rights of the underlying assets shall be transferred back to the appointing authority after the expiry of the concession period. At the end of the agreed concession period, the operating rights in relation to the roads and the obligation to maintain the road revert to the government entity that granted the concession by the SPVs. Accordingly, terminal period value i.e. value on account of cash flows to be generated after the expiry of concession period has not been considered.

Based on the methodology and assumptions discussed further, RV has arrived at the fair enterprise value of the SPVs as on the Valuation Date:

INR Mn

Sr. No.	SPVs	Approximate Projection Period (Balance Concession Period)	WACC	Fair EV	Fair Adj EV
1	GNHPL	~11 Years 3 Months	7.53%	4,367	5,011
2	GKBHPL	~11 Years 4 Months	7.53%	2,958	4,212
3	HHHPL	~13 Years 7 Months	7.53%	5,925	6,013
4	GRJHPL	~10 Years 9 Months	7.53%	2,891	3,077
5	GKNHPL	~13 Years 8 Months	7.53%	11,965	12,374
6	GRSHPL	~12 Years 4 Months	7.60%	4,626	4,909
7	DUHPL	~13 Years 9 Months	7.53%	3,620	3,744
8	GBHPL	~11 Years 3 Months	7.96%	5,518	5,760
9	GNHPL II	~10 Years 1 Months	8.03%	3,273	3,414
Total				**45,143**	**48,513**

** Enterprise Value ("**EV**") is described as the total value of the equity in a business plus the value of its debt and debt related liabilities, minus any Cash and Cash Equivalents to meet those liabilities.*

*** Further, on the request of the Investment Manager, I have calculated Adjusted Enterprise Value of the SPVs which is derived as the EV as defined above plus Cash and Cash equivalents of the SPVs as at the Valuation Date.*
(Refer Appendix 1 & 2 for the detailed workings)

Further to above, considering that present valuation exercise is based on the future financial performance and based on opinions on the future credit risk, cost of debt assumptions, etc., which represent reasonable expectations at a particular point of time, but such information, estimates or opinions are not offered as predictions or as assurances that a particular level of income or profit will be achieved, a particular event will occur or that a particular level of income or profit will be achieved, a particular event will occur or that a particular price will be offered or accepted. Actual results achieved during the period covered by the prospective financial analysis will vary from these estimates and variations may be material. Accordingly, a quantitative sensitivity analysis is considered on the following unobservable inputs:

a. WACC by increasing / decreasing it by 0.5%
b. WACC by increasing / decreasing it by 1.0%
c. Total Expenses by increasing / decreasing it by 20%

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1. **Fair Enterprise Valuation Range based on**

a. **WACC parameter (0.5%)**

INR Mn

Sr. No.	SPVs	WACC +0.5%	EV	Base WACC	EV	WACC -0.5%	EV
1	GNHPL	8.03%	4,277	7.53%	4,367	7.03%	4,461
2	GKBHPL	8.03%	2,901	7.53%	2,958	7.03%	3,018
3	HHHPL	8.03%	5,782	7.53%	5,925	7.03%	6,075
4	GRJHPL	8.03%	2,832	7.53%	2,891	7.03%	2,953
5	GKNHPL	8.03%	11,673	7.53%	11,965	7.03%	12,268
6	GRSHPL	8.10%	4,523	7.60%	4,626	7.10%	4,732
7	DUHPL	8.03%	3,533	7.53%	3,620	7.03%	3,710
8	GBHPL	8.46%	5,387	7.96%	5,518	7.46%	5,654
9	GNHPL II	8.53%	3,209	8.03%	3,273	7.53%	3,339
Total of all SPVs			**44,116**		**45,143**		**46,211**

b. **WACC parameter (1.0%)**

INR Mn

Sr. No.	SPVs	WACC +1.0%	EV	Base WACC	EV	WACC -1.0%	EV
1	GNHPL	8.53%	4,190	7.53%	4,367	6.53%	4,558
2	GKBHPL	8.53%	2,845	7.53%	2,958	6.53%	3,079
3	HHHPL	8.53%	5,644	7.53%	5,925	6.53%	6,232
4	GRJHPL	8.53%	2,775	7.53%	2,891	6.53%	3,016
5	GKNHPL	8.53%	11,394	7.53%	11,965	6.53%	12,585
6	GRSHPL	8.60%	4,424	7.60%	4,626	6.60%	4,844
7	DUHPL	8.53%	3,450	7.53%	3,620	6.53%	3,805
8	GBHPL	8.96%	5,260	7.96%	5,518	6.96%	5,796
9	GNHPL II	9.03%	3,147	8.03%	3,273	7.03%	3,408
Total of all SPVs			**43,129**		**45,143**		**47,322**

c. **Total Expenses by increasing / decreasing it by 20%**

INR Mn

Sr. No.	SPVs	EV at Expenses +20%	EV at Base Expenses	EV at Expenses -20%
1	GNHPL	4,020	4,367	4,674
2	GKBHPL	2,602	2,958	3,312
3	HHHPL	5,563	5,925	6,288
4	GRJHPL	2,714	2,891	3,081
5	GKNHPL	11,452	11,965	12,477
6	GRSHPL	4,319	4,626	4,918
7	DUHPL	3,285	3,620	3,933
8	GBHPL	5,014	5,518	5,978
9	GNHPL II	3,097	3,273	3,450
	Total	**42,066**	**45,143**	**48,111**

2. Adjusted Enterprise Valuation Range based on

a. WACC parameter (0.5%)

INR Mn

Sr. No.	SPVs	WACC +0.5%	Adjusted EV	Base WACC	Adjusted EV	WACC -0.5%	Adjusted EV
1	GNHPL	8.03%	4,921	7.53%	5,011	7.03%	5,105
2	GKBHPL	8.03%	4,155	7.53%	4,212	7.03%	4,272
3	HHHPL	8.03%	5,869	7.53%	6,013	7.03%	6,163
4	GRJHPL	8.03%	3,018	7.53%	3,077	7.03%	3,139
5	GKNHPL	8.03%	12,082	7.53%	12,374	7.03%	12,677
6	GRSHPL	8.10%	4,806	7.60%	4,909	7.10%	5,015
7	DUHPL	8.03%	3,657	7.53%	3,744	7.03%	3,834
8	GBHPL	8.46%	5,629	7.96%	5,760	7.46%	5,896
9	GNHPL II	8.53%	3,350	8.03%	3,414	7.53%	3,480
Total of all SPVs			**47,487**		**48,513**		**49,581**

b. WACC parameter (1.0%)

INR Mn

Sr. No.	SPVs	WACC +1.0%	Adjusted EV	Base WACC	Adjusted EV	WACC -1.0%	Adjusted EV
1	GNHPL	8.53%	4,834	7.53%	5,011	6.53%	5,202
2	GKBHPL	8.53%	4,099	7.53%	4,212	6.53%	4,333
3	HHHPL	8.53%	5,732	7.53%	6,013	6.53%	6,319
4	GRJHPL	8.53%	2,961	7.53%	3,077	6.53%	3,202
5	GKNHPL	8.53%	11,803	7.53%	12,374	6.53%	12,994
6	GRSHPL	8.60%	4,707	7.60%	4,909	6.60%	5,127
7	DUHPL	8.53%	3,574	7.53%	3,744	6.53%	3,929
8	GBHPL	8.96%	5,503	7.96%	5,760	6.96%	6,038
9	GNHPL II	9.03%	3,288	8.03%	3,414	7.03%	3,549
Total of all SPVs			**46,500**		**48,513**		**50,692**

c. Total Expenses by increasing / decreasing it by 20%

INR Mn

Sr. No.	SPVs	EV at Expenses +20%	EV at Base Expenses	EV at Expenses -20%
1	GNHPL	4,664	5,011	5,318
2	GKBHPL	3,856	4,212	4,566
3	HHHPL	5,650	6,013	6,376
4	GRJHPL	2,900	3,077	3,267
5	GKNHPL	11,861	12,374	12,886
6	GRSHPL	4,602	4,909	5,201
7	DUHPL	3,409	3,744	4,057
8	GBHPL	5,256	5,760	6,220
9	GNHPL II	3,237	3,414	3,591
	Total	**45,437**	**48,513**	**51,482**

2. Procedures adopted for current valuation exercise

2.1. I have performed the valuation analysis, to the extent applicable, in accordance with ICAI Valuation Standards 2018 ("**IVS**") issued by the Institute of Chartered Accountants of India.

2.2. In connection with this analysis, I have adopted the following procedures to carry out the valuation analysis:

2.2.1. Requested and received financial and qualitative information relating to the SPVs;

2.2.2. Obtained and analyzed data available in public domain, as considered relevant by me;

2.2.3. Discussions with the Investment Manager on:

- Understanding of the business of the SPVs – business and fundamental factors that affect its earning-generating capacity including strengths, weaknesses, opportunities and threats analysis and historical and expected financial performance;

2.2.4. Undertook industry analysis:

- Research publicly available market data including economic factors and industry trends that may impact the valuation;
- Analysis of key trends and valuation multiples of comparable companies/comparable transactions, if any, using proprietary databases subscribed by me;

2.2.5. Analysis of other publicly available information;

2.2.6. Selection of valuation approach and valuation methodology/(ies), in accordance with IVS, as considered appropriate and relevant by me;

2.2.7. Conducted physical site visit of the road stretch of the SPVs;

2.2.8. Determination of fair value of the EV of the SPVs on a going concern basis till the end of the concession period as at the Valuation Date and determination of fair value of the Adjusted EV of the SPVs on a going concern basis till the end of the concession period as at the Valuation Date on request of the Investment Manager.

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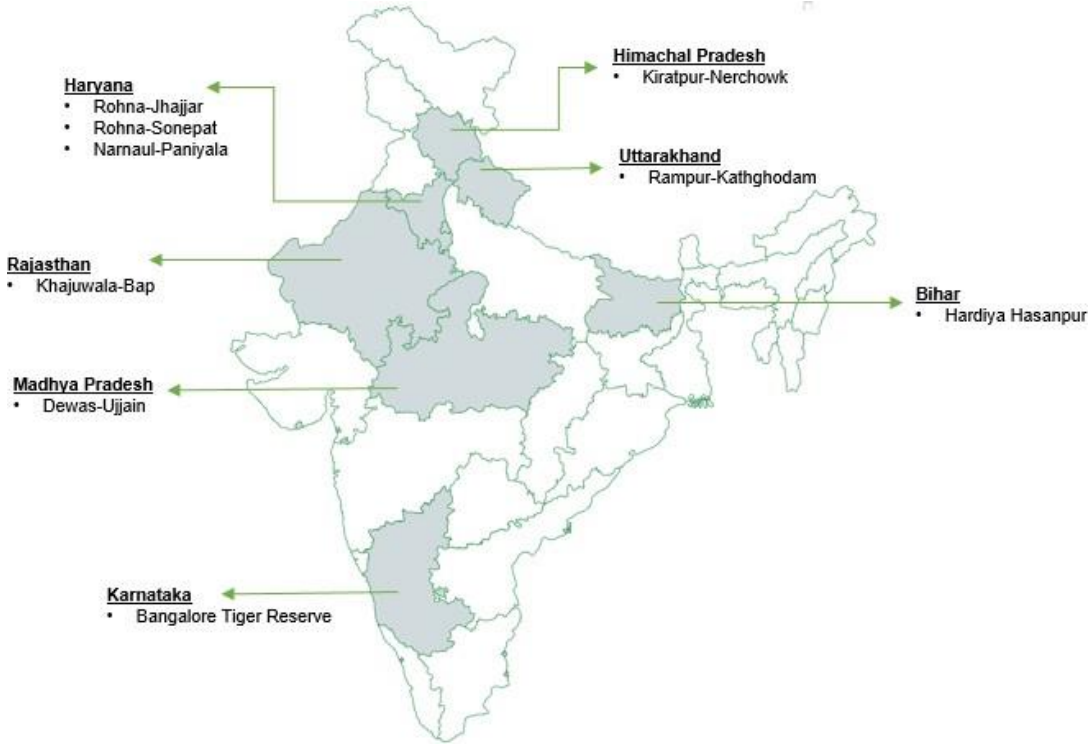
3. Overview of InvIT and SPVs

3.1. InvIT / Capital Infra Trust (Erstwhile National Infrastructure Trust) ("the Trust")

- Capital Infra Trust (Erstwhile National Infrastructure Trust) was established on 25th September 2023 as an irrevocable trust pursuant to the trust deed under the provisions of the Indian Trusts Act, 1882. The Trust is registered as an Indian infrastructure investment trust with the Securities and Exchange Board of India ("**SEBI**"), pursuant to the SEBI (Infrastructure Investment Trusts) Regulations, 2014, as amended from time to time, with effect from 7th March 2024, bearing registration number IN/InvIT/23-24/00029. The Trust has proposed to acquire the SPVs and would be responsible for holding the SPVs in trust and for the benefit of the unitholders, undertaking the activities and other duties specified as per the SEBI InvIT Regulations.
- Capital Infra Trust (Erstwhile National Infrastructure Trust) is an infrastructure investment trust established to acquire, manage and invest in a portfolio of infrastructure assets across sectors and/or securities of companies engaged in the infrastructure sector.
- Axis Trustee Services Limited ("**the Trustee**") has been appointed as the Trustee of the Trust.
- Following is a map of India showing the area covered by the SPVs of the Trust:



Source: Investment Manager

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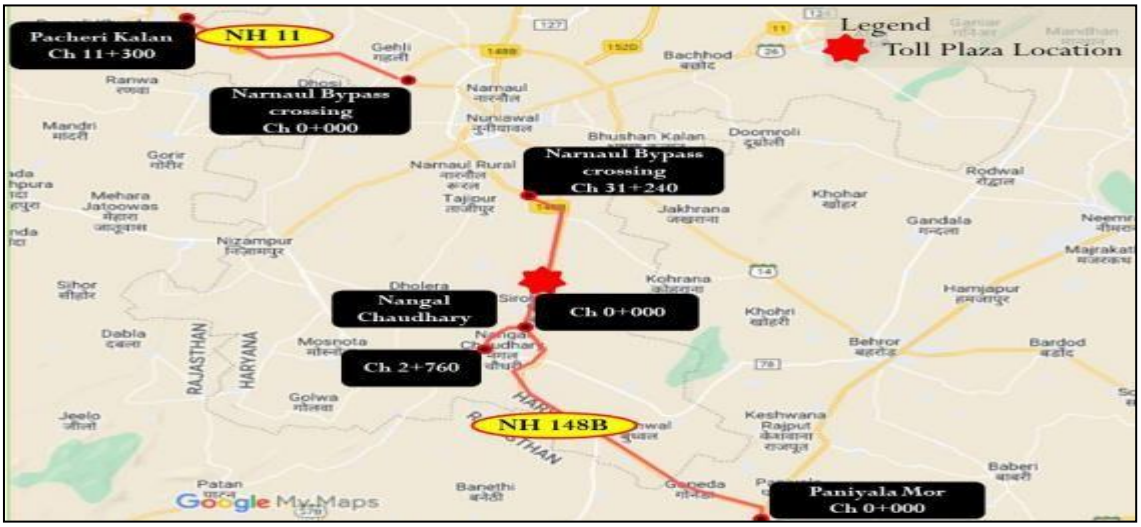
3.2. Background of the SPVs

3.2.1. Gawar Narnaul Highway Private Limited ("GNHPL")

- GNHPL was incorporated on 8th February 2019 as a private limited company under the Companies Act, 2013 pursuant to certificate of incorporation issued by the Registrar of Companies, Central Registration Centre. The registered office of GNHPL is located at DSS-378 Sector 16-17, Hissar HR 125001 IN.
- The Project Highway starts from Paniyala Mor with junction at NH-48 having Design Ch 0+000 and ends at Narnaul Bypass at Design Ch. 31+240, Nizampur link road having Design Ch. 0+000 to Ch. 2+760 and NH-11 starting from Narnaul Bypass crossing having Design Ch 0+000 and ends at Pacheri Kalan at Design Ch 11+300 in the state of Haryana.
- The project corridor passes through the towns/villages Paniyala Mor,Nangal Chaudhary,Sirohi Bahali, Narnaul, Khatoti, and Pacheri Kalan.
- The map below illustrates the location of the Project and the corridor it covers:



Source: Investment Manager

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- Summary of project details of GNHPL are as follow

Parameters	Details
Lane Kms	242.48 Lane Kms
Nos. of Lanes	4/6
NH / SH	NH 148B
State Covered	Haryana and Rajasthan
Area (Start and End)	Narnaul- Paniyala Mor
Bid Project Cost	INR 11,370 Mn
LOA Date	15th January 2019
Appointed Date	19th September 2020
Name of EPC Contractor	M/s Gawar Construction Ltd
Model	HAM
Project Type	DBOT
Concession Granted by	NHAI
PCOD	9th January 2021
COD	9th January 2021
Nos. of Annuities	30
Construction Period	910 days from Appointed date
Operational Period	15 years from COD

Source: Investment Manager

- The salient features of the project are as follows:

Sr. No.	Salient Features	For SPV
1	Total Length of the Project Highway	45.300 Km
2	Total length of Service Roads	71.307 Km
3	Widening	0 Km
4	New Alignment including bypass	0 Km
5	Approaches to underpasses	0 Km
6	New Jersey Crash Barrier	56.520 Km
7	Rigid Pavement for Main carriageway	25.821 Km
8	Flexible Pavement for Main carriageway	19.479 Km
9	Toll Plaza	1 Nos.
10	Bus Bays / Bus Shelters	12 Nos.
11	Truck Lay Bays	2 Nos.
12	Emergency call box	21 Nos.
13	Major/Minor Junction	36 Nos.
14	FOB	1 Nos.
15	No of Vehicular underpasses	11 Nos.
16	Vehicle overpass	0 Nos.
17	No of Subways	0 Nos.
18	No of Flyovers	0 Nos.
19	Pedestrian/Cattle Underpass	17 Nos.
20	ROB	0 Nos.
21	Major Bridges	2 Nos.
22	Minor Bridges	7 Nos.
23	Box/Slab Culverts	52 Nos.
24	Pipe Culverts	0 Nos.

Source: Investment Manager

- The shareholding of GNHPL as on Valuation Date is as follows:

Sr. No.	Particulars	No. of Shares	%
1	Gawar Construction Limited and its nominee(s)	6,10,00,000	100%
	Total	**6,10,00,000**	**100%**

Source: Investment Manager

- I have been represented by the Investment Manager that there is no change in shareholding pattern from the Valuation Date till the date of this Report.
- My team had conducted physical site visit of the road stretch of GNHPL on 19th July 2024. Refer below for the pictures of the road stretch:

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3.2.2. Gawar Khajuwala Bap Highway Private Limited ("GKBHPL")

- GKBHPL was incorporated on 18th April 2018 as a private limited company under the Companies Act, 2013 pursuant to certificate of incorporation issued by the Registrar of Companies, Central Registration Centre. The registered office of GKBHPL is located at DSS-378 Sector 16-17, Hissar HR 125001 IN.
- It was incorporated for the purpose of upgradation to 2 lanes with paved shoulder/ 4 lane of Khajuwala - Poogal section (Design Chainage 0.000to Chainage 30.812) and Poogal-Bap section of NH – 911 section (Design Chainage 1.430 to Chainage 182.725) (Total Length 212.107 km) under Bharatmala Pariyojna in the state of Rajasthan on Hybrid Annuity Mode.
- The Project Highway connects Beriyanwala/Khajuwala -Alladin ka Bera - Poogal - Dantour - Jaggasar - Gokul - Godu - Ranjeetpura-Charanwala - Nokh - Bap sections in the State of Rajasthan. (Package No. NHAI/BM/10). It serves movement of army vehicles to the border area and also a number of remote villages are also provided connectivity by this road. The total length of the project corridor is 212.107 km (existing length).
- The Project Road passes through three districts namely Bikaner, Jaisalmer and Jodhpur.
- The map below illustrates the location of the Project and the corridor it covers

Source: Investment Manager

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- The salient features of the project are as follows:

Parameters	Details
Lane Kms	424.21 Lane Kms
Nos. of Lanes	2
NH / SH	NH 911
State Covered	Rajasthan
Area (Start and End)	Khajuwala- Bap
Bid Project Cost	INR 8,950 Mn
LOA Date	27th March 2018
Appointed Date	22nd May 2019
Name of EPC Contractor	M/s Gawar Construction Ltd
Model	HAM
Project Type	DBOT
Concession Granted by	NHAI
PCOD	20th January 2021
COD	30th October 2021
Nos. of Annuities	30
Construction Period	730 days from Appointed date
Operational Period	15 years from COD

Source: Investment Manager

- The salient features of the project are as follows:

Sr. No.	Salient Features	As per Site
1	Total Length of the Project Highway	212.107 Km
2	Total length of Service Roads	5.800 Km
3	Widening	0 Km
4	New Alignment including bypass	0 Km
5	Approaches to underpasses	0 Km
6	No of Bypass Roads	0 Nos.
7	Flexible Pavement for Main carriageway	212.107 Km
8	Rigid Pavement for Main carriageway	0 Km
9	Total length of Slip Roads	0 Km
10	Toll Plaza	3 Nos.
11	Bus Bays / Bus Shelters	71 Nos.
12	Truck Lay Bays	2 Nos.
13	No of Rest Areas	4 Nos.
14	Major Junction	13 Nos.
15	Minor Junctions	78 Nos.
16	No of Vehicular underpasses	3 Nos.
17	Vehicle overpass	0 Nos.
18	No of Subways	0 Nos.
19	Elevated Structure	0 Nos.
20	Syphon pipe culverts	54 Nos.
21	Pedestrian/Cattle Underpass	0 Nos.
22	Foot Over Bridge	0 Nos.
23	ROB	0 Nos.
24	Major Bridges	0 Nos.
25	Minor Bridges	5 Nos.

26	Box/Slab Culverts	107 Nos.
27	Pipe Culverts	24 Nos.

Source: Investment Manager

- The shareholding of GKBHPL as on Valuation Date is as follows:

Sr. No.	Particulars	No. of Shares	%
1	Gawar Construction Limited and its nominee(s)	5,30,00,000	100%
	Total	**5,30,00,000**	**100%**

Source: Investment Manager

- My team had conducted physical site visit of the road stretch of GKBHPL on 18th July 2024. Refer below for the pictures of the road stretch:

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3.2.3. Hardiya Hasanpur Highway Private Limited ("HHHPL")

- HHHPL was incorporated on 22nd September 2020 as a private limited company under the Companies Act, 2013 pursuant to certificate of incorporation issued by the Registrar of Companies, Central Registration Centre. The registered office of HHHPL is located at DSS-378 Sector 16-17, Hissar HR 125001 IN.
- HHHPL was incorporated for purpose of four Laning of Rajauli-Bakhtiyarpur section of new NH-20 (Old NH-31) from Design Ch 54+405 to Design Ch 101+630 (Design Length 47.225 km) in the State of Bihar on Hybrid Annuity Mode.
- The existing Project Highway starts at km 54.405 Hardiya and ends at km. 101.630 at Hasanpur in the state of Bihar. The Start co-ordinate of the Project is Latitude 24°36'11.88" N and Longitude 85°30'49.68" E. The end co-ordinate of the Project is Latitude 25°0'24.84" N and Longitude 85°31'38.28" E.
- The map below illustrates the location of the Project and the corridor it covers:

Source: Investment Manager

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- Summary of project details are as follows:

Parameters	Details
Lane Kms	188.9 Lane Kms
Nos. of Lanes	4
NH / SH	NH 20
State Covered	Bihar
Area (Start and End)	Rajauli-Bakhtiyarpur
Bid Project Cost	INR 10,440 Mn
LOA Date	14th September 2020
Appointed Date	28th April 2021
Name of EPC Contractor	M/s Gawar Construction Ltd
Model	HAM
Project Type	DBOT
Concession Granted by	NHAI
PCOD	27th April 2023
COD	Pending
Nos. of Annuities	30
Construction Period	730 days from Appointed date
Operational Period	15 years from COD

Source: Investment Manager

- The salient features of the project are as follows:

Sr. No.	Salient Features	As per Site
1	Total Length of the Project Highway	47.225 Km
2	Total length of Service Roads	31.559 Km
3	Rigid Crash Barrier	29.111 Km
4	New Alignment including bypass	0 Km
5	Approaches to underpasses	0 Km
6	No of Bypass Roads	0 Nos.
7	Rigid Pavement for Main carriageway	47.225 Km
8	Emergency Call box	20 Nos.
9	Toll Plaza	1 Nos.
10	Bus Bays / Bus Shelters	20 Nos.
11	Truck Lay Bays	2 Nos.
12	No of Rest Areas	1 Nos.
13	Major Junction	14 Nos.
14	Minor Junctions	73 Nos.
15	Vehicular Underpass	10 Nos.
16	Light Vehicular underpasses	4 Nos.
17	Small Vehicular underpasses	1 Nos.
18	Vehicle overpass	10 Nos.
19	No of Subways	0 Nos.
20	No of Flyovers	2 Nos.
21	Pedestrian/Cattle Underpass	0 Nos.
22	ROB	1 Nos.
23	Major Bridges	2 Nos.
24	Minor Bridges for Main Carriageway	0 Nos.
25	Box/Slab Culverts	107 Nos.

26	Pipe Culverts	64 Nos.

Source: Investment Manager

- The shareholding of HHHPL as on Valuation Date is as follows:

Sr. No.	Particulars	No. of Shares	%
1	Gawar Construction Limited and its nominee(s)	2,41,00,000	100%
	Total	**2,41,00,000**	**100%**

Source: Investment Manager

- My team had conducted physical site visit of the road stretch of HHHPL on 24th July 2024. Refer below for the pictures of the road stretch:

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3.2.4. Gawar Rohna Jhajjar Highway Private Limited ("GRJHPL")

- GRJHPL was incorporated on 20th April 2018 as a private limited company under the Companies Act, 2013 pursuant to certificate of incorporation issued by the Registrar of Companies, Central Registration Centre. The registered office of GRJHPL is located at DSS-378 Sector 16-17, Hissar HR 125001 IN.
- GRJHPL was incorporated for the development, maintenance and management of National Highway No. 334B.The project corridor is situated in Haryana, passing through Rohna, Sampla, Hassangarh, Chara, and Bhaproda, all within the state. It commences at Rohna/Hassangarh with NH 334B at Design Ch. 44+800 and concludes at Jhajjar, connecting to NH 71 at Design Ch. 80+250.
- Spanning a total of 35.450 kilometers, the corridor traverses the towns/villages of Rohna, Hassangarh, Bhainsru Kalan, Bhainsru Khurd, Nayabans, Sampla, Bhaproda, Chara, and Jhajjar.
- The existing highway is a 2-lane road, while the Chhara Bypass is a 4-lane road, with plans to upgrade the entire route to 4 lanes with earthen shoulders. The road runs through a plain terrain.
- The map below illustrates the location of the Project and the corridor it covers:

Source: Investment Manager

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- Summary of project details of GRJHPL are as follows:

Parameters	Details
Lane Kms	141.80 Lane Kms
Nos. of Lanes	4
NH / SH	NH 334B
State Covered	Haryana
Area (Start and End)	Rohna- Jhajjar
Bid Project Cost	INR 7,180 Mn
LOA Date	26th March 2018
Appointed Date	18th December 2018
Name of EPC Contractor	M/s Gawar Construction Ltd
Model	HAM
Project Type	DBOT
Concession Granted by	NHAI
PCOD	10th July 2020
COD	31st July 2020
Nos. of Annuities	30
Construction Period	730 days from Appointed date
Operational Period	15 years from COD

Source: Investment Manager

- The salient features of the project are as follows:

Sr. No.	Salient Features	As per Site
1	Total Length of the Project Highway	35.450 Km
2	Total length of Service Roads	40.116 Km
3	Widening	0 Km
4	New Alignment including bypass	0 Km
5	Approaches to underpasses	0 Km
6	No of Bypass Roads	0 Nos.
7	Flexible Pavement for Main carriageway	0 Km
8	Rigid Pavement for Main carriageway	35.450 Km
9	Total length of Slip Roads	0 Km
10	Toll Plaza	1 No.
11	Bus Bays / Bus Shelters	22 Nos.
12	Truck Lay Bays	2 Nos.
13	No of Rest Areas	0 Nos.
14	Grade Separated Intersection without Ramps	16 Nos.
15	At-Grade Intersections	26 Nos.
16	Vehicular underpasses	10 Nos.
17	Light Vehicular underpasses	0 Nos.
18	Vehicle overpass	0 Nos.
19	No of Subways	0 Nos.
20	No of Flyovers	4 Nos.
21	Pedestrian/Cattle Underpass	0 Nos.
22	ROB	1 Nos.
23	Major Bridges	0 Nos.
24	Minor Bridges	5 Nos.
25	Slab Culverts	6 Nos.
26	Pipe/Box Culverts	16 Nos.

Source: Investment Manager

- The shareholding of GRJHPL as on Valuation Date is as follows:

Sr. No.	Particulars	No. of Shares	%
1	Gawar Construction Limited and its nominee(s)	3,90,00,000	100%
	Total	**3,90,00,000**	**100%**

Source: Investment Manager

- My team had conducted physical site visit of the road stretch of GRJHPL on 18th July 2024. Refer below for the pictures of the road stretch:

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3.2.5. Gawar Kiratpur Nerchowk Highway Private Limited ("GKNHPL")

- GKNHPL was incorporated on 23rd October 2020 as a private limited company under the Companies Act, 2013 pursuant to certificate of incorporation issued by the Registrar of Companies, Central Registration Centre. The registered office of GKNHPL is located at DSS-378 Sector 16-17, Hissar HR 125001 IN.
- GKNHPL was incorporated to identify, formulate, aid, promote, finance, establish, build, construct, erect, equip, operate, maintain, control, upgrade, regulate, modify, takeover, and / or to undertake development of balance Work for four laning of Kiratpur to Nerchowk Section of NH-2.
- It is equipped with closed-circuit television cameras and Intelligent Traffic Management System (ITMS) and the maximum speed limit has been fixed at 60km/hour. The ITMS will automatically issue challan for speeding violations.
- The Project Highway length is 47.753 km in Himachal Pradesh. The project has two link road one from Noni chowk to Bharari Village and other is ACC link road which connect Barmana to Dehar Village.
- The map below illustrates the location of the Project and the corridor it covers:

Source: Investment Manager

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- Summary of project details of GKNHPL are as follows:

Parameters	Details
Lane Kms	177.33 Lane Kms
Nos. of Lanes	4
NH / SH	NH 21
State Covered	Punjab and Himachal Pradesh
Area (Start and End)	Kiratpur- Ner Chowk
Bid Project Cost	INR 20,980 Mn
LOA Date	16th October 2020
Appointed Date	12th August 2021
Name of EPC Contractor	M/s Gawar construction Ltd
Model	HAM
Project Type	DBOT
Concession Granted by	NHAI
PCOD	7th June 2023
COD	5th September 2023
Nos. of Annuities	30
Construction Period	910 days from Appointed date
Operational Period	15 years from COD

Source: Investment Manager

- The salient features of the project are as follows:

Sr. No.	Salient Features	As per Site
1	Total Length of the Project Highway	47.753 Km
2	Total length of Service Roads	3 Km
3	Widening	0 Km
4	New Alignment including bypass	0 Km
5	Approaches to underpasses	0 Km
6	No of Tunnel	5 Nos.
7	Flexible Pavement for Main carriageway	44.10 Km
8	Rigid Pavement for Main carriageway	3.34 Km
9	Total length of Slip Roads	0 Km
10	Toll Plaza	1 No.
11	Bus Bays / Bus Shelters	19 Nos.
12	Truck Lay Bays	1 Nos.
13	No of Rest Areas	1 Nos.
14	Major Junction	9 Nos.
15	Minor Junctions	9 Nos.
16	No of Vehicular underpasses	3 Nos.
17	Vehicle overpass	0 Nos.
18	No of Subways	0 Nos.
19	Elevated Structure	0 Nos.
20	No of Flyovers	1 Nos.
21	Pedestrian/Cattle Underpass	2 Nos.
22	ROB	2 Nos.
23	Major Bridges	22 Nos.
24	Minor Bridges for Main Carriageway	15 Nos.
25	Box/Slab Culverts	115 Nos.
26	Pipe Culverts	30 Nos.

Source: Investment Manager

- The shareholding of GKNHPL as on Valuation Date is as follows:

Sr. No.	Particulars	No. of Shares	%
1	M/s Gawar Construction Limited	5,70,00,000	100%
	Total	**5,70,00,000**	**100%**

Source: Investment Manager

- My team had conducted physical site visit of the road stretch of GKNHPL on 18th July 2024. Refer below for the pictures of the road stretch:

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3.2.6. Gawar Rohna Sonepat Highways Private Limited ("GRSHPL")

- GRSHPL was incorporated on 1st April 2019 as a private limited company under the Companies Act, 2013 pursuant to certificate of incorporation issued by the Registrar of Companies, Central Registration Centre. The registered office of GRSHPL is located at DSS-378 Sector 16-17, Hissar HR 125001 IN.
- The Project includes UP/ Haryana border to Rohna section starts from km 0.000 and ends at km 44.800. The Start co-ordinate of the Project is Latitude 28°59'11.136156" N and Longitude 77°11'49.689996" E. The end co-ordinate of the Project is Latitude 28°50'44.67444" N and Longitude 76°51'47.667924" E.
- The Project corridor also includes 4 bypass around Khewra, Bahalgarh, Sonepat and Rohna along with new alignment at one location.
- The map below illustrates the location of the Project and the corridor it covers:

Source: Investment Manager

- Summary of project details of GRSHPL are as follows:

Parameters	Details
Lane Kms	160.88 Lane Kms
Nos. of Lanes	2/4
NH / SH	NH 334B
State Covered	Haryana
Area (Start and End)	Rohna- Sonepat
Bid Project Cost	INR 10,200 Mn
LOA Date	28th February 2019
Appointed Date	22nd January 2020
Name of EPC Contractor	M/s Gawar Construction Ltd
Model	HAM
Project Type	DBOT
Concession Granted by	NHAI
PCOD	29th January 2022
COD	5th April 2022
Nos. of Annuities	30
Construction Period	730 days from Appointed date
Operational Period	15 years from COD

Source: Investment Manager

- The salient features of the project are as follows:

Sr. No.	Salient Features	As per Site
1	Total Length of the Project Highway	40.500 Km
2	Total length of Service Roads	39.240 Km
3	Widening	0 Km
4	New Alignment including bypass	0 Km
5	Emergency Call Box	2 Nos.
6	No of Bypass Roads	4 Nos.
7	Flexible Pavement for Main carriageway	19.035 Km
8	Total length of Slip Roads	21.465 Km
9	Toll Plaza	1 Nos.
10	Bus Bays / Bus Shelters	32 Nos.
11	Truck Lay Bays	2 Nos.
12	No of Rest Areas	0 Nos.
13	Interchange	0 Nos.
14	Major/Minor Junction	44 Nos.
15	Grade Separator Intersections	11 Nos.
16	Vehicular underpasses	6 Nos.
17	Light Vehicular underpasses	2 Nos.
18	Vehicle overpass	0 Nos.
19	No of Subways	0 Nos.
20	Grade Separator Flyovers	10 Nos.
21	Pedestrian/Cattle Underpass	3 Nos.
22	ROB	1 Nos.
23	Major Bridges	1 Nos.
24	Minor Bridges	7 Nos.
25	Box/Slab Culverts	26 Nos.
26	Pipe Culverts	4 Nos.

Source: Investment Manager

- The shareholding of GRSHPL as on Valuation Date is as follows:

Sr. No.	Particulars	No. of Shares	%
1	Gawar Construction Limited and its nominee(s)	6,00,00,000	100%
	Total	**6,00,00,000**	**100%**

Source: Investment Manager

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- My team had conducted physical site visit of the road stretch of GRSHPL on 18th July 2024. Refer below for the pictures of the road stretch:

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3.2.7. Dewas Ujjain Highway Private Limited ("DUHPL")

- DUHPL was incorporated on 24th November 2020 as a private limited company under the Companies Act, 2013 pursuant to certificate of incorporation issued by the Registrar of Companies, Central Registration Centre. The registered office of HHHPL is located at DSS-378 Sector 16-17, Hissar HR 125001 IN.

- DUHPL was incorporated for the purpose of for Four Laning of Dewas Ujjain section of NH-148 NG and Construction of 4-Lane Ujjain Bypass Part-I and Part-II in the State of Madhya Pradesh.

- The Project includes Dewas Ujjain section starts from km 0.000 and ends 19.733, Ujjain Bypass starts from km.19.733 and ends at km 26.900 (Part-I) and Dewas Bypass starts at km 0.000 and ends at 14.520 (Part-II).

- The Project corridor also includes bypass around Ujjain along with minor realignment at three locations and 4 new construction stretches.

- DUHPL has received COD for Project Length of 40.25 km out of the total Project Length of 41.42 km w.e.f. 1st October 2023.

- The project highway passes through the built-up areas of towns and villages enroute. Important towns along the alignment are Gangedi, Chandesara, Daatana, Bolasa,Bangar etc.

- The map below illustrates the location of the Project and the corridor it covers:

Source: Investment Manager

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- Summary of project details are as follows:

Parameters	Details
Lane Kms	165.68 Lane Kms
Nos. of Lanes	4
NH / SH	NH 148
State Covered	Madhya Pradesh
Area (Start and End)	Dewas-Ujjain
Bid Project Cost	INR 7,160 Mn
LOA Date	29th October 2020
Appointed Date	28th April 2021
Name of EPC Contractor	M/s Gawar Construction Ltd
Model	HAM
Project Type	DBOT
Concession Granted by	NHAI
PCOD	3rd June 2023
COD	1st October 2023
Nos. of Annuities	30
Construction Period	730 days from Appointed date
Operational Period	15 years from PCOD/COD

Source: Investment Manager

- The salient features of the project are as follows:

Sr. No.	Salient Features	As per Site
1	Total Length of the Project Highway	41.420 Km
2	Total length of Service Roads	20.720 Km
3	Width of Service/Slip Road	5.75-8.5 m
4	Bypass Length	21.417 Km
5	Approaches to underpasses	0 Km
6	No of Bypass Roads	1 No.
7	Rigid Pavement for Main carriageway	0.4142 Km
8	Flexible Pavement for Main carriageway	41.000 Km
9	Toll Plaza	1 Nos.
10	Bus Bays / Bus Shelters	60 Nos.
11	Truck Lay Bays	2 Nos.
12	No of Rest Areas	0 Nos.
13	Major Junction	5 Nos.
14	Minor Junctions	29 Nos.
15	No of Vehicular underpasses	4 Nos.
16	Light Vehicular underpass	2 Nos.
17	Small Vehicular underpass	5 Nos.
18	No of Flyovers	5 Nos.
19	Pedestrian/Cattle Underpass	0 Nos.
20	ROB	1 Nos.
21	Major Bridges	1 Nos.
22	Minor Bridges	11 Nos.
23	Box/Slab Culverts	69 Nos.
24	Pipe Culverts	1 Nos.

Source: Investment Manager

- The shareholding of DUHPL as on Valuation Date is as follows:

Sr. No.	Particulars	No. of Shares	%
1	Gawar Construction Limited and its nominee(s)	1,90,00,000	100%
	Total	**1,90,00,000**	**100%**

Source: Investment Manager

- My team had conducted physical site visit of the road stretch of DUHPL on 18th July 2024. Refer below for the pictures of the road stretch:

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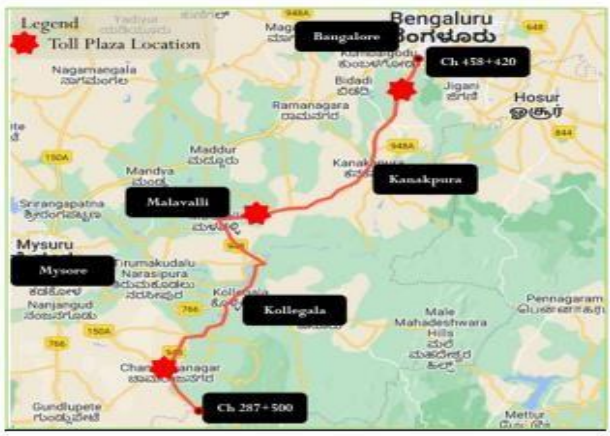
3.2.8. Gawar Bangalore Highways Private Limited ("GBHPL")

- GBHPL was incorporated on 28th November 2022 as a private limited company under the Companies Act, 2013 pursuant to certificate of incorporation issued by the Registrar of Companies, Central Registration Centre. The registered office of GBHPL is located at DSS-378 Sector 16-17, Hissar HR 125001 IN.
- SBHPL was the original bidder for the Project SPV, and was also responsible as the EPC contractor for the construction and development of the Project.
- The appointed date of the project was declared as 21st August 2021. However, there had been delay in implementation of project primarily on account of delay in land acquisition. Only about 80.10 Km length out of total project length of 170.92 Km was physically made available by 146th day from the appointed date. Further the original concessionaire had been facing financial crunch as occurrence of COVID- 19.
- Due to inordinate delays in fulfilment of the obligations by the Authority and Original Concessionaire, they entered into Settlement Agreement on 16th August 2021 wherein the PCOD was agreed to be issued retrospectively from 31st December 2020 for the completed length of 81.175 Km and extension of time was granted for completion of balance work.
- In spite of the Settlement Agreement, the Original Concessionaire failed to adhere to the terms of Settlement. Therefore, the Senior Lender carried out a bidding process for the Substitution of the Original Concessionaire through which GCL was selected. The senior lenders proposed the authority on 14th October 2022 to approve the Substitution of the Original Concessionaire with the Nominated Company.
- The Authority gave 'in principal' approval for the substitution of the Original Concessionaire with a new SPV to be incorporated by Nominated Company. The Authority gave final approval on 30th December 2020. Pursuant to an Endorsement Agreement dated 13th February 2023, GCL has acquired the said SPV.
- GBHPL was incorporated for the purpose of Two/Four laning of BRT Tiger Reserve Boundary to Bangalore section of NH-209 (Existing chainage from km 287.500 to km 458.420) in the State of Karnataka on Hybrid Annuity mode under NHDP Phase IV.
- The existing Project Highway starts from BRT Tiger Reserve at km 287.500 and ends at Bangalore section of NH-209 at km 458.420 in the state of Karnataka. The Project stretch is a part of Chamrajanagar-Kollegala-Malavalli-Kanakpura-Bangalore route.
- The project road has 3 nos of toll Plaza's proposed at km.298.940, km 359.800 and km 448.900 (as Concession Agreement)
- GBHPL has completed 99.16% of physical progress as on 30th September 2024.
- The SPV has received PCC2 for the length of 83.165 Km as on 29th October 2024.
- There has been a de-scope in the project for a length of 6.58 Km
- The map below illustrates the location of the Project and the corridor it covers:



Source: Investment Manager

- Summary of project details are as follows:

Parameters	Details
Lane Kms	382.52 Lane Kms
Nos. of Lanes	2/4
NH / SH	NH 209
State Covered	Karnataka
Area (Start and End)	Bengaluru to BRT Tiger Reserve Boundary
Bid Project Cost	INR 10,080 Mn
LOA Date	26th October 2016
Appointed Date	21st August 2017
Name of EPC Contractor	M/s Gawar Construction Ltd. (previously M/s Sadbhav Infrastructure Projects Ltd.)
Model	HAM
Project Type	DBOT
Concession Granted by	NHAI
PCOD	31st December 2020
COD	Pending
Nos. of Annuities	30
Construction Period	730 days from Appointed date
Operational Period	15 years from PCOD/COD

Source: Investment Manager

- The salient features of the project are as follows:

Sr. No.	Salient Features	As per Site
1	Total Length of the Project Highway	164.34 Km
2	Total length of Service Roads	6.60 Km
3	Width of Service/Slip Road	5.5 m
4	Bypass Length	0 Km
5	Approaches to underpasses	0 Km
6	No of Bypass Roads	0 No.
7	Rigid Pavement for Main carriageway	0 Km
8	Flexible Pavement for Main carriageway	164.34 Km
9	Toll Plaza	3 Nos.
10	Bus Bays / Bus Shelters	148 Nos.
11	Truck Lay Bays	4 Nos.
12	No of Rest Areas	0 Nos.
13	Major Junction	39 Nos.
14	Minor Junctions	166 Nos.
15	No of Vehicular underpasses	6 Nos.
16	Light Vehicular underpass	3 Nos.
17	Small Vehicular underpass	0 Nos.
18	No of Flyovers	0 Nos.
19	Pedestrian/Cattle Underpass	0 Nos.
20	ROB	1 Nos.
21	Major Bridges	6 Nos.
22	Minor Bridges	48 Nos.
23	Box/Slab Culverts	188 Nos.
24	Pipe Culverts	211 Nos.

Source: Investment Manager

- The shareholding of GBHPL as on Valuation Date is as follows:

Sr. No.	Particulars	No. of Shares	%
1	Gawar Construction Limited and its nominee(s)	2,39,10,000	100%
	Total	**2,39,10,000**	**100%**

Source: Investment Manager

- My team had conducted physical site visit of the road stretch of GBHPL on 15th July 2024. Refer below for the pictures of the road stretch:

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3.2.9. Gawar Nainital Highways Private Limited ("GNHPL II")

- GNHPL II was incorporated on 9th April 2023 as a private limited company under the Companies Act, 2013 pursuant to certificate of incorporation issued by the Registrar of Companies, Central Registration Centre. The registered office of GNHPL II is located at DSS-378 Sector 16-17, Hissar HR 125001 IN.
- SIPL through its SPV named SNHPL was the original bidder for the Project SPV, and was also responsible as the EPC contractor for the construction and development of each of the Projects.
- However, the work on the project was substantially delayed for the reason not attributable to Original Concessionaire such as delay in handing of ROW to the site by the Authority free from encumbrances, delay in receipt of approval of estimate for shifting of Utilities, delay in approval of estimate and drawings of ROB from Railway Department, delays due to Force Majeure Event (i.e. the first and second wave of COVID- 19, etc).
- The matters pertaining to extension of time was referred to CCIE. Accordingly, a settlement agreement was entered between the Authority and SNHL on 25th October 2021 wherein the PCOD was agreed to be issued retrospectively from 27th October 2019 for the completed road having a length of 18.085 Km. Length of project. The balance road was agreed to be completed by 30th June 2022 and the ROB by 30th September 2022.
- Subsequent to signing of Settlement Agreement, the project got delayed on account of several reasons like continuing effect of force Majeure, delay in approval of GAD for the ROB, flash floods in Gola River, un-seasonal rainfalls, delay in issuance of soil extraction permission and State Assemblies election related duties but mainly due to financial issues of Original Concessionaire.
- Furthermore, the Original Concessionaire again requested for Extension of timeline of the project. The approval of GAD for ROB was approved by railway authority on 9th February 2023.
- The Original Concessionaire on 20th February 2023 requested the Senior Lender for Harmonious Substitution with the SPV to be incorporated by GCL (Nominated Company) after which the senior Lender requested authority for Harmonious Substitution on 10th March 2023.. The authority gave 'in principal' approval on 17th April 2023. The Authority conveyed final approval for Harmonious Substitution on 12th July 2023.Pursuant to an Endorsement Agreement dated 14th July 2023, GCL has acquired the said SPV.
- GNHPL II was incorporated for the purpose of 4-Laning of Rampur – Kathgodam section of NH87 (New NH no. 09, 109) from km 42.791 (Design Chainage km 43.446) to km 88.000 (Design Chainage km 93.226) [Package – II] in the State of Uttarakhand under NHDP Phase – III on Hybrid Annuity Mode.
- The Project starts at Rampur km 43.446 and ends at Kathgodam km 93.226. The Start co-ordinate of the Project is Latitude 28°57'36.20427" N and Longitude 79°23'8.0817" E. The end co-ordinate of the Project is Latitude 29°16'10.41564" N and Longitude 79°32'40.33271" E.
- GNHPL II has completed 94.56% of physical progress as on 30th September 2024.
- The Project corridor also includes 1 bypass around Haldwani of length 13.202 km along with realignment at two locations.

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- The map below illustrates the location of the Project and the corridor it covers:

Source: Investment Manager

- Summary of project details are as follows:

Parameters	Details
Lane Kms	175.62 Lane Kms
Nos. of Lanes	4
NH / SH	NH 87
State Covered	Uttrakhand
Area (Start and End)	Rampur- Kathghodam
Bid Project Cost	INR 5,601 Mn
LOA Date	31st March 2016
Appointed Date	28th October 2017
Name of EPC Contractor	M/s Gawar Construction Ltd. (previously M/s Sadbhav Infrastructure Projects Ltd.)
Model	HAM
Project Type	DBOT
Concession Granted by	NHAI
PCOD	27th October 2019
COD	Pending
Nos. of Annuities	30
Construction Period	730 days from Appointed date
Operational Period	15 years from PCOD/COD

Source: Investment Manager

- The salient features of the project are as follows:

Sr. No.	Salient Features	As per Site
1	Total Length of the Project Highway	49.780 Km
2	Total length of Service Roads	3.150 Km
3	Total length of Slip Roads	7.800 Km
4	Bypass Length	13.202 Km

5	Approaches to underpasses	0 Km
6	No of Bypass Roads	1 No.
7	Rigid Pavement for Main carriageway	49.780 Km
8	Flexible Pavement for Main carriageway	0 Km
9	Toll Plaza	1 Nos.
10	Bus Bays / Bus Shelters	32 Nos.
11	Truck Lay Bays	0 Nos.
12	No of Rest Areas	0 Nos.
13	Major/Minor Junction	36 Nos.
14	Emergency Call Box	0 Nos.
15	No of Vehicular underpasses	1 Nos.
16	Light Vehicular underpass	0 Nos.
17	Railway Under Bridge	1 Nos.
18	No of Flyovers	0 Nos.
19	Pedestrian/Cattle Underpass	0 Nos.
20	ROB	1 Nos.
21	Major Bridges	2 Nos.
22	Minor Bridges	8 Nos.
23	Box/Slab Culverts	56 Nos.
24	Pipe Culverts	10 Nos.

Source: Investment Manager

- The shareholding of GNHPL II as on Valuation Date is as follows:

Sr. No.	Particulars	No. of Shares	%
1	Gawar Construction Limited and its nominee(s)	98,00,000	100%
	Total	**98,00,000**	**100%**

Source: Investment Manager

- My team had conducted physical site visit of the road stretch of GNHPL II on 19th July 2024. Refer below for the pictures of the road stretch:

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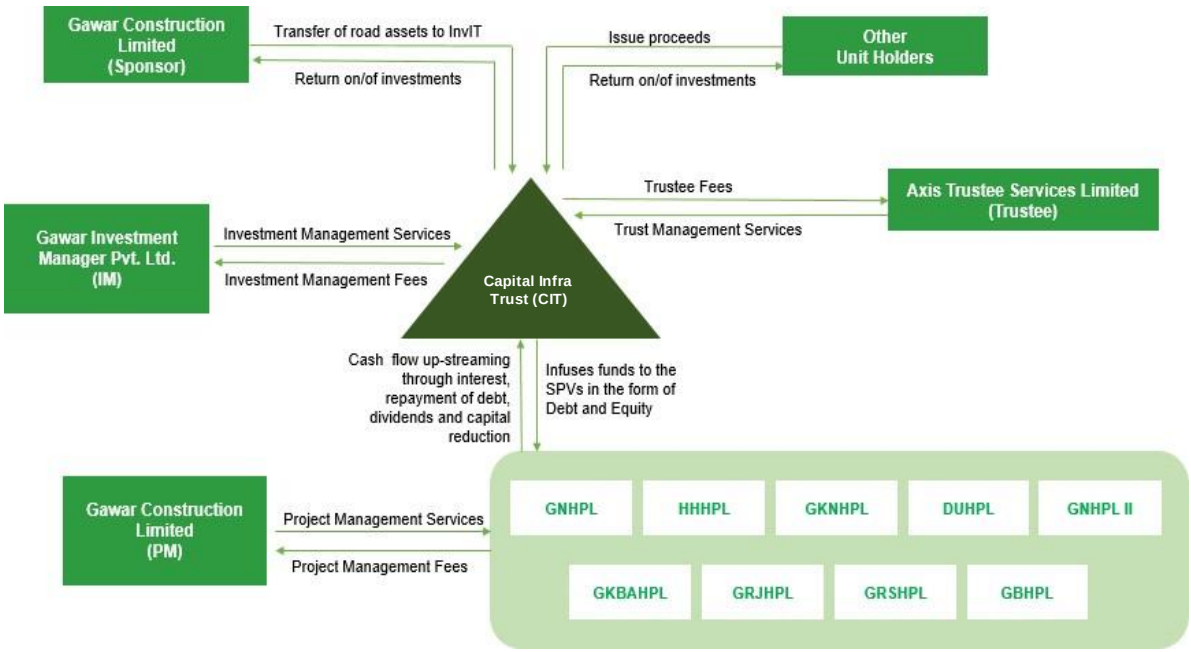
4. Structure of the Trust

4.1. Following is the structure of Capital Infra Trust (Erstwhile National Infrastructure Trust):



Source: Investment Manager

4.2 Following is the proposed acquisition structure:

Sr. No.	SPVs	Holding as on Valuation Date	Post Proposed Transaction Holding
		GCL	CIT
1	GNHPL	100%	100%
2	GKBHPL	100%	100%
3	HHHPL	100%	100%
4	GRJHPL	100%	100%
5	GKNHPL	100%	100%
6	GRSHPL	100%	100%
7	DUHPL	100%	100%
8	GBHPL	100%	100%
9	GNHPL II	100%	100%

Source: Investment Manager

5. Overview of the Industry

5.1 Introduction

5.1.1 In the context of India's ambitious journey towards a 5 trillion dollar economy, the transport sector emerges as a pivotal player.

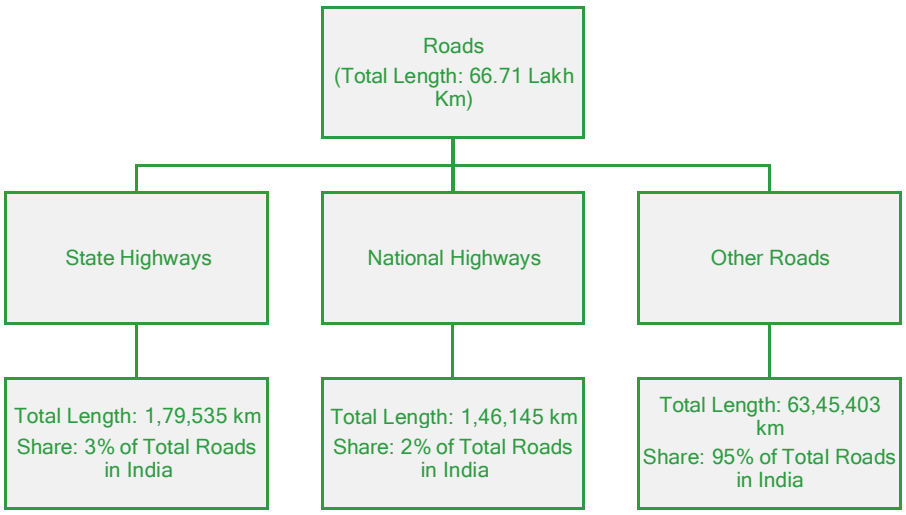
5.1.2 Creation and operation of quality road infrastructure continue to be major requirements for enabling overall growth and development of India in a sustained manner.

5.1.3 Bridging of existing infrastructure gaps and creating additional facilities to cater to the increasing population are equally important. Apart from providing connectivity in terms of enabling movement of passengers and freight, roads act as force multipliers in the economy.

5.1.4 Further, roads play a significant role in times of natural calamities, wars and other such events in terms of timely evacuation of the impacted population, carriage of relief material and other associated movements. Government takes cognisance of this requirement and road infrastructure remains to be a focus area.

5.2 Road Network in India

5.2.1 India has the second largest road network in the world, spanning over 6.67 million kms. Over 64.5% of all goods in the country are transported through roads, while 90% of the total passenger traffic uses road network to commute.



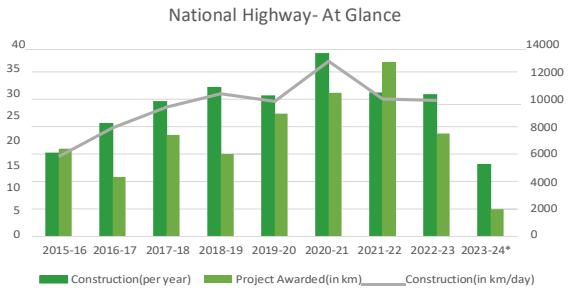
Source: MoRTH, Government of India (January 2024)

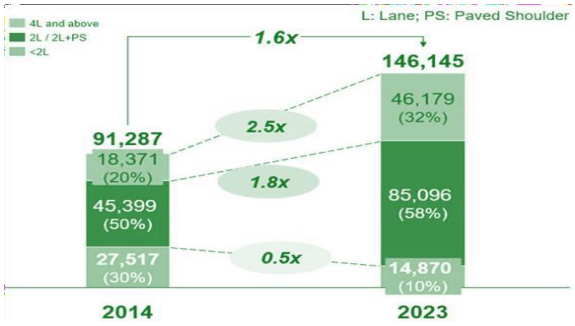
5.2.2 NHs constitute around 2 per cent of the total road network in the country but carry about 40% of the road traffic. The density of India's highway network at 1.89 km of roads per square kilometer of land – is similar to that of the France (1.98) and much greater than China's (0.49) or USA's (0.68).

5.2.3 National Highway (NH) network increased by ~60% from 91,287 km in 2014 to 1,46,145 km in year 2023.

Year	Construction (per year)	Project Awarded (in km)	Construction (in km/day)
2015-16	6061	6397	16.6
2016-17	8231	4335	22.6
2017-18	9829	7400	26.9
2018-19	10855	6000	29.7
2019-20	10237	8948	28.1
2020-21	13327	10467	36.5
2021-22	10457	12731	28.6
2022-23	10331	7497	28.3
2023-24*	5248	1975	-

Source: MoRTH, Government of India (January 2024)





Source: MoRTH, Government of India (January 2024)

5.3 Government Agencies for Road Development

5.3.1 The Ministry of Road Transport & Highway ("**MoRTH**") is responsible for development of Road Transport and Highways in general and construction & maintenance of National Highways.

5.3.2 The National Highways Authority of India ("**NHAI**") is an autonomous agency of the Government of India, set up in 1988 and is responsible for implementation of National Highways Development Project ("**NHDP**").

5.3.3 The NHDP in the context of NHs is nearing completion- in seven phases. Later, the other highway development programmes like Special Accelerated Road Development Programme for Development of Road Network in North Eastern States (SARDP- NE) and National Highways Interconnectivity Improvement Project (NHIIP) were also taken up by MoRTH. Further, Bharatlmala Pariyojana is ongoing. For majority of the projects under NHDP and Bharatmala Pariyojana, NHAI is the implementation agency. Other NH related programmes/works are being implemented through agencies like National Highways Infrastructure Development Corporation Limited (NHIDCL), State Public Works Departments (PWDs), State Road Development Corporations and the Border Road Organization.

5.3.4 In August 2023, the National Highways Authority of India (NHAI) made a big step towards improving the highway user experience, with the introduction of 'Rajmargyatra,' a citizen-centric unified mobile application. This user-friendly app provides travellers with in-depth knowledge of Indian National Highways as well as an effective procedure for filing complaints.

5.3.5 In June 2023, National Highways Authority of India (NHAI) introduced a 'Knowledge Sharing' platform for sharing of knowledge and innovative best practices. This effort, which is hosted on the NHAI website, will assist the authority in working with specialists and citizens who want to exchange knowledge and views about subjects including road design, construction, road safety, environmental sustainability, and related sectors. The platform will promote the exchange of best practices from all around the world and work to strengthen the nation's national highway system.

5.3.6 NHAI will come out with the third and fourth rounds of Infrastructure Investment Trusts (InvITs) to raise over Rs. 20,000 crore (US$ 2.41 billion) in FY24. NHAI is planning to raise Rs. 40,000 crore (US$ 5.72billion) to monetise its highway assets throughInfrastructure Investment Trust (InvIT).

5.3.7 In December 2022, NHAI raised Rs. 10,200 crore (US$ 1.23 billion) from foreign and Indian institutional investors to meet ever-growing budgetary support. Indian Government and Asian Development Bank signed US$ 500 million loan agreement to build the longest bridge across river Ganga, in Bihar. The bridge is expected to be ready by December 2021.

5.3.8 NHAI is planning to award 1,000-1,500 km of projects under the BOT model in 2023-24. In FY21, there were 125 PPP projects worth US$ 23.25 billion in India.

5.3.9 A total of 261 road projects under different Schemes of MoRTH with a total sanctioned cost of Rs. 1,02,594 crore (US$ 12.33 billion) are under implementation through the National Highways Authority of India (NHAI), National Highways & Infrastructure Development Corporation Ltd. (NHIDCL), and State Public Works Departments (PWDs) in the North-Eastern States. The Ministry of Development of the North-Eastern Region, under the erstwhile North-East Road Sector Development Scheme (NERSDS) and the present North-East Special Infrastructure Development Scheme (NESIDS), has sanctioned a total of 77 road projects amounting to Rs. 3,372.58 crore (US$ 405.5 million).

5.3.10 As of November 2023, there were 352 PPP projects worth US$ 76.95 billion in India.

5.3.11 In August 2020, the Government of India revised the Model Concession Agreement for BOT projects to plug delays by imposing a deadline on the NHAI and incentivising timely work by concessionaires. According to revised norms, the NHAI will have to hand over 90% of the project land (vacant and ready to build) to private developers, thus creating a more market-friendly sector and attracting more private players.

5.3.12 Roads in the jurisdiction of state governments are under different categories like State Highways (“SHs”) and Major District Roads. They are being developed/ upgraded through State PWDs and State Road Development Corporations. Pradhan Mantri Gramm Sadak Yojana is being implemented for rural roads through the Ministry of Rural Affairs with active participation by state governments. Further, roads within urban areas are maintained/ developed mostly with PWDs and Urban Local Bodies.

5.3.13 State Governments have a significant role to play in developing the SHs, Major District Roads, Other District Roads to ensure the last mile connectivity. States have varying levels of maturity in terms of road infrastructure development due to issues such as inadequate identification and prioritization of projects, funding shortfall, limited institutional capacity to implement projects, etc

5.4 Trend of Road and Highways Construction

5.4.1 The length of National Highways awarded has almost doubled in the years FY15 to FY18 compared to FY11 to FY14. NHAI plans to construct 25,000 kilometres of national highways in 2022-23 at a pace of 50 km per day.

5.4.2 The current rate of road construction is almost three times that in 2007-08.

5.4.3 The launch of the Bharatmala Pariyojana in 2017 provided a big fillip to construction activity, with the pace of construction doubling from 12 km per day in 2014-15 to 30 km per day in 2022-23, and peaking at 37 km per day in 2020-21.

5.4.4 The government aims to take this up to 100 km per day in the next few years.

5.4.5 National Highway (NH) network increased by 60% from 91,287 km in 2014 to 1,46,145 km in year 2023

5.4.6 Length of 4 lanes and above NH increased by 2.5 times - 18,387 km (2014) to 46,179 km (Nov’23)

5.4.7 Length of less than 2 lane NH decreased from 30% (2014) to 10% (Nov’23)

5.4.8 Average pace of NH construction increased by 143% to 28.3 km/day from 2014

5.4.9 Expenditure is expected to increase by 9.4 times to Rs 3.17 lakh Crore from 2014

5.4.10 Out of 108 (3700 km) port connectivity road projects, 8 (294 km) are completed, 28 (1808 km) are awarded and DPR under-progress for 72 (1595 km) projects

5.4.11 With the Government permitting 100% Foreign Direct Investment (FDI) in the road sector, several foreign companies have formed partnerships with Indian players to capitalise on the sector's growth. Cumulative FDI inflows in construction development stood at US$ 26.42 billion between April 2000-September 2023.

5.4.12 The GST on construction equipment has been reduced to 18% from 28%, which is expected to give a boost to infrastructure development in the country.

5.4.13 The Indian construction equipment industry, which aspires to become the world's second-largest by 2030, is believed to have grown by 25% year-on-year in FY23, surpassing 100,000-unit sales for the second year in a row.

5.4.14 In FY23, a total of 107,779 units of construction equipment were sold, registering an increase of 26%.

5.4.15 The NHDP is a program to upgrade, rehabilitate and widen major highways in India to a higher standard. The project was started in 1998 to be implemented in 7 phases.

5.4.16 With the launch of Bharatmala project, 10,000 km of highway construction left under NHDP was merged with Phase I of the Bharatmala project.

5.4.17 The Indian government launched Gati Shakti-National Master Plan, which has consolidated a list of 81 high impact projects, out of which road infrastructure projects were the top priority. The major highway projects include the Delhi-Mumbai expressway (1,350 kilometres), Amritsar-Jamnagar expressway (1,257 kilometres) and Saharanpur-Dehradun expressway (210 kilometres).

5.4.18 The main aim of this program is a faster approval process by digitizing the process through a dedicated Gati shakti portal.

5.4.19 In December 2021, the government set a highway monetization target of Rs. 2 trillion (US$ 26.20 billion) for the next 3 years.

5.4.20 The Government of India has allocated Rs. 111 lakh crore (US$ 13.14 billion) under the National Infrastructure Pipeline for FY 2019-25. The Roads sector is expected to account for 18% capital expenditure over FY 2019-25.

5.4.21 NHAI is planning to raise Rs. 40,000 crore (US$ 5.72 billion) to monetise its highway assets through Infrastructure Investment Trust (InvIT). The InvIT of NHAI, National Highways Infra Trust, has raised more than Rs 8,000 crore from foreign and Indian institutional investors till October 2022.

5.4.22 The development of market for roads and highways 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.

5.4.23 In August 2023, the National Highways Authority of India (NHAI) made a big step towards improving the highway user experience, with the introduction of 'Rajmargyatra,' a citizen-centric unified mobile application. This user-friendly app provides travellers with in-depth knowledge of Indian National Highways as well as an effective procedure for filing complaints.

5.4.24 In June 2023, National Highways Authority of India (NHAI) introduced a ‘Knowledge Sharing’ platform for sharing of knowledge and innovative best practices. This effort, which is hosted on the NHAI website, will assist the authority in working with specialists and citizens who want to exchange knowledge and views about subjects including road design, construction, road safety, environmental sustainability, and related sectors. The platform will promote the exchange of best practices from all around the world and work to strengthen the nation's national highway system.

5.4.25 Under the Union Budget 2024-25, the Government of India has allocated Rs 2,78,000 Crore to the Ministry of Road Transport and Highways.

5.4.26 Of the total budgetary grant, ₹1,68,464 is for investment in NHAI for the development of national highway corridors under Bharat Mala Pariyojana. As of November 2023, a total of 15,045 km of the total project of 26,418 km have been completed and an amount of ₹4.10 lakh crore has been spent under Bharat Mala Pariyojana up to October 2023.

5.4.27 The NHDP is a program to upgrade, rehabilitate and widen major highways in India to a higher standard. The project was started in 1998 to be implemented in 7 phases.

5.4.28 In December 2021, the government set a highway monetization target of Rs. 2 trillion (US$ 26.20 billion) for the next 3 years.

5.4.29 The development of market for roads and highways 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.

5.5 Implementation of important projects and expressways:

5.5.1 Bharatmala Pariyojna

Bharatmala Pariyojana is a new umbrella program for the highways sector that focuses on optimizing efficiency of freight and passenger movement across the country by bridging critical infrastructure gaps through effective interventions like development of Economic Corridors, Inter Corridors and Feeder Routes, National Corridor Efficiency Improvement, Border and International connectivity roads, Coastal and Port connectivity roads and Green-field expressway.

The Bharatmala Pariyojana envisages development of about 26,000 km length of Economic Corridors, which along with Golden Quadrilateral (GQ) and North-South and East-West (NS-EW) Corridors are expected to carry majority of the Freight Traffic on roads.

A total length of 34,800 km in road projects have been proposed to be constructed with an estimated outlay of Rs 5.35 trillion (US$ 74.15 billion) under Bharatmala Pariyojana Phase-I over a five year period (2017-18 to 2021-22). In Bharatmala Pariyojana, 60% projects on Hybrid Annuity Mode, 10% projects on BOT (Toll) Mode and 30% projects on EPC mode have been envisaged respectively.

Components under Bharatmala Pariyojana Phase-I are as given below:

Component	Length (Km)	Cost (INR Crore)
Economic corridors development	9,000	1,20,000
Inter-corridor & feeder roads	6,000	80,000
National Corridors Efficiency	5,000	1,00,000
Border & International connectivity	2,000	25,000
Coastal & port connectivity roads	2,000	20,000
Expressways	800	40,000
Sub Total	**24,800**	**3,85,000**
Other works - under NHDP	10,000	1,50,000
Total	**34,800**	**5,35,000**

Source: Ministry of Road Transport and Highways, Government of India

The completion cost of Phase-I is now estimated 10.63 trillion (US$ 130 billion) after factoring in cost escalations up to December 2021 and is 99% higher than the initial estimates owing to substantial rise in land acquisition cost, and steep increase in input costs. It is expected to be completed in FY2028, a delay of six years from the initial envisaged completion date of FY2022. During the last seven years, around 60% (20,632 km vs 34,800 km) of highway length has been awarded as of December 2021, and ~23% of the total length completed till March 2022

5.5.2 Char Dham Vikas Mahamarg Pariyojna:

This project envisages development of easy access to the four dhams in India – Gangotri, Yamunotri, Kedarnath and Badrinath. Development of this route of 889 km route us expected at an estimated cost of INR 12,000 Crores.

5.5.3 Eastern peripheral and western peripheral expressway

These two projects will connect NH-1 and NH-2 from western and eastern side of Delhi.

5.5.4 NH-544G Bengaluru-Vijayawada Economic Corridor

In February 2023, Mr. Nitin Gadkari has approved the development of 32 km long 6-lane Access Controlled Greenfield Highway on NH-544G Bengaluru-Vijayawada Economic Corridor in Hybrid Annuity Mode in Andhra Pradesh worth US$ 157 million (Rs. 1,292.65 crors).

5.5.5 Setu Bharatam:

This project aims to replace crossings on NHs with Road Over Bridges and Road Under Bridges. It is projected to construct 174 such structures.

a. 3,500 km of National Highway works in the state of Tamil Nadu at an investment of INR 1.03 lakh Crores. These include Madurai-Kollam corridor, Chittoor-Thatchur corridor. Construction will start next year.

b. 1,100 km of National Highway works in the State of Kerala at an investment of INR 65,000 Crores including 600 km section of Mumbai Kanyakumari corridor in Kerala.

c. 675 km of highway works in the state of West Bengal at a cost of INR 25,000 Crores including upgradation of existing road-Kolkata -Siliguri.

d. National Highway works of around INR 19,000 Crores are currently in progress in the State of Assam. Further works of more than INR 34,000 Crores covering more than 1300 kms of National Highways will be undertaken in the State in the coming three years.

e. In the Union Budget of 2022-23, the increase in Budget was a whopping 68% compared to the last year and the government plans to complete 25,000 kilometres of National highways.

5.6 Opportunities in road development & maintenance in India

a. India has joined the league of 15 of global alliance which will work towards the ethical use of smart city technologies

b. The Government aims to construct 65,000 kms of national highways at a cost of Rs. 5.35 lakh crore (US$ 741.51 billion).

c. The government also aims to construct 23 new national highways by 2025.

d. Road building in India is second least expensive in Asia.

e. Andhra Pradesh will spend US$ 296.05 million to build 8,970 kms of roads.

f. In February 2022, NHAI rolled out a plan to construct 5,795 kilometres of highways that will connect 117 districts. The plan was worth Rs. 1 trillion (US$ 13.09 billion).

5.7 Asset Monetisation

5.7.1 **TOT Model** – Under this model, the right of collection of user fee (toll) in respect of selected operational highways constructed through public funding are assigned through a concession agreement as a result of bidding. For a specified period of 15-30 years to the Concessionaire against upfront payment of a lump-sum amount quoted to the Government/NHAI. During the concession period, the responsibility for operations and maintenance of the road assets rests with the Concessionaire. 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. LoAs are issued under ToT bundles 11, 12, 13 & 14 and realization of Rs 15,968 Cr concession fee is expected in FY 2023-24. It is also pertinent to mention here that LoAs for these 4 TOT Bundles were issued by NHAI within one day of opening of the respective Financial bids. Total asset monetization under this model is expected to be Rs 42,334 Cr by the end of FY 2023-24.

5.7.2 **InVIT Model** - NHAI has set up an InvIT under the SEBI InvIT Regulations, 2014 which is a pooled investment vehicle that issues units to investors, while having three entities for management of the Trust – Trustee, Investment Manager and Project Manager. The three entities have defined roles and responsibilities under the SEBI Regulations.

5.7.3 **Securitization through SPV Model** – A SPV/DME (100% owned by NHAI), has been created by bundling road assets under consideration and securitizing the future user fee from the road assets. NHAI will collect tolls, maintain the road assets and periodically transfer payments to the SPV sufficient for servicing debt obligations at the SPV level. About Rs.37,000 crore has already been raised through this method (DME- Delhi Mumbai Expressway) by NHAI so far. Another, Rs.6,000 crore is expected to be raised under this model in FY 2023-24.

5.8 Utility Corridors

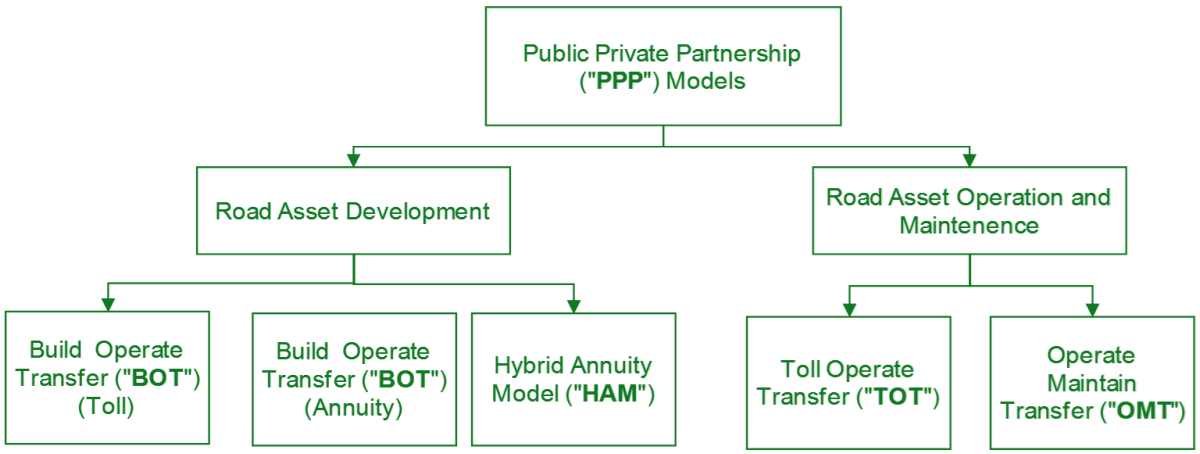
Working towards development of around 10,000 km of Optic Fibre Cables (OFC) infrastructure across the country by FY 2024-25, National Highways Logistics Management Limited (NHLML), a fully owned Company of NHAI, is implementing the network of Digital Highways by developing integrated utility corridors 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.

5.9 Public Private Partnership ("PPP") Models of road development and maintenance in India

5.9.1 India has a well-developed framework for Public-Private-Partnerships (PPP) in the highway sector. PPP has been a major contributor to the success story of the roads and highway sector in India. With the emergence of private players over the last decade, the road construction market has become fragmented and competitive. Players bidding for projects also vary in terms of size. PPP modes have been used in India for both development and operation & maintenance of road assets.

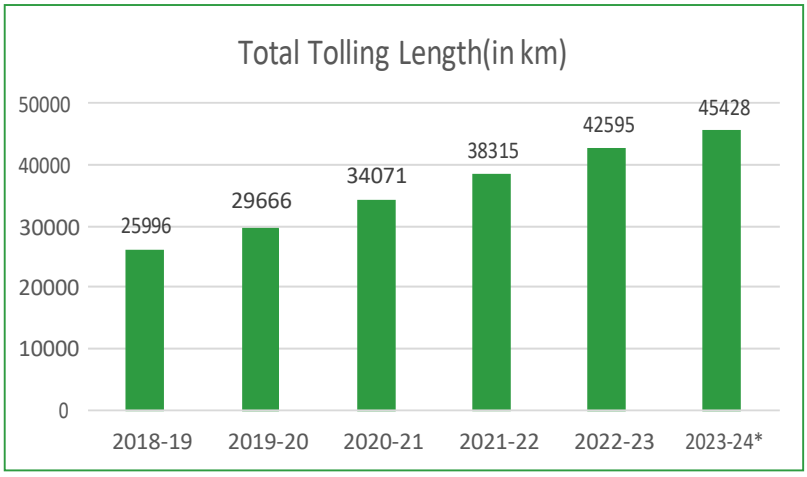
NHAI is planning to award 500 km of the 6,500 km target for FY23 through BOT mode. It may give minimum toll revenue guarantee to make it easier for contractors to bid for BOT projects.

5.9.2 In August 2020, the Government of India revised the Model Concession Agreement for BOT projects to plug delays by imposing a deadline on the NHAI and incentivising timely work by concessionaires. According to revised norms, the NHAI will have to hand over 90% of the project land (vacant and ready to build) to private developers, thus creating a more market-friendly sector and attracting more private players.



5.10 Road Asset Development Models

- **BOT Toll**
  - In a BOT toll project, the concessionaire is responsible for designing, building, financing, operating, maintaining, tolling and transferring the project to the relevant authority at the end of the concession period. The concession period is project specific but is usually for 20-25 years. In BOT Toll model, the concessionaire earns revenue primarily in the form of toll revenue which in turns depends on the traffic on the road stretch. Toll rates are regulated by the government through rules.



- **BOT Annuity**
  - Similar to a BOT Toll projects, in BOT Annuity project, the concessionaire is responsible for designing, building, financing, operating, maintaining, tolling and transferring the project to the relevant authority at the end of the concession period. However, in these projects, the right to collect toll on road stretch lies with the government. The concessionaire earns revenue in the form of pre-determined semi-annual annuity payments.
- **HAM**
  - Similar to a BOT projects, in HAM project, the concessionaire is responsible for designing, building, financing, operating, maintaining, tolling and transferring the project to the relevant authority at the end of the concession period. However, in these projects, the right to collect toll on road stretch lies with the government. The construction period for HAM projects is project specific and a fixed operation period of 15 years.

5.11 Major Events of 2023

5.11.1 Delhi-Vadodara Expressway: The Hon'ble Prime Minister dedicated to the nation 244.50 km long stretch of Delhi-Vadodara Expressway developed at a cost of about Rs. 11 ,895 crore on 2nd October 2023.

5.11.2 The Hon'ble Prime Minister dedicated to the nation a road project 'four laning of 59 km long Suryapet to Khammam section of NH-365BB' built at a cost of about Rs.2,460 crore.

5.11.3 The Hon'ble Prime Minister laid the foundation stone of key road projects that are part of Nagpur -Vijayawada Economic Corridor.

5.11.4 Foundation Stone laying for Karnataka Section of Six Lane Surat – Chennai Expressway (1270 Km)

5.11.5 Hon'ble Prime Minister dedicated 118 km long Bengaluru-Mysuru Expressway to the nation and laid the foundation stone for the 92 km Mysuru-Kushalnagar 4-lane highway in Mandya, Karnataka

5.11.6 Hon'ble Prime Minister inaugurated and laid the foundation stone of road projects worth about Rs.3,700 crores at Chennai, Tamil Nadu.

5.11.7 Hon'ble Prime Minister inaugurated and laid the foundation stones for upgradation of two lanes roads in Rajsamand and Udaipur.

5.11.8 Foundation stones of five National Highway projects worth Rs. 6,400 crores were laid in Raipur on 07th July 2023.

5.12 Government Investment in the Sector

5.12.1 A sum of ₹78,349 crore has been set aside for road works, which includes six landing of crowded sections of the Golden Quadrilateral, road development in Naxal-hit areas and provisioning of last-mile connectivity through State government's Public Works Department.

5.13 Growth Drivers

5.13.1 Robust Demand :

Growing domestic trade flows have led to rise in commercial vehicles and freight movement; supported by rise in production of commercial vehicles to 752,022 in FY20 which commands stronger road network in India. Higher individual discretionary spending has led to increased spending on two and four wheelers. Domestic sales of passenger vehicles, three-wheelers and two-wheelers, reached 3,069,499, 260,995, and 13,466,412 units, respectively, in FY22. Road's traffic share of the total traffic in India has grown from 13.8% to 65% in freight traffic and from 32% to 90% in passenger traffic over 1951-2019.

5.13.2 Increasing Investment :

Huge investment have been made in the sector with total investment increasing more than three times from 2014-15 to 2018- 19. Between FY16 and FY21, budget outlay for road transport and highways increased at a robust CAGR of 13.10%. NHAI has earmarked 46 projects, spanning more than 2,612 km for monetization in FY24. Plans are in place to raise up to INR 45,000 crore in FY24 through monetization, of which INR 30,000 crore will be raised through ToT mode and INR 15,000 crore through InvITs. NHAI will bid out nearly 75% of new highway projects on PPP, FY24 onwards. Projects worth over INR 500 crore will preferably be executed through PPP mode.

5.13.3 Policy Support :

100% FDI is allowed under automatic route subject to applicable laws and regulations, standardized process for bidding and tolling. Government of India has set up India Infrastructure Finance Company (IIFCL) to provide long-term funding for infrastructure projects.

5.14 Challenges & Issues in the Sector

5.14.1 Land Acquisition Delays & Cost :

- Land acquisition cost has increased more than 30% since 2017, primarily due to enhanced compensation payment requirements as per 'The Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Act, 2013'.
- Delay in pre-construction activities (such as land acquisition, relocation) affects project timelines. Land acquisition for road projects involves various stages. Each stage involves a number of stakeholders and regulatory bodies. Thus processes consume considerable time.

5.14.2 Regulatory Approvals & Disputes :

- Road development process requires a number of approvals such as environmental clearance, forest clearance, railways clearance, etc. Each of these activities takes considerable time and non-adherence to timelines result in cost overruns due to delays.
- Claims arising out of disputes between the concessionaire/ contractor and the government authorities are also a significant cost which can lead to large liabilities.

5.14.3 Operational Issues :

- Uncertainty of toll revenue collection and variation of collected toll revenue compared to projected levels as Actual traffic is much less than the anticipated traffic.
- Often unforeseen weather conditions require unplanned O&M, over and above the routine and periodic maintenance activities. This results in enhanced O&M expenses. The increase in O&M costs is also affecting the project returns.

5.14.4 Financing road construction projects :

- In the case of toll motorways, the challenge of financing construction projects is different but still remains. Traditionally, the construction of toll motorways is a profitable investment but in the times of recession, funding may be rare or nonexistent.

- Powerful national economies may be able to efficiently tackle the problem but weaker economies can hardly find the financing sources for road construction projects.

5.14.5 Climate Change :

- The road sector is vulnerable to climate change impacts. Climate change and extreme weather events pose a significant challenge to the safety, reliability, effectiveness and sustainability of road transportation systems. Tsunami waves, wildfires, floods and hurricanes constitute a big risk for passengers, vehicles and goods, as well as for the integrity of the transport infrastructure.
- Since reliable road transport is an essential driver of economic growth and social wellbeing worldwide, national road authorities and motorway operators must adapt the infrastructure to climate change and increase the resilience of road transport to extreme weather

5.14.6 Economy and cost effectiveness :

- Among all transport modes, road transport occupies a significant place in short- and medium distance travel operations. However, the unit cost of transportation (per ton × km), compared with other modes of transport, remains high and is getting higher and cost-ineffective as the travel distance increases.
- Road transport cost comprises direct costs (fuel, capital depreciation, maintenance, motorway tolls, ferry fares and wages) and external costs (noise, congestion, infrastructure damages, health and environmental issues).

5.15 Recent Initiatives by Government

5.15.1 Bhoomi Rashi - Land Acquisition Portal

The ministry has corroborated with the National Informatics Centre, to create Bhoomirashi, a web portal which digitises the cumbersome land acquisition process, and also helps in processing notifications relating to land acquisition online. Processing time, which was earlier two to three months has come down to one to two weeks now.

5.15.2 Central Road and Infrastructure Fund (CRF)

A majority of the Ministry's expenditure is managed through transfers from the CRIF. A portion of the cess collected on motor spirit and high-speed diesel is earmarked for the development of NHs and SHs, and the amount is transferred to the non-lapsable CRIF. This amount is eventually released to the NHAI, and to the state/UT governments for the development of road infrastructure, and other projects (such as ports, railway track, airports) in the country. For 2024-25, the transfer from CRIF towards the Ministry is estimated at Rs 3,464 crore.

5.15.3 National Investment Fund (NIF)

The NIF was created in 2005, and is credited with proceeds from disinvestments of public sector enterprises. The Ministry finances the Special Accelerated Road Development Programme in North East (SARDP-NE) with funds from the NIF.

5.15.4 FASTag - Electronic Toll Collection

National Electronic Toll Collection (NETC) system, 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.

5.15.5 Revival of languishing projects

Projects which were languishing for a number of years have been attempted to be revived, with the help of a number of policy measures taken by the government. Some of the policy measures like Premium deferment in stressed projects, extension of concession period for languishing projects to the extent of delay not attributable to concessionaires, One Time Capital Support for physical completion of languishing projects that have achieved at least 50 per cent physical progress, through one time fund infusion by NHAI, subject to adequate due diligence on a case to case basis.

5.15.6 Rural development

The Central government launched the Pradhan Mantri Gram Sadak Yojana on December 25, 2000, to provide all-weather road connectivity to the eligible unconnected habitations in rural areas. Over 7 lakh kilometres of roads have been constructed under the first and second phases of the scheme, which is currently in its third phase. Under the Union Budget 2024-25, the Government of India allocated Rs. 19,000 (US$ 2.37 billion) for Pradhan Mantri Gram Sadak Yojana (PMGSY).

5.15.7 Improve safety standards

In October 2021, the government announced rules to improve road safety, such as fixed driving hours for commercial truck drivers and a mandate to install sleep detection sensors in commercial vehicles. In October 2020, a memorandum of understanding (MoU) has been signed with the National Highways Authority of India (NHAI) by Guru Nanak Dev University (GNDU) to conduct advanced research on various aspects, including highway architecture, protection and revitalisation. The GNDU will undertake studies on ~137 km length of the National Highways passing through Pathankot, Gurdaspur and Amritsar districts.

5.15.9 Portfolios in roads & highways sector

In October 2020, the National Investment and Infrastructure Fund (NIIF) is making progress towards integrating its road and highway portfolio. The NIIF has acquired Essel Devanahalli Tollway and Essel Dichpally Tollway through the NIIF master fund. These road infra-projects will be supported by Athaang Infrastructure, NIIF's proprietary road network, assisted by a team of established professionals with diverse domain expertise in the transport field.

5.15.10 International Tie-ups

In December 2020, the Ministry of Road Transport and Highways signed a MoU with the Federal Ministry of Climate Action, Environment, Energy, Mobility, Innovation and Technology of the Republic of Austria on technology cooperation in the road infrastructure sector.

5.15.11 Encourage private funding to reduce finance constraints

- From April 2000 to September 2022, the construction sector in India attracted 26 billion U.S. dollars in foreign direct investments (FDI) for construction development. Another 28 billion U.S. dollars went into construction activities. Maif 2 Investments India Pvt. Ltd. became the first-largest foreign investment in Indian roads sector under toll-operate-transfer (TOT) mode worth Rs. 9,681.5 crore (US$ 1.50 billion).
- In October 2020, the Asian Development Bank (ADB) and the Government of India signed a US$ 177 million loan to upgrade 450 kms of state highways and major district roads in Maharashtra.
- In January 2021, the Government of India and New Development Bank (NDB) signed two loan agreements for US$ 646 million for upgrading the state highway and district road networks in Andhra Pradesh.
- In August 2020, the Government of India revised the Model Concession Agreement for BOT projects to plug delays by imposing a deadline on the NHAI and incentivising timely work by concessionaires.
- According to revised norms, the NHAI will have to hand over 90% of the project land (vacant and ready to build) to private developers, thus creating a more market-friendly sector and attracting more private players.

5.16 Outlook

India's infrastructure sector is rapidly 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 strong 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 will raise productivity, and accelerate economic growth and sustainable development.

The highways sector in India has been at the forefront of performance and innovation. The government is committed towards 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 well-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) has balanced risk appropriated between private and public partners and boosted PPP activity in the sector

Sources: IBEF Roads Report, August 2023; KPMG Report - Roads and Highway Sector; Website of Ministry of Road Transport and Highways, Government of India.

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6. Valuation Methodology and Approach

6.1. The present valuation exercise is being undertaken in order to derive the fair EV of the SPVs.

6.2. The valuation exercise involves selecting a method suitable for the purpose of valuation, by exercise of judgment by the valuers, based on the facts and circumstances as applicable to the business of the company to be valued.

6.3. There are three generally accepted approaches to valuation:

(a) "Cost" approach
(b) "Market" approach
(c) "Income" approach

6.4. Cost Approach

The cost approach values the underlying assets of the business to determine the business value. This valuation method carries more weight with respect to holding companies than operating companies. Also, cost value approaches are more relevant to the extent that a significant portion of the assets are of a nature that could be liquidated readily if so desired.

Net Asset Value ("NAV") Method

The NAV Method under Cost Approach considers the assets and liabilities, including intangible assets and contingent liabilities. The Net Assets, after reducing the dues to the preference shareholders, if any, represent the value of a company.

The NAV Method is appropriate in a case where the main strength of the business is its asset backing rather than its capacity or potential to earn profits. This valuation approach is also used in cases where the firm is to be liquidated, i.e. it does not meet the "Going Concern" criteria.

As an indicator of the total value of the entity, the NAV method has the disadvantage of only considering the status of the business at one point in time.

Additionally, NAV does not properly take into account the earning capacity of the business or any intangible assets that have no historical cost. In many aspects, NAV represents the minimum benchmark value of an operating business.

6.5. Market Approach

Under the Market approach, the valuation is based on the market value of the company in case of listed companies, and comparable companies' trading or transaction multiples for unlisted companies. The Market approach generally reflects the investors' perception about the true worth of the company.

Comparable Companies Multiples ("CCM") Method

The value is determined on the basis of multiples derived from valuations of comparable companies, as manifest in the stock market valuations of listed companies. This valuation is based on the principle that market valuations, taking place between informed buyers and informed sellers, incorporate all factors relevant to valuation. Relevant multiples need to be chosen carefully and adjusted for differences between the circumstances.

Comparable Transactions Multiples ("CTM") Method

Under the CTM Method, the value is determined on the basis of multiples derived from valuations of similar transactions in the industry. Relevant multiples need to be chosen carefully and adjusted for differences between the circumstances. Few of such multiples are EV/Earnings before Interest, Taxes, Depreciation & Amortization ("**EBITDA**") multiple and EV/Revenue multiple.

Market Price Method

Under this method, the market price of an equity share of the company as quoted on a recognized stock exchange is normally considered as the fair value of the equity shares of that company where such quotations are arising from the shares being regularly and freely traded. The market value generally reflects the investors' perception about the true worth of the company.

6.6. Income Approach

The income approach is widely used for valuation under "Going Concern" basis. It focuses on the income generated by the company in the past as well as its future earning capability. The Discounted Cash Flow Method under the income approach seeks to arrive at a valuation based on the strength of future cash flows.

DCF Method

Under DCF Method value of a company can be assessed using the FCFF or Free Cash Flow to Equity Method ("**FCFE**"). Under the DCF method, the business is valued by discounting its free cash flows for the explicit forecast period and the perpetuity value thereafter. The free cash flows represent the cash available for distribution to both, the owners and creditors of the business. The free cash flows in the explicit period and those in perpetuity are discounted by the WACC. The WACC, based on an optimal vis-à-vis actual capital structure, is an appropriate rate of discount to calculate the present value of future cash flows as it considers equity-debt risk by incorporating debt-equity ratio of the firm.

The perpetuity (terminal) value is calculated based on the business' potential for further growth beyond the explicit forecast period. The "Constant Growth Model" is applied, which implies an expected constant level of growth for perpetuity in the cash flows over the last year of the forecast period.

The discounting factor (rate of discounting the future cash flows) reflects not only the time value of money, but also the risk associated with the business' future operations. The EV (aggregate of the present value of explicit period and terminal period cash flows) so derived, is further reduced by the value of debt, if any, (net of Cash and Cash Equivalents) to arrive at value to the owners of the business.

6.7. Conclusion on Valuation Approach

It is pertinent to note that the valuation of any company or its assets is inherently imprecise and is subject to certain uncertainties and contingencies, all of which are difficult to predict and are beyond my control. In performing my analysis, I have made numerous assumptions with respect to industry performance and general business and economic conditions, many of which are beyond the control of the SPVs. In addition, this valuation will fluctuate with changes in prevailing market conditions, and prospects, financial and otherwise, of the SPVs, and other factors which generally influence the valuation of companies and their assets.

The goal in selection of valuation approaches and methods for any business is to find out the most appropriate method under particular circumstances on the basis of available information. No one method is suitable in every possible situation. Before selecting the appropriate valuation approach and method, I have considered various factors, inter-alia, the basis and premise of current valuation exercise, purpose of valuation exercise, respective strengths and weaknesses of the possible valuation approach and methods, availability of adequate inputs or information and its reliability and valuation approach and methods considered by the market participants.

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6.7.1. Cost Approach

The existing book value of EV of the SPVs comprising of the value of its Net fixed assets, Financial assets, Other non-current assets and working capital based on the Special Purpose Combined Financial Statement as at 30th September 2024 for all the SPVs, prepared as per Indian Accounting Standards (Ind AS) are as under:

Sr. No.	SPVs	Book EV* 30th September 2024	Adjusted EV** 30th September 2024
1	GNHPL	4,407	5,051
2	GKBHPL	2,507	3,761
3	HHHPL	5,337	5,425
4	GRJHPL	2,872	3,058
5	GKNHPL	10,879	11,288
6	GRSHPL	4,745	5,028
7	DUHPL	3,324	3,448
8	GBHPL	5,895	6,137
9	GNHPL II	3,051	3,192
	Total	**43,016**	**46,387**

** Enterprise Value ("**EV**") is described as the total value of the equity in a business plus the value of its debt and debt related liabilities, minus any Cash and Cash Equivalents to meet those liabilities.*

*** Adjusted Enterprise Value of the SPVs is derived as the EV as defined above plus Cash and Cash Equivalents of the SPVs as at the Valuation Date.*

During the concession period, the SPVs operate and maintain their respective road assets and earn revenues through annuity payment that are pre-determined as per the respective concession agreement. In such scenario, the true worth of the business is reflected in its future earning capacity rather than the cost of the project. Accordingly, I have not considered the cost approach for the current valuation exercise.

Market Approach

The present valuation exercise is to undertake fair EV of the SPVs engaged in the road infrastructure projects for a predetermined tenure. Further, the tariff revenue and expenses are very specific to the SPVs depending on the nature of their geographical location, stage of project, terms of profitability. In the absence of any exactly comparable listed companies with characteristics and parameters similar to that of the SPVs, I have not considered CCM method in the present case. In the absence of adequate details about independent Comparable Transactions, I was unable to apply the CTM method as a measure of valuation. Currently, the equity shares of the SPVs are not listed on any recognized stock exchange of India. Hence, I was unable to apply market price method.

Income Approach

Each of the SPVs operates under a DBOT based concession agreement with NHAI.

Currently, all of the SPVs except HHHPL, GBHPL and GNHPL II are fully completed and are revenue generating. In case of HHHPL GBHPL and GNHPL II, the SPVs have received PCOD and are partially completed. In case of GBHPL and GNHPL II, the SPVs are likely to incur capital expenditure in order to complete the balance project work and are expected to receive the annuities along with past arrears at the pre-determined rate. The revenue of the SPVs is based on tenure, annuity payments, operations and other factors that are unique to each of the SPVs. The revenue of the SPVs is mainly derived from the annuity payments (annuity fees), interest income on balance annuity payments (which is linked to bank rate) and O&M payments (adjusted for inflation), that is defined under the respective Concession Agreement for the operation period.

The annuity amounts are typically pre-determined with the relevant government authority (NHAI in this case) and cannot be modified to reflect prevailing circumstances. Interest on balance annuity payments are linked

to bank rate, which is changed by RBI based on prevailing market conditions. The rights in relation to the underlying assets of all the SPVs shall be transferred after the expiry of the Concession Period. Accordingly, since all the SPVs are generating income based on pre-determined agreements / mechanism and since the Investment Manager has provided me with the financial projections of the SPVs for the balance tenor of the concession agreements, DCF Method under the income approach has been considered as the appropriate method for the present valuation exercise.

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7. Valuation of the SPVs

7.1. I have estimated the fair EV and Adjusted Enterprise Value of the SPVs using the DCF Method. While carrying out this engagement, I have relied extensively on the information made available to me by the Investment Manager. I have considered projected financial statement of the SPVs as provided by the Investment Manager.

Valuation

7.2. The key assumptions of the projections provided to me by the Investment Manager are:

7.2.1. Revenue cash flows

The Cash flow for the SPVs can be divided into two segments:

Payment NHAI during the Construction Period:

Each SPV was eligible to receive 40% of the Bid Project Cost, adjusted for the price index multiple, in 5 equal installments during the construction period. I have been represented by the Investment Manager that all the SPVs have received the agreed portion of the inflation adjusted bid project cost (of 40%) as per their respective concession agreement. Hence, no further cash flow receipts are attributable towards this segment of cash flows.

Payment by NHAI during the Operation Period: Accordingly, the revenue of the SPVs would mainly consists of the following receipts:

a. **Annuity payments**: The Bid Project Cost remaining, adjusted for the price index multiple, to be paid in pursuance of the respective concession agreements (i.e. the Balance Completion Cost) is eligible to be received by the respective SPVs by way of specified biannual installments as mentioned in their respective concession agreement for the balance period of operations.

Following table represents the balance number of biannual annuity installments expected to be received by the respective SPVs after 30th September, 2024:

SPV	Annuities received till valuation date	Balance Annuities to be Received
GNHPL	7	23
GKBHPL	7	23
HHHPL	2	28
GRJHPL	8	22
GKNHPL	2	28
GRSHPL	5	25
DUHPL	2	28
GBHPL	7	23
GNHPL II	9	21

b. **Interest**: As per the concession agreements, the SPVs are entitled to receive interest on reducing Balance Completion Cost equal to applicable Bank Rate (as decided by the Monetary Policy Committee and published by the Reserve Bank of India) + 3.00% spread. Such interest is due and payable along with each of the biannual installments as mentioned above; and

c. **Operation and Maintenance Revenue**: In lieu of O&M expenses to be incurred by SPV, SPVs are eligible for certain O&M income (as defined in the respective concession agreement) at each biannual installment date, duly adjusted for an appropriate inflation rate.

7.2.2. Expenditure:

Since all the SPVs are operational on the Valuation Date, following are the major costs incurred by the SPV:

Operation and Maintenance Costs (Routine) ("O&M Costs")

These are routine costs incurred every year. These costs are related to the normal wear and tear of the road and hence involve repairing the patches damaged mainly due to heavy traffic movement. O&M Costs also includes staff salaries, project management fees, professional fees, insurance, security expenses, electricity, etc. The primary purpose of these expenses is to maintain the road as per the specifications mentioned in the respective concession agreement. The SPV is generally responsible for carrying out operation and maintenance activities at its road during its concession period**.** Within the scope of such operation and maintenance obligations, the SPV may be required to undertake routine 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 Investment Manager has provided the estimated O&M costs for the projected period and I have corroborated the said expenses with O&M as per Technical Due Diligence Report.

Major Maintenance and Repairs Costs ("MMR Costs")

Estimating the MMR Costs

Period maintenance expenses will be incurred on periodic basis say every 5 years or more. These are the costs incurred to bring the road assets back to its earlier condition or keep the road assets in its present condition. These expenses are primarily related to the construction or re-laying of the top layer of the road. Accordingly, such costs includes considerable amount of materials and labor.

The Investment Manager has provided the estimated MMR cost for the projected period and I have corroborated the said expenses with Technical Due Diligence Report.

Capital Expenditure ("Capex"): As represented by the Investment Manager, regarding the maintenance Capex, the same has already been considered in the Operation & Maintenance expenditure and Major Maintenance and Repairs expenditure for the projected period.

I understand that there are some balance work pending in case of GBHPL and GNHPL II as per documents provided by the Investment Manager, hence capex has been considered for the same in the projection for the future period.

7.2.3. **Direct Taxes**: As per the discussions with the Investment Manager, the new provisions of Income Tax Act, 1961 (Section 115BAA) have been considered for the projected period of all SPVs except GBHPL & GNHPL II for which Old Tax Regime has been followed. The SPVs have been filing their income tax returns basis the IND AS Income, adjusted for adjustments prescribed by Income Computation and Deduction Standards III & IV, which can be substantiated from the tax audit reports of the respective SPVs. I have relied on the representation of the Investment Manager for the projected tax outflow for the projected period.

7.2.4. **Working Capital:** The Investment Manager has provided projected financial information on biannual basis for all the SPVs. The biannual period are based on the annuity dates of the respective SPVs. The amount of O&M expenses payable to Gawar Construction Limited by the SPVs on the basis of their respective O&M Agreements is also due and payable on the basis of the annuity amount and date on which annuities are received. Hence, for all the SPVs where annuity payments are material component of revenue, there are no receivables and payables estimated to be outstanding at their respective annuity dates during the biannually prepared projected period. Other working capital items outstanding as at the Valuation Date mainly represents the advance income tax, GST input tax (and cash) credit, prepaid expenses, withheld amount, GST receivable on annuity, interest and O&M (which is expected to be received after 1 year) etc. that are separately adjusted in the calculation of the enterprise values of the SPVs. The Investment Manager has provided projected Working Capital information for all the SPVs. I have relied on the same.

7.2.5. **GST Claim:** The Investment Manager has informed us that due to the changes in extant provision of the Goods & Services Tax ("GST") laws, the SPVs are eligible to receive GST claim from NHAI which are as follows:

i. **On Annuity:** As per the clarification notification of Ministry of Road Transport & Highways as on 27th August 2021 vis-à-vis Ministry of Finance circular dated 17th June 2021, SPVs are eligible to claim reimbursement of GST on annuity, considering change in law, after adjusting GST input credit lying with the SPVs.

ii. **On Interest on Annuity:** As per the Ministry of Finance circular dated 17th June 2021, GST will be applicable on annuity (deferred payments) paid for construction of roads i.e. annuity plus interest, additionally Ministry of Road Transport & Highways issued clarification dated 17th June 2021 that the SPVs will be eligible to claim reimbursement of GST on interest.

iii. **Change in GST rates:** Ministry of Finance vide notification no. 03/2022 dated 13th July 2022, increased the GST rates applicable on road construction services from 12% to 18%. As per the clarification of Ministry of Road Transport & Highways dated 20th September 2022, the above increase in GST rates are eligible for reimbursement from NHAI as it is considered as change in law (i.e. change of rate).

iv. The following table represents the total amount of NHAI claims represented as per the Special Purpose Combined Financial Statements and is expected to be received by the next financial year:

INR Mn

SPVs	GNHPL	GKBHPL	HHHPL	GRJHPL	GKNHPL	GRSHPL	DUHPL
Claim Amount	43	1	112	78	90	58	21

7.3. Impact of Ongoing Material Litigation on Valuation

As on 30th September 2024, there are no ongoing material litigations except as shown in Appendix 4. Further, Investment Manager has informed us that majority of the tax litigations are low to medium risk and accordingly no material outflow is expected against the litigations, hence no impact has been factored on the valuation of the SPVs. Further, I have been informed by the Investment Manager that the tax litigations prior to acquisition of SPVs by the Trust shall be covered by an indemnity given by the Sponsor (Gawar Construction Limited) for a period of eight years (from date of such transfer) through the Share Purchase Agreement ("SPA") to be executed between the Trust and the Sponsor.

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7.4. Calculation of Weighted Average Cost of Capital for the SPVs

7.4.1. Cost of Equity:

Cost of Equity (CoE) is a discounting factor to calculate the returns expected by the equity holders depending on the perceived level of risk associated with the business and the industry in which the business operates.

For this purpose, I have used the Capital Asset Pricing Model (CAPM), which is a commonly used model to determine the appropriate cost of equity for the SPVs.

K(e) = Rf + [ERP* Beta] + CSRP

Wherein:
K(e) = cost of equity
Rf = risk free rate
ERP = Equity Risk Premium
Beta = a measure of the sensitivity of assets to returns of the overall market
CSRP = Company Specific Risk Premium (In general, an additional company-specific risk premium will be added to the cost of equity calculated pursuant to CAPM).
For valuation exercise, I have arrived at adjusted cost of equity of the SPVs based on the above calculation (Refer Appendix 2).

7.4.2. Risk Free Rate:

I have applied a risk free rate of return of 6.69% on the basis of the zero coupon yield curve as on 30th September 2024 for government securities having a maturity period of 10 years, as quoted on the website of Clearing Corporation of India Limited.

7.4.3. Equity Risk Premium ("ERP"):

Equity Risk Premium is a measure of premium that investors require for investing in equity markets rather than bond or debt markets. The equity risk premium is estimated based on consideration of historical realised returns on equity investments over a risk-free rate as represented by 10 year government bonds. Based on the aforementioned, a 7% equity risk premium for India is considered appropriate.

7.4.4. Beta:

Beta is a measure of the sensitivity of a company's stock price to the movements of the overall market index. In the present case, I find it appropriate to consider the beta of companies in similar business/ industry to that of the SPVs for an appropriate period.

For the valuation of the SPVs, I find it appropriate to consider the beta of IRB InvIT and PG InvIT fund for an appropriate period. The beta so arrived, is further adjusted based on the factors of mentioned SPVs like completion of projects, revenue certainty, past collection trend, lack of execution uncertainty, etc. to arrive at the adjusted unlevered beta appropriate to the SPVs.

I have further unlevered the beta of such companies based on market debt-equity of the respective company using the following formula:
Unlevered Beta = Levered Beta / [1 + (Debt / Equity) *(1-T)]

Further I have re-levered it based on debt-equity at 70:30 based on the industry Debt: Equity ratio of HAM based projects using the following formula:
Re-levered Beta = Unlevered Beta * [1 + (Debt / Equity) *(1-T)]

Accordingly, as per above, I have arrived at re-levered betas of the SPVs. (Refer Appendix 2)

7.4.5. Company Specific Risk Premium ("CSRP"):

Discount Rate is the return expected by a market participant from a particular investment and shall reflect not only the time value of money but also the risk inherent in the asset being valued as well as the risk inherent in achieving the future cash flows.

As at the Valuation Date, GBHPL and GNHPL II has received project completion of ~99.16% and ~94.56% respectively. In light of the projected timeline for the completion of the projects undertaken by SPVs, GBHPL and GNHPL II, which are anticipated to achieve 100% project completion by 31st December, 2024, and the ongoing capital expenditure associated with the remaining Engineering, Procurement, and Construction

(EPC) costs until the completion date (139 Mn for GBHPL and 353 Mn for GNHPL II by Dec 24), these two SPVs has a relatively higher risks in achieving their projected cash flows due to uncertainties associated with the receipt of the required regulatory approvals.

Both SPVs have been receiving annuities based on partial completion costs up to the Valuation Date and are expected to continue receiving such annuities until the regulatory authority approves the full project costs incurred. Upon reaching 100% project completion, GBHPL and GNHPL II will be eligible to receive a one-time additional annuity amount reflecting the past annuities received on a partial completion cost basis. This amount is estimated to be approximately 76 million for GBHPL, anticipated by 9th Annuity Payment, and approximately 395 million for GNHPL II, anticipated along with 10th Annuity Payment.

Given the inherent uncertainties surrounding the completion timelines and the timing and approval of the annuity payments, it is prudent to incorporate a company-specific risk premium in the valuation. Based on discussions with the Investment Manager and relative risks associated with these two SPVs, a CSRP of 1% has been assigned to both GBHPL and GNHPL II to appropriately reflect the potential risks and uncertainties associated with these projects till the time it achieves the required regulatory approvals.

7.4.6. Cost of Debt:

The calculation of Cost of Debt post-tax can be defined as follows:
K(d) = K(d) pre-tax * (1 - T)

Wherein:
K(d) = Cost of debt
T = tax rate as applicable

For valuation exercise, pre-tax cost of debt has been considered as 8.25%, as per Management Representation Letter for all the SPVs except for GBHPL and GNHPL II where 9.0% and 9.10% on account of reasons explained in section 7.4.5.

7.4.7. Weighted Average Cost of Capital (WACC):

The discount rate, or the WACC, is the weighted average of the expected return on equity and the cost of debt. The weight of each factor is determined based on the company's optimal capital structure.

Formula for calculation of WACC:
WACC = [K(d) * Debt /(Debt + Equity)] + [K(e) * (1 - Debt /(Debt + Equity))]

Accordingly, as per above, I have arrived the WACC for the explicit period of the SPVs.
(Refer Appendix 2 for detailed workings).

7.4.8. Cash Accrual Factor (CAF) and Discounting Factor

Discounted cash flow require to forecast cash flows in future and discount them to the present in order to arrive at present value of the asset as on Valuation Date. To discount back the projections we use the Cash Accrual Factor ("CAF"). The Cash Accrual Factor refers to the duration between the Valuation date and the point at which each cash flow is expected to accrue.

In case of HAM Projects, the annuities are received bi-annually at a predetermined date and the concession agreement provides that the annuities would be realized in 15 days from the annuity date. Hence we have considered the annuity realizations date for the purpose of determination of the CAF Accordingly, the cash flows during each year of the projected period are discounted back from the respective annuity realization to Valuation Date.

Discounted cash flow is equal to sum of the cash flow in each period divided by discounting factor, where the discounting factor is determined by raising one plus discount rate (WACC) to the power of the CAF.

$DCF = [CF_1 / (1+r)^{CAF1}] + [CF_2 / (1+r)^{CAF2}] + ... + [CF_n /(1+r)^{CAFn}]$

Where,

CF = Cash Flows,

CAF = Cash accrual factor for particular period

R = Discount Rate (i.e. WACC)

7.5. At the end of the agreed concession period, the rights in relation to the underlying assets, its operations and the obligation to maintain the road reverts to the government authority that granted the concession. Hence,

SPVs are not expected to generate cash flow after the expiry of their respective concession agreements. Accordingly, I found it appropriate not to consider terminal period value, which represents the present value at the end of explicit forecast period of all subsequent cash flows to the end of the life of the asset or into perpetuity if the asset has an indefinite life, in this valuation exercise.

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8. Valuation Conclusion

8.1. The current valuation has been carried out based on the discussed valuation methodology explained herein earlier. Further, various qualitative factors, the business dynamics and growth potential of the business, having regard to information base, management perceptions, key underlying assumptions and limitations were given due consideration.

8.2. I have been represented by the Investment Manager that there is no potential devolvement on account of the contingent liability as of valuation date; hence no impact has been factored in to arrive at fair EV of the SPVs.

8.3. Based on the above analysis, the fair EV and Adjusted Enterprise Value as on the Valuation Date of the SPVs is as mentioned below:

INR Mn

Sr. No.	SPVs	Approximate Projection Period (Balance Concession Period)	WACC	Fair EV	Fair Adj EV
1	GNHPL	~11 Years 3 Months	7.53%	4,367	5,011
2	GKBHPL	~11 Years 4 Months	7.53%	2,958	4,212
3	HHHPL	~13 Years 7 Months	7.53%	5,925	6,013
4	GRJHPL	~10 Years 9 Months	7.53%	2,891	3,077
5	GKNHPL	~13 Years 8 Months	7.53%	11,965	12,374
6	GRSHPL	~12 Years 4 Months	7.60%	4,626	4,909
7	DUHPL	~13 Years 9 Months	7.53%	3,620	3,744
8	GBHPL	~11 Years 3 Months	7.96%	5,518	5,760
9	GNHPL II	~10 Years 1 Months	8.03%	3,273	3,414
Total				**45,143**	**48,513**

(Refer Appendix 1 for detailed workings)

8.4. EV is described as the total value of the equity in a business plus the value of its debt and debt related liabilities, minus any Cash and Cash Equivalents to meet those liabilities.

8.5. Adjusted Enterprise Value is derived as EV as defined above plus Cash and Cash Equivalents of the SPVs as at 30th September 2024.

8.6. The fair EV of the SPVs is estimated using DCF method. The valuation requires Investment Manager to make certain assumptions about the model inputs including forecast cash flows, discount rate, and credit risk.

8.7. Valuation is based on estimates of future financial performance or opinions, which represent reasonable expectations at a particular point of time, but such information, estimates or opinions are not offered as predictions or as assurances that a particular level of income or profit will be achieved, a particular event will occur or that a particular price will be offered or accepted. Actual results achieved during the period covered by the prospective financial analysis will vary from these estimates and the variations may be material.

8.8. Accordingly, I have conducted a quantitative sensitivity analysis on certain model inputs, the results of which are as indicated below:

a. WACC by increasing / decreasing it by 0.5%
b. WACC by increasing / decreasing it by 1.0%
c. Total Expenses by increasing / decreasing it by 20%

1. **Fair Enterprise Valuation Range based on**

a. **WACC parameter (0.5%)**

INR Mn

Sr. No.	SPVs	WACC +0.5%	EV	Base WACC	EV	WACC -0.5%	EV
1	GNHPL	8.03%	4,277	7.53%	4,367	7.03%	4,461
2	GKBHPL	8.03%	2,901	7.53%	2,958	7.03%	3,018
3	HHHPL	8.03%	5,782	7.53%	5,925	7.03%	6,075
4	GRJHPL	8.03%	2,832	7.53%	2,891	7.03%	2,953
5	GKNHPL	8.03%	11,673	7.53%	11,965	7.03%	12,268
6	GRSHPL	8.10%	4,523	7.60%	4,626	7.10%	4,732
7	DUHPL	8.03%	3,533	7.53%	3,620	7.03%	3,710
8	GBHPL	8.46%	5,387	7.96%	5,518	7.46%	5,654
9	GNHPL II	8.53%	3,209	8.03%	3,273	7.53%	3,339
Total of all SPVs			**44,116**		**45,143**		**46,211**

b. **WACC parameter (1.0%)**

INR Mn

Sr. No.	SPVs	WACC +1.0%	EV	Base WACC	EV	WACC -1.0%	EV
1	GNHPL	8.53%	4,190	7.53%	4,367	6.53%	4,558
2	GKBHPL	8.53%	2,845	7.53%	2,958	6.53%	3,079
3	HHHPL	8.53%	5,644	7.53%	5,925	6.53%	6,232
4	GRJHPL	8.53%	2,775	7.53%	2,891	6.53%	3,016
5	GKNHPL	8.53%	11,394	7.53%	11,965	6.53%	12,585
6	GRSHPL	8.60%	4,424	7.60%	4,626	6.60%	4,844
7	DUHPL	8.53%	3,450	7.53%	3,620	6.53%	3,805
8	GBHPL	8.96%	5,260	7.96%	5,518	6.96%	5,796
9	GNHPL II	9.03%	3,147	8.03%	3,273	7.03%	3,408
Total of all SPVs			**43,129**		**45,143**		**47,322**

c. **Total Expenses by increasing / decreasing it by 20%**

INR Mn

Sr. No.	SPVs	EV at Expenses +20%	EV at Base Expenses	EV at Expenses -20%
1	GNHPL	4,020	4,367	4,674
2	GKBHPL	2,602	2,958	3,312
3	HHHPL	5,563	5,925	6,288
4	GRJHPL	2,714	2,891	3,081
5	GKNHPL	11,452	11,965	12,477
6	GRSHPL	4,319	4,626	4,918
7	DUHPL	3,285	3,620	3,933
8	GBHPL	5,014	5,518	5,978
9	GNHPL II	3,097	3,273	3,450
	Total	**42,066**	**45,143**	**48,111**

2. **Adjusted Enterprise Valuation Range based on**

a. **WACC parameter (0.5%)**

INR Mn

Sr. No.	SPVs	WACC +0.5%	Adjusted EV	Base WACC	Adjusted EV	WACC -0.5%	Adjusted EV
1	GNHPL	8.03%	4,921	7.53%	5,011	7.03%	5,105
2	GKBHPL	8.03%	4,155	7.53%	4,212	7.03%	4,272
3	HHHPL	8.03%	5,869	7.53%	6,013	7.03%	6,163
4	GRJHPL	8.03%	3,018	7.53%	3,077	7.03%	3,139
5	GKNHPL	8.03%	12,082	7.53%	12,374	7.03%	12,677
6	GRSHPL	8.10%	4,806	7.60%	4,909	7.10%	5,015
7	DUHPL	8.03%	3,657	7.53%	3,744	7.03%	3,834
8	GBHPL	8.46%	5,629	7.96%	5,760	7.46%	5,896
9	GNHPL II	8.53%	3,350	8.03%	3,414	7.53%	3,480
Total of all SPVs			**47,487**		**48,513**		**49,581**

b. **WACC parameter (1.0%)**

INR Mn

Sr. No.	SPVs	WACC +1.0%	Adjusted EV	Base WACC	Adjusted EV	WACC -1.0%	Adjusted EV
1	GNHPL	8.53%	4,834	7.53%	5,011	6.53%	5,202
2	GKBHPL	8.53%	4,069	7.53%	4,182	6.53%	4,303
3	HHHPL	8.53%	5,732	7.53%	6,013	6.53%	6,319
4	GRJHPL	8.53%	2,961	7.53%	3,077	6.53%	3,202
5	GKNHPL	8.53%	11,803	7.53%	12,374	6.53%	12,994
6	GRSHPL	8.60%	4,688	7.60%	4,890	6.60%	5,108
7	DUHPL	8.53%	3,574	7.53%	3,744	6.53%	3,929
8	GBHPL	8.96%	5,503	7.96%	5,760	6.96%	6,038
9	GNHPL II	9.03%	3,288	8.03%	3,414	7.03%	3,549
Total of all SPVs			**47,487**		**48,513**		**49,581**

c. **Total Expenses by increasing / decreasing it by 20%**

INR Mn

Sr. No.	SPVs	EV at Expenses +20%	EV at Base Expenses	EV at Expenses -20%
1	GNHPL	4,664	5,011	5,318
2	GKBHPL	3,856	4,212	4,566
3	HHHPL	5,650	6,013	6,376
4	GRJHPL	2,900	3,077	3,267
5	GKNHPL	11,861	12,374	12,886
6	GRSHPL	4,602	4,909	5,201
7	DUHPL	3,409	3,744	4,057
8	GBHPL	5,256	5,760	6,220
9	GNHPL II	3,237	3,414	3,591
	Total	**45,437**	**48,513**	**51,482**

9. Additional Procedures to be complied with in accordance with InvIT regulations

Scope of Work

9.1 The Schedule V of the SEBI InvIT Regulations prescribes the minimum set of mandatory disclosures to be made in the valuation report. In this reference, the minimum disclosures in valuation report may include following information as well, so as to provide the investors with the adequate information about the valuation and other aspects of the underlying assets of the InvIT.

The additional set of disclosures, as prescribed under Schedule V of InvIT Regulations, to be made in the valuation report of the SPVs are as follows:

- List of one-time sanctions/approvals which are obtained or pending;
- List of up to date/overdue periodic clearances;
- Statement of assets;
- Estimates of already carried as well as proposed major repairs and improvements along with estimated time of completion;
- Revenue pendencies including local authority taxes associated with InvIT asset and compounding charges, if any;
- On-going material litigations including tax disputes in relation to the assets, if any;
- Vulnerability to natural or induced hazards that may not have been covered in town planning/ building control.

Limitations

9.2 This Report is based on the information provided by the representatives of the Investment Manager. The exercise has been restricted and kept limited to and based entirely on the documents, records, files, registers and information provided to me. I have not verified the information independently with any other external source.

9.3 I have currently relied on Draft Offer Document filed with SEBI on 26th August 2024 for this valuation report. I have not been provided with updated Offer Document as at the report date but the management has confirmed that there have been no material changes in details from Draft Offer Document to Offer Document.

9.4 I have assumed the genuineness of all signatures, the authenticity of all documents submitted to me as original, and the conformity of the copies or extracts submitted to me with that of the original documents.

9.5 I have assumed that the documents submitted to me by the representatives of Investment Manager in connection with any particular issue are the only documents related to such issue.

9.6 I have reviewed the documents and records from the limited perspective of examining issues noted in the scope of work and I do not express any opinion as to the legal or technical implications of the same.

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Analysis of Additional Set of Disclosures for the SPVs

A. List of one-time sanctions/approvals which are obtained or pending:

As informed by the Investment Manager, there are no pending applications for government sanctions/ approvals by the SPVs (related to the road stretches of the SPVs) which are pending as on 30th September 2024. The list of sanctions/ approvals obtained by the SPVs till 30th September 2024 is provided in Appendix 3.1 to Appendix 3.09.

B. List of up to date/ overdue periodic clearances:

The Investment Manager has confirmed that the SPVs are not required to take any periodic clearances and hence there are no up to date/ overdue periodic clearances as on 30th September 2024.

C. Statement of assets included:

The details of assets of the SPVs as per the provisional financial statements at 30th September are as mentioned below:

INR Mn

SPVs	Net Fixed Assets	Non-Current Assets	Current Assets
GNHPL	-	3,840	1,497
GKBHPL	-	2,319	1,664
HHHPL	-	4,062	1,564
GRJHPL	-	2,306	887
GKNHPL	-	9,101	2,944
GRSHPL	-	4,075	1,242
DUHPL	-	2,697	979
GBHPL	-	4,928	1,456
GNHPL II	-	2,629	894
Total	**-**	**35,957**	**13,128**

Source: Investment Manager

D. Estimates of already carried and proposed major repairs and improvements along with estimated time of completion:

I have been informed that maintenance is regularly carried out by SPVs in order to maintain the working condition of the assets.

Historical and forecasted major repairs

INR Mn

SPV	Mar 21	Mar 22	Mar 23	Mar 24	Mar 25	Mar 26	Mar 27	Mar 28	Mar 29	Mar 30
GNHPL	-	-	-	-	-	-	224	236	-	-
GKBHPL	-	-	-	-	-	-	-	333	350	-
HHHPL	-	-	-	-	-	-	-	-	122	128
GRJHPL	-	-	-	-	-	-	197	-	-	-
GKNHPL	-	-	-	-	-	-	-	-	-	286
GRSHPL	-	-	-	-	-	-	249	261	-	-
DUHPL	-	-	-	-	-	-	-	-	264	278
GBHPL	-	-	-	53	-	504	529	-	-	-
GNHPL II	-	-	-	-	27	4	1	31	5	34

INR Mn

SPV	Mar 31	Mar 32	Mar 33	Mar 34	Mar 35	Mar 36	Mar 37	Mar 38	Mar 39
GNHPL	-	-	-	316	332	-	-	-	-
GKBHPL	-	-	-	297	312	328	-	-	-
HHHPL	-	-	-	-	-	172	180	-	-
GRJHPL	-	-	264	-	-	-	-	-	-
GKNHPL	300	-	-	-	-	-	402	422	-
GRSHPL	-	-	333	350	-	-	-	-	-
DUHPL	-	-	-	-	355	372	-	-	-
GBHPL	-	676	710	-	-	-	-	-	-
GNHPL II	171	5	40	-	51	-	-	-	-

Source: Investment Manager

E. Revenue pendencies including local authority taxes associated with InvIT asset and compounding charges, if any:

Investment Manager has informed me that there are no material dues including local authority taxes (such as Municipal Tax, Property Tax, etc.) pending to be payable to the government authorities with respect to the SPVs (InvIT assets).

F. On-going material litigations including tax disputes in relation to the assets, if any:

As informed by the Investment Manager, as on 30th September 2024, there are no ongoing material litigations except those shown in Appendix 4. Further, Investment Manager has informed us that majority of the tax litigations are low to medium risk and accordingly no material outflow is expected against the litigations, hence no impact has been factored on the valuation of the SPVs. Further, I have been informed by the Investment Manager that the tax litigations prior to acquisition of SPVs by the Trust shall be covered by an indemnity given by the Sponsor (Gawar Construction Limited) for a period of eight years (from date of such transfer) through the Share Purchase Agreement ("SPA") to be executed between the Trust and the Sponsor.

G. Vulnerability to natural or induced hazards that may not have been covered in town planning/ building control:

Investment Manager has confirmed to me that there are no natural or induced hazards which may impact town planning/ building control, that have not been considered.

10. Sources of Information

For the purpose of undertaking this valuation exercise, I have relied on the following sources of information provided by the Investment Manager:

10.1. Audited Financial Statements of all SPVs for Financial Year ended 31st March 2024;

10.2. Special Purpose Combined Financial Statement for all SPVs for Half Year ended 30th September 2024;

10.3. Projected financial information for the remaining project life for each of the SPVs;

10.4. Technical Due Diligence Report for all the SPVs dated May 2024, prepared by Cube Highways Technology Private Limited for projected MMR and O&M Costs;

10.5. Details of projected Major Maintenance & Repairs (MMR) Expenditure and Capital Expenditure (Capex);

10.6. Signed O&M contracts;

10.7. Details of brought forward losses (as per Income Tax Act) of the SPVs as at 30th September;

10.8. Concession Agreement of each of the SPVs with their respective concessioning authority;

10.9. List of licenses / approvals, details of tax litigations, civil proceeding and arbitrations of the SPVs;

10.10. Shareholding pattern as on Valuation Date of the SPVs and other entities mentioned in this Report;

10.11. Management Representation Letter by the Investment Manager dated 07th November 2024;

10.12. Relevant data and information about the SPVs provided by the Investment Manager either in written or oral form or in the form of soft copy;

10.13. Information provided by leading database sources, market research reports and other published data.

The information provided to me by the Investment Manager in relation to the SPVs included but not limited to historical financial statements, forecasts/projections, other statements and assumptions about future matters like forward-looking financial information prepared by the Investment Manager. The forecasts and projections as supplied to me are based upon assumptions about events and circumstances which are yet to occur.

I have not tested individual assumptions or attempted to substantiate the veracity or integrity of such assumptions in relation to the forward-looking financial information, however, I have made sufficient enquiries to satisfy myself that such information has been prepared on a reasonable basis.

Notwithstanding anything above, I cannot provide any assurance that the forward looking financial information will be representative of the results which will actually be achieved during the cash flow forecast period.

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11. Exclusions and Limitations

11.1. My Report is subject to the limitations detailed hereinafter. This Report is to be read in totality, and not in parts, in conjunction with the relevant documents referred to herein.

11.2. Valuation analysis and results are specific to the purpose of valuation and is not intended to represent value at any time other than the valuation date of 30th September 2024 ("Valuation Date") mentioned in the Report and as per agreed terms of my engagement. It may not be valid for any other purpose or as at any other date. Also, it may not be valid if done on behalf of any other entity.

11.3. This Report, its contents and the results are specific to (i) the purpose of valuation agreed as per the terms of my engagements; (ii) the Valuation Date and (iii) are based on the financial information of the SPVs till 30th September 2024. The Investment Manager has represented that the business activities of the SPVs have been carried out in normal and ordinary course between 30th September 2024 and the Report Date and that no material changes have occurred in the operations and financial position between 30th September 2024 and the Report date, except for any events disclosed by the Investment Manager during the valuation exercise.

11.4. The scope of my assignment did not involve me performing audit tests for the purpose of expressing an opinion on the fairness or accuracy of any financial or analytical information that was provided and used by me during the course of my work. The assignment did not involve me to conduct the financial or technical feasibility study. I have not done any independent technical valuation or appraisal or due diligence of the assets or liabilities of the SPVs or any of other entity mentioned in this Report and have considered them at the value as disclosed by the SPVs in their regulatory filings or in submissions, oral or written, made to me.

11.5. In addition, I do not take any responsibility for any changes in the information used by me to arrive at my conclusion as set out here in which may occur subsequent to the date of my Report or by virtue of fact that the details provided to me are incorrect or inaccurate.

11.6. I have assumed and relied upon the truth, accuracy and completeness of the information, data and financial terms provided to me or used by me; I have assumed that the same are not misleading and do not assume or accept any liability or responsibility for any independent verification of such information or any independent technical valuation or appraisal of any of the assets, operations or liabilities of the SPVs or any other entity mentioned in the Report. Nothing has come to my knowledge to indicate that the material provided to me was misstated or incorrect or would not afford reasonable grounds upon which to base my Report.

11.7. This Report is intended for the sole use in connection with the purpose as set out above. It can however be relied upon and disclosed in connection with any statutory and regulatory filing in connection with the provision of SEBI InvIT Regulations. However, I will not accept any responsibility to any other party to whom this Report may be shown or who may acquire a copy of the Report, without my written consent.

11.8. It is clarified that this Report is not a fairness opinion under any of the stock exchange/ listing regulations. In case of any third party having access to this Report, please note this Report is not a substitute for the third party's own due diligence/ appraisal/ enquiries/ independent advice that the third party should undertake for his purpose.

11.9. Further, this Report is necessarily based on financial, economic, monetary, market and other conditions as in effect on, and the information made available to me or used by me up to, the date hereof. Subsequent developments in the aforementioned conditions may affect this Report and the assumptions made in preparing this Report and I shall not be obliged to update, revise or reaffirm this Report if information provided to me changes.

11.10. This Report is based on the information received from the sources as mentioned in Section 10 of this Report and discussions with the Investment Manager. I have assumed that no information has been withheld that could have influenced the purpose of my Report.

11.11. Valuation is not a precise science and the conclusions arrived at in many cases may be subjective and dependent on the exercise of individual judgment. There is, therefore, no indisputable single value. I have arrived at an indicative EV based on my analysis. While I have provided an assessment of the value based

on an analysis of information available to me and within the scope of my engagement, others may place a different value on this business.

11.12. Any discrepancies in any table / appendix between the total and the sums of the amounts listed are due to rounding-off.

11.13. Valuation is based on estimates of future financial performance or opinions, which represent reasonable expectations at a particular point of time, but such information, estimates or opinions are not offered as predictions or as assurances that a particular level of income or profit will be achieved, a particular event will occur or that a particular price will be offered or accepted. Actual results achieved during the period covered by the prospective financial analysis will vary from these estimates and the variations may be material.

11.14. I do not carry out any validation procedures or due diligence with respect to the information provided/extracted or carry out any verification of the assets or comment on the achievability and reasonableness of the assumptions underlying the financial forecasts, save for satisfying ourselves to the extent possible that they are consistent with other information provided to me in the course of this engagement.

11.15. My conclusion assumes that the assets and liabilities of the SPVs, reflected in their respective latest balance sheets remain intact as of the Report date.

11.16. Whilst all reasonable care has been taken to ensure that the factual statements in the Report are accurate, neither myself, nor any of my associates, officers or employees shall in any way be liable or responsible either directly or indirectly for the contents stated herein. Accordingly, I make no representation or warranty, express or implied, in respect of the completeness, authenticity or accuracy of such factual statements. I expressly disclaim any and all liabilities, which may arise based upon the information used in this Report. I am not liable to any third party in relation to the issue of this Report.

11.17. The scope of my work has been limited both in terms of the areas of the business & operations which I have reviewed and the extent to which I have reviewed them. There may be matters, other than those noted in this Report, which might be relevant in the context of the transaction and which a wider scope might uncover.

11.18. For the present valuation exercise, I have also relied on information available in public domain; however the accuracy and timelines of the same has not been independently verified by me.

11.19. In the particular circumstances of this case, my liability (in contract or under any statute or otherwise) for any economic loss or damage arising out of or in connection with this engagement, however the loss or damage caused, shall be limited to the amount of fees actually received by me from the Investment Manager, as laid out in the engagement letter for such valuation work.

11.20. In rendering this Report, I have not provided any legal, regulatory, tax, accounting or actuarial advice or opinion and accordingly I do not assume any responsibility or liability in respect thereof.

11.21. This Report does not address the relative merits of investing in InvIT as compared with any other alternative business transaction, or other alternatives, or whether or not such alternatives could be achieved or are available. I am not an advisor with respect to legal, tax and regulatory matters for the transaction occurred. No investigation of the SPVs' claim to title of assets has been made for the purpose of this Report and the SPVs' claim to such rights have been assumed to be valid. No consideration has been given to liens or encumbrances against the assets, beyond the loans disclosed in the accounts. Therefore, no responsibility is assumed for matters of a legal nature.

11.22. I have no present or planned future interest in the Trustee, Investment Manager or the SPVs and the fee for this Report is not contingent upon the values reported herein. My valuation analysis should not be construed as investment advice; specifically, I do not express any opinion on the suitability or otherwise of entering into any financial or other transaction with the Investment Manager or SPVs.

11.23. I have submitted the draft valuation report to the Trust and Investment Manager for confirmation of accuracy of the factual data used in my analysis and to prevent any error or inaccuracy in this Report.

Limitation of Liabilities

11.24. It is agreed that, having regard to the RV's interest in limiting the personal liability and exposure to litigation of its personnel, the Sponsor, the Settlor, the Investment Manager and the Trust will not bring any claim in respect of any damage against any of RV personally.

11.25. In no circumstances RV shall be responsible for any consequential, special, direct, indirect, punitive or incidental loss, damages or expenses (including loss of profits, data, business, opportunity cost, goodwill or indemnification) in connection with the performance of the services whether such damages are based on breach of contract, tort, strict liability, breach of warranty, negligence, or otherwise, even if the Investment Manager had contemplated and communicated to RV the likelihood of such damages. Any decision to act upon the deliverables (including this Report) is to be made by the Investment Manager and no communication by RV should be treated as an invitation or inducement to engage the Investment Manager to act upon the deliverable(s).

11.26. It is clarified that the Investment Manager will be solely responsible for any delays, additional costs, or other liabilities caused by or associated with any deficiencies in their responsibilities, misrepresentations, incorrect and incomplete information including information provided to determine the assumptions.

11.27. RV will not be liable if any loss arises due to the provision of false, misleading or incomplete information or documentation by the Investment Manager.

11.28. Further, this Report is necessarily based on financial, economic, monetary, market and other conditions as in effect on, and the information made available to me or used by me up to, the date hereof. Subsequent developments in the aforementioned conditions may affect this Report and the assumptions made in preparing this Report and I shall not be obliged to update, revise or reaffirm this Report if information provided to me changes.

Yours faithfully,

SWAMINATHAN SUNDARARAMAN

Digitally signed by SWAMINATHAN SUNDARARAMAN
Date: 2024.11.08 20:14:24 +05'30'

S. Sundararaman
Registered Valuer
IBBI Registration No.: IBBI/RV/06/2018/10238
Asset Class: Securities or Financial Assets
Place: Chennai
UDIN: 24028423BKGABR3481

Appendix 1 – Valuation of SPVs as on 30th September 2024

Abbreviations	Meaning
O&M	Operation and Maintenance
EBITDA	Operating Earnings Before Interest, Taxes, Depreciation and Amortization
MME	Major Maintenance and Repairs Expenditure
Capex	Capital Expenditure
WCap	Incremental Working Capital
FCFF	Free Cash Flow to the Firm
CAF	Cash Accrual Factor
WACC	Weighted Average Cost of Capital
DF	Discounting Factor
PVFCFF	Present value of Free Cash Flow to the Firm

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Appendix 1.1 – Valuation of GNHPL as on 30th September 2024 under the DCF Method

INR Mn

Period	Finance Income	O&M Income	Changes in Financial Asset	Milestone	Total Inflow from NHAI	Routine O&M Expense	Cash EBITDA	MMR	Capex	WCap	Tax	FCFF	WACC	CAF	DF	PV of FCFF
	A	B	C	D	E=A+B+C+D	F	G=E-F	H	I	J	K	L=G-H-I-J-K			M	N=L*M
Jan-25	68	36	382	-	486	44	442	-	-	(38)	62	418	7.53%	0.3	0.98	409
Jul-25	213	66	204	-	483	74	409	-	-	-	69	340	7.53%	0.8	0.94	321
Jan-26	202	67	211	-	480	75	405	-	-	(87)	67	426	7.53%	1.3	0.91	387
Jul-26	193	183	101	-	477	77	400	112	-	-	64	223	7.53%	1.8	0.88	196
Jan-27	188	183	102	-	474	78	396	112	-	-	62	222	7.53%	2.3	0.85	188
Jul-27	183	192	96	-	471	79	392	118	-	-	59	215	7.53%	2.8	0.82	175
Jan-28	178	193	96	-	467	79	388	118	-	-	57	213	7.53%	3.3	0.79	167
Jul-28	171	77	214	-	463	83	380	-	-	-	54	327	7.53%	3.8	0.76	248
Jan-29	160	78	221	-	460	84	376	-	-	-	51	325	7.53%	4.3	0.73	238
Jul-29	149	81	225	-	456	87	369	-	-	-	48	321	7.53%	4.8	0.71	226
Jan-30	138	82	232	-	452	88	364	-	-	-	45	319	7.53%	5.3	0.68	217
Jul-30	126	86	237	-	448	92	357	-	-	-	42	314	7.53%	5.8	0.66	206
Jan-31	114	87	244	-	444	92	352	-	-	-	39	313	7.53%	6.3	0.63	198
Jul-31	101	90	248	-	440	96	343	-	-	-	36	308	7.53%	6.8	0.61	188
Jan-32	89	91	255	-	435	97	338	-	-	-	33	305	7.53%	7.3	0.59	179
Jul-32	76	95	260	-	431	101	329	-	-	-	29	300	7.53%	7.8	0.57	170
Jan-33	62	96	267	-	426	102	323	-	-	-	26	298	7.53%	8.3	0.55	163
Jul-33	51	259	108	-	417	106	311	158	-	-	22	131	7.53%	8.8	0.53	69
Jan-34	45	259	99	-	403	106	297	158	-	-	19	120	7.53%	9.3	0.51	61
Jul-34	40	271	91	-	403	110	292	166	-	-	15	111	7.53%	9.8	0.49	55
Jan-35	36	273	98	-	407	113	294	166	-	-	11	118	7.53%	10.3	0.47	56
Jul-35	29	110	256	-	394	117	278	-	-	-	7	271	7.53%	10.8	0.46	124
Jan-36	16	78	285	-	379	81	298	-	-	-	3	294	7.53%	11.3	0.44	129
Enterprise Value																**4,367**
Adjustments:																
Cash and Cash Equivalents																644
Adjusted Enterprise Value																**5,011**

Appendix 1.2 – Valuation of GKBHPL as on 30th September 2024 under the DCF Method

INR Mn

Period	Finance Income	O&M Income	Changes in Financial Asset	Milestone	Total Inflow from NHAI	Routine O&M Expense	Cash EBITDA	MMR	Capex	WCap	Tax	FCFF	WACC	CAF	DF	PV of FCFF
	A	B	C	D	E=A+B+C+D	F	G=E-F	H	I	J	K	L=G-H-I-J-K			M	N=L*M
Jan-25	167	68	171	-	406	70	336	-	-	67	7	262	7.53%	0.3	0.98	256
Jul-25	186	66	151	-	403	73	330	-	-	-	57	273	7.53%	0.8	0.94	257
Jan-26	175	67	159	-	401	73	328	-	-	(29)	55	302	7.53%	1.3	0.91	274
Jul-26	163	70	165	-	398	76	322	-	-	-	53	269	7.53%	1.8	0.87	235
Jan-27	151	70	175	-	396	77	319	-	-	-	51	268	7.53%	2.3	0.84	226
Jul-27	142	242	9	-	393	78	315	167	-	-	50	99	7.53%	2.8	0.81	80
Jan-28	141	243	7	-	391	79	312	167	-	-	48	98	7.53%	3.3	0.78	77
Jul-28	141	255	-8	-	388	82	306	175	-	-	45	86	7.53%	3.8	0.76	65
Jan-29	141	255	(11)	-	385	82	303	175	-	-	43	85	7.53%	4.3	0.73	62
Jul-29	139	81	162	-	382	86	296	-	-	-	40	256	7.53%	4.8	0.70	180
Jan-30	127	81	170	-	379	86	292	-	-	-	38	255	7.53%	5.3	0.68	173
Jul-30	115	85	176	-	376	90	286	-	-	-	35	251	7.53%	5.8	0.65	164
Jan-31	102	85	185	-	373	91	282	-	-	-	32	249	7.53%	6.3	0.63	157
Jul-31	88	89	192	-	369	95	274	-	-	-	30	245	7.53%	6.8	0.61	149
Jan-32	74	90	201	-	365	95	270	-	-	-	27	243	7.53%	7.3	0.59	143
Jul-32	59	94	208	-	362	99	262	-	-	-	24	238	7.53%	7.8	0.57	135
Jan-33	44	94	219	-	358	100	258	-	-	-	21	237	7.53%	8.4	0.55	129
Jul-33	31	250	70	-	351	103	248	149	-	-	19	80	7.53%	8.8	0.53	42
Jan-34	26	250	64	-	339	103	237	149	-	-	16	72	7.53%	9.4	0.51	37
Jul-34	21	262	56	-	339	108	231	156	-	-	13	62	7.53%	9.8	0.49	31
Jan-35	17	263	63	-	343	109	234	156	-	-	10	68	7.53%	10.4	0.47	32
Jul-35	13	275	44	-	333	113	219	164	-	-	6	49	7.53%	10.8	0.45	22
Jan-36	10	242	69	-	320	78	243	164	-	-	3	75	7.53%	11.4	0.44	33
Enterprise Value																**2,958**
Adjustments:																
Cash and Cash Equivalents																1,254
Adjusted Enterprise Value																**4,212**

Appendix 1.3 – Valuation of HHHPL as on 30th September 2024 under the DCF Method

INR Mn

Period	Finance Income	O&M Income	Changes in Financial Asset	Milestone	Total Inflow from NHAI	Routine O&M Expense	Cash EBITDA	MMR	Capex	WCap	Tax	FCFF	WACC	CAF	DF	PV of FCFF
	A	B	C	D	E=A+B+C+D	F	G=E-F	H	I	J	K	L=G-H-I-J-K			M	N=L*M
Oct-24	330	150	54	-	533	149	384	-		(23)	171	237	7.53%	0.1	0.99	235
Apr-25	295	214	22	-	531	208	323	-	-	(96)	85	333	7.53%	0.6	0.96	319
Oct-25	294	214	21	-	529	209	320	-	-	(413)	83	650	7.53%	1.1	0.92	600
Apr-26	292	217	16	-	526	212	314	-	-	(95)	81	328	7.53%	1.6	0.89	292
Oct-26	287	75	161	-	523	76	447	-	-	(19)	77	389	7.53%	2.1	0.86	334
Apr-27	277	79	166	-	521	80	441	-	-	-	75	367	7.53%	2.6	0.83	303
Oct-27	266	79	173	-	518	80	438	-	-	-	73	366	7.53%	3.1	0.80	292
Apr-28	256	147	113	-	516	84	432	61	-	-	71	300	7.53%	3.6	0.77	231
Oct-28	249	147	116	-	512	84	428	61	-	-	68	299	7.53%	4.1	0.74	222
Apr-29	242	154	114	-	510	88	422	64	-	-	66	292	7.53%	4.6	0.72	209
Oct-29	235	155	117	-	507	89	418	64	-	-	63	291	7.53%	5.1	0.69	201
Apr-30	226	91	186	-	504	92	411	-	-	-	60	351	7.53%	5.6	0.67	234
Oct-30	215	92	193	-	500	93	407	-	-	-	57	350	7.53%	6.1	0.64	225
Apr-31	202	96	199	-	497	97	400	-	-	-	54	346	7.53%	6.6	0.62	214
Oct-31	190	97	207	-	493	98	396	-	-	-	51	345	7.53%	7.1	0.60	206
Apr-32	177	101	212	-	490	102	388	-	-	-	48	340	7.53%	7.6	0.58	195
Oct-32	163	102	222	-	486	103	383	-	-	-	45	339	7.53%	8.1	0.55	188
Apr-33	149	106	227	-	483	107	375	-	-	-	42	334	7.53%	8.6	0.54	179
Oct-33	135	107	237	-	478	108	370	-	-	-	38	332	7.53%	9.1	0.52	171
Apr-34	120	111	243	-	474	113	361	-	-	-	35	326	7.53%	9.6	0.50	162
Oct-34	104	112	253	-	470	113	356	-	-	-	31	325	7.53%	10.1	0.48	156
Apr-35	90	207	169	-	465	118	347	86	-	-	29	232	7.53%	10.6	0.46	108
Oct-35	79	207	170	-	457	119	338	86	-	-	25	227	7.53%	11.1	0.45	101
Apr-36	69	216	158	-	443	123	320	90	-	-	21	208	7.53%	11.6	0.43	90
Oct-36	59	217	167	-	443	124	318	90	-	-	17	211	7.53%	12.1	0.41	88
Apr-37	47	129	272	-	448	131	317	-	-	-	12	305	7.53%	12.6	0.40	122
Oct-37	30	129	277	-	436	131	305	-	-	-	8	296	7.53%	13.1	0.39	114
Apr-38	11	51	358	-	420	50	370	-	-	-	5	365	7.53%	13.6	0.37	136
Enterprise Value																**5,925**
Adjustments:																
Cash and Cash Equivalents																88
Adjusted Enterprise Value																**6,013**

Appendix 1.4 – Valuation of GRJHPL as on 30th September 2024 under the DCF Method

INR Mn

Period	Finance Income	O&M Income	Changes in Financial Asset	Milestone	Total Inflow from NHAI	Routine O&M Expense	Cash EBITDA	MMR	Capex	WCap	Tax	FCFF	WACC	CAF	DF	PV of FCFF
	A	B	C	D	E=A+B+C+D	F	G=E-F	H	I	J	K	L=G-H-I-J-K			M	N=L*M
Jan-25	14	34	271	-	318	37	281	-	-	11	21	249	7.53%	0.3	0.98	244
Jul-25	146	50	121	-	316	53	263	-	-	-	43	221	7.53%	0.8	0.94	208
Jan-26	139	50	125	-	314	53	261	-	-	(92)	41	312	7.53%	1.3	0.91	284
Jul-26	133	152	27	-	312	56	257	98	-	-	40	119	7.53%	1.8	0.88	104
Jan-27	132	152	26	-	310	56	255	98	-	-	38	118	7.53%	2.3	0.85	100
Jul-27	129	55	124	-	308	58	250	-	-	-	36	214	7.53%	2.8	0.82	174
Jan-28	122	55	129	-	306	59	247	-	-	-	34	213	7.53%	3.3	0.79	167
Jul-28	115	58	132	-	304	61	243	-	-	-	33	210	7.53%	3.8	0.76	159
Jan-29	108	58	136	-	302	62	240	-	-	-	31	209	7.53%	4.3	0.73	153
Jul-29	100	61	139	-	300	65	235	-	-	-	29	206	7.53%	4.8	0.71	145
Jan-30	92	61	144	-	297	65	232	-	-	-	27	205	7.53%	5.3	0.68	140
Jul-30	84	64	147	-	295	68	227	-	-	-	25	202	7.53%	5.8	0.66	133
Jan-31	76	64	152	-	292	68	224	-	-	-	23	201	7.53%	6.3	0.63	127
Jul-31	68	67	155	-	290	71	218	-	-	-	21	197	7.53%	6.8	0.61	120
Jan-32	59	67	161	-	287	72	215	-	-	-	18	196	7.53%	7.3	0.59	116
Jul-32	52	204	28	-	284	75	209	132	-	-	17	60	7.53%	7.8	0.57	34
Jan-33	50	205	24	-	279	75	203	132	-	-	14	57	7.53%	8.3	0.55	31
Jul-33	47	73	150	-	270	78	192	-	-	-	11	180	7.53%	8.8	0.53	95
Jan-34	39	74	157	-	270	79	191	-	-	-	9	182	7.53%	9.3	0.51	92
Jul-34	30	78	165	-	273	83	190	-	-	-	7	183	7.53%	9.8	0.49	90
Jan-35	21	78	166	-	265	83	182	-	-	-	4	178	7.53%	10.3	0.47	84
Jul-35	11	54	190	-	256	57	199	-	-	-	2	197	7.53%	10.8	0.46	90
Enterprise Value																**2,891**
Adjustments:																
Cash and Cash Equivalents																186
Adjusted Enterprise Value																**3,077**

Appendix 1.5 – Valuation of GKNHPL as on 30th September 2024 under the DCF Method

INR Mn

Period	Finance Income	O&M Income	Changes in Financial Asset	Milestone	Total Inflow from NHAI	Routine O&M Expense	Cash EBITDA	MMR	Capex	WCap	Tax	FCFF	WACC	CAF	DF	PV of FCFF
	A	B	C	D	E=A+B+C+D	F	G=E-F	H	I	J	K	L=G-H-I-J-K			M	N=L*M
Dec-24	985	10	51	-	1,046	20	1,026	-	-	90	422	514	7.53%	0.2	0.98	506
Jun-25	600	452	(11)	-	1,041	432	610	-	-	(187)	177	620	7.53%	0.7	0.95	589
Dec-25	591	113	333	-	1,036	118	918	-	-	(344)	166	1,095	7.53%	1.2	0.92	1,003
Jun-26	571	117	341	-	1,030	121	908	-	-	(185)	162	932	7.53%	1.7	0.88	823
Dec-26	552	118	353	-	1,023	122	901	-	-	(128)	157	871	7.53%	2.2	0.85	742
Jun-27	531	123	364	-	1,018	122	895	-	-	-	153	743	7.53%	2.7	0.82	610
Dec-27	510	124	377	-	1,012	124	888	-	-	-	148	740	7.53%	3.2	0.79	586
Jun-28	488	129	388	-	1,005	125	880	-	-	-	143	737	7.53%	3.7	0.76	562
Dec-28	466	130	401	-	998	126	871	-	-	-	138	733	7.53%	4.2	0.74	540
Jun-29	445	290	256	-	991	131	860	143	-	-	136	581	7.53%	4.7	0.71	412
Dec-29	430	292	263	-	984	133	852	143	-	-	131	578	7.53%	5.2	0.68	396
Jun-30	415	305	257	-	977	138	839	150	-	-	126	563	7.53%	5.7	0.66	372
Dec-30	400	306	262	-	969	139	830	150	-	-	120	559	7.53%	6.2	0.64	356
Jun-31	383	149	429	-	961	144	817	-	-	-	111	706	7.53%	6.7	0.61	434
Dec-31	358	151	444	-	953	146	808	-	-	-	105	703	7.53%	7.2	0.59	416
Jun-32	332	157	455	-	945	151	793	-	-	-	99	694	7.53%	7.7	0.57	396
Dec-32	306	159	472	-	937	153	784	-	-	-	93	691	7.53%	8.2	0.55	380
Jun-33	279	165	484	-	928	159	769	-	-	-	86	683	7.53%	8.7	0.53	362
Dec-33	251	167	501	-	919	161	758	-	-	-	80	678	7.53%	9.2	0.51	347
Jun-34	222	173	513	-	908	167	741	-	-	-	73	668	7.53%	9.7	0.49	330
Dec-34	192	175	532	-	899	169	730	-	-	-	66	664	7.53%	10.2	0.48	316
Jun-35	162	182	545	-	889	176	713	-	-	-	58	654	7.53%	10.7	0.46	300
Dec-35	130	183	557	-	870	177	693	-	-	-	51	642	7.53%	11.2	0.44	284
Jun-36	102	406	333	-	841	182	659	201	-	-	47	410	7.53%	11.7	0.43	175
Dec-36	82	409	348	-	839	185	655	201	-	-	40	414	7.53%	12.2	0.41	170
Jun-37	62	429	357	-	848	194	654	211	-	-	32	411	7.53%	12.7	0.40	163
Dec-37	42	430	350	-	822	195	627	211	-	-	23	392	7.53%	13.2	0.38	150
Jun-38	19	125	645	-	789	120	669	-	-	-	10	659	7.53%	13.7	0.37	243
Enterprise Value																**11,965**
Adjustments:																
Cash and Cash Equivalents																409
Adjusted Enterprise Value																**12,374**

Appendix 1.6 – Valuation of GRSHPL as on 30th September 2024 under the DCF Method

INR Mn

Period	Finance Income	O&M Income	Changes in Financial Asset	Milestone	Total Inflow from NHAI	Routine O&M Expense	Cash EBITDA	MMR	Capex	WCap	Tax	FCFF	WACC	CAF	DF	PV of FCFF
	A	B	C	D	E=A+B+C+D	F	G=E-F	H	I	J	K	L=G-H-I-J-K			M	N=L*M
Jan-25	(37)	22	484	-	469	23	446	-	-	(36)	-	482	7.60%	0.4	0.97	469
Jul-25	214	55	197	-	466	59	407	-	-	(43)	16	434	7.60%	0.9	0.94	407
Jan-26	204	56	204	-	463	59	404	-	-	(92)	68	429	7.60%	1.4	0.90	388
Jul-26	196	183	82	-	461	62	399	124	-	-	65	209	7.60%	1.9	0.87	182
Jan-27	191	183	83	-	458	63	395	124	-	-	63	208	7.60%	2.4	0.84	175
Jul-27	188	192	75	-	455	65	389	131	-	-	61	198	7.60%	2.9	0.81	160
Jan-28	184	193	75	-	452	66	386	131	-	-	59	197	7.60%	3.4	0.78	154
Jul-28	179	64	206	-	449	69	380	-	-	-	56	324	7.60%	3.9	0.75	244
Jan-29	168	65	213	-	446	69	377	-	-	-	54	323	7.60%	4.4	0.73	234
Jul-29	158	68	217	-	442	72	370	-	-	-	51	319	7.60%	4.9	0.70	223
Jan-30	147	68	224	-	439	73	366	-	-	-	48	318	7.60%	5.4	0.67	214
Jul-30	136	71	228	-	435	76	359	-	-	-	46	314	7.60%	5.9	0.65	204
Jan-31	125	72	235	-	432	77	355	-	-	-	43	312	7.60%	6.4	0.63	196
Jul-31	114	75	240	-	428	80	348	-	-	-	40	308	7.60%	6.9	0.60	186
Jan-32	102	76	247	-	424	81	343	-	-	-	37	306	7.60%	7.4	0.58	179
Jul-32	92	246	82	-	420	85	336	167	-	-	34	135	7.60%	7.9	0.56	76
Jan-33	88	247	81	-	416	85	331	167	-	-	31	133	7.60%	8.4	0.54	72
Jul-33	84	259	69	-	412	89	323	175	-	-	28	120	7.60%	8.9	0.52	63
Jan-34	80	259	67	-	407	90	317	175	-	-	24	118	7.60%	9.4	0.50	59
Jul-34	75	87	237	-	399	93	305	-	-	-	21	285	7.60%	9.9	0.49	138
Jan-35	63	87	236	-	386	93	292	-	-	-	17	275	7.60%	10.4	0.47	129
Jul-35	52	91	243	-	385	98	287	-	-	-	14	274	7.60%	10.9	0.45	123
Jan-36	40	93	257	-	390	99	290	-	-	-	10	280	7.60%	11.4	0.43	122
Jul-36	27	96	255	-	378	103	275	-	-	-	6	269	7.60%	11.9	0.42	113
Jan-37	14	72	277	-	363	76	287	-	-	-	3	284	7.60%	12.4	0.40	115
Enterprise Value																**4,626**
Adjustments:																
Cash and Cash Equivalents																283
Adjusted Enterprise Value																**4,909**

Appendix 1.7 – Valuation of DUHPL as on 30th September 2024 under the DCF Method

INR Mn

Period	Finance Income	O&M Income	Changes in Financial Asset	Milestone	Total Inflow from NHAI	Routine O&M Expense	Cash EBITDA	MMR	Capex	WCap	Tax	FCFF	WACC	CAF	DF	PV of FCFF
	A	B	C	D	E=A+B+C+D	F	G=E-F	H	I	J	K	L=G-H-I-J-K			M	N=L*M
Jan-25	46	117	209	-	371	121	250	-	-	53	42	155	7.53%	0.3	0.98	152
Jul-25	198	149	23	-	370	152	217	-	-	(67)	56	228	7.53%	0.8	0.94	215
Jan-26	197	50	122	-	368	54	315	-	-	(127)	55	387	7.53%	1.3	0.91	352
Jul-26	189	52	126	-	367	56	311	-	-	(112)	53	370	7.53%	1.8	0.88	325
Jan-27	180	52	132	-	365	56	309	-	-	-	52	257	7.53%	2.3	0.85	218
Jul-27	172	54	137	-	364	59	305	-	-	-	50	255	7.53%	2.8	0.82	208
Jan-28	162	55	145	-	362	59	303	-	-	-	48	254	7.53%	3.3	0.79	200
Jul-28	155	190	16	-	360	62	298	132	-	-	47	119	7.53%	3.8	0.76	91
Jan-29	154	190	14	-	358	62	296	132	-	-	45	119	7.53%	4.3	0.73	87
Jul-29	153	199	4	-	357	65	292	139	-	-	43	110	7.53%	4.8	0.71	77
Jan-30	153	200	2	-	355	66	289	139	-	-	41	109	7.53%	5.3	0.68	74
Jul-30	150	63	139	-	353	68	285	-	-	-	40	245	7.53%	5.8	0.66	161
Jan-31	141	64	146	-	351	69	282	-	-	-	38	244	7.53%	6.3	0.63	155
Jul-31	132	67	151	-	349	72	277	-	-	-	36	241	7.53%	6.8	0.61	147
Jan-32	122	67	158	-	347	73	274	-	-	-	34	241	7.53%	7.3	0.59	142
Jul-32	111	70	163	-	345	76	269	-	-	-	32	237	7.53%	7.8	0.57	135
Jan-33	100	71	172	-	343	76	266	-	-	-	29	237	7.53%	8.3	0.55	130
Jul-33	89	74	178	-	340	80	261	-	-	-	27	234	7.53%	8.8	0.53	123
Jan-34	77	75	187	-	338	80	258	-	-	-	25	233	7.53%	9.3	0.51	119
Jul-34	67	255	13	-	335	84	251	177	-	-	22	52	7.53%	9.8	0.49	25
Jan-35	67	256	11	-	333	84	248	177	-	-	20	51	7.53%	10.3	0.47	24
Jul-35	66	268	(4)	-	330	88	242	186	-	-	17	38	7.53%	10.8	0.46	17
Jan-36	66	268	(10)	-	325	89	236	186	-	-	15	35	7.53%	11.3	0.44	15
Jul-36	64	85	166	-	315	92	224	-	-	-	12	211	7.53%	11.8	0.42	90
Jan-37	53	86	177	-	316	93	223	-	-	-	10	213	7.53%	12.3	0.41	87
Jul-37	41	91	188	-	320	98	222	-	-	-	7	215	7.53%	12.8	0.39	85
Jan-38	29	91	192	-	312	98	214	-	-	-	4	210	7.53%	13.3	0.38	80
Jul-38	16	62	224	-	301	66	236	-	-	-	2	234	7.53%	13.8	0.37	86
Enterprise Value																**3,620**
Adjustments:																
Cash and Cash Equivalents																124
Adjusted Enterprise Value																**3,744**

Appendix 1.8 – Valuation of GBHPL as on 30th September 2024 under the DCF Method

INR Mn

Period	Finance Income	O&M Income	Changes in Financial Asset	Milestone	Total Inflow from NHAI	Routine O&M Expense	Cash EBITDA	MMR	Capex*	WCap	Tax	FCFF	WACC	CAF	DF	PV of FCFF
	A	B	C	D	E=A+B+C+D	F	G=E-F	H	I	J	K	L=G-H-I-J-K			M	N=L*M
Dec-24	125	145	299	-	569	10	560	-	139	144	126	151	7.96%	0.3	0.98	148
Jun-25	259	344	99	-	703	81	621	252	-	(126)	82	414	7.96%	0.8	0.94	390
Dec-25	257	344	10	-	610	81	529	252	-	(243)	78	442	7.96%	1.3	0.91	401
Jun-26	256	361	(6)	-	611	85	525	265	-	-	75	185	7.96%	1.8	0.87	162
Dec-26	257	361	(6)	-	612	85	526	265	-	-	72	189	7.96%	2.3	0.84	159
Jun-27	253	88	271	-	613	89	523	-	-	-	66	457	7.96%	2.8	0.81	369
Dec-27	240	88	286	-	613	89	524	-	-	-	63	461	7.96%	3.3	0.78	358
Jun-28	225	92	297	-	614	94	520	-	-	-	60	460	7.96%	3.8	0.75	344
Dec-28	210	92	312	-	614	94	521	-	-	-	57	463	7.96%	4.3	0.72	334
Jun-29	194	96	325	-	615	98	517	-	-	-	54	463	7.96%	4.8	0.69	321
Dec-29	178	96	342	-	616	98	517	-	-	-	51	467	7.96%	5.3	0.67	311
Jun-30	160	101	355	-	617	102	514	-	-	-	47	467	7.96%	5.8	0.64	300
Dec-30	142	101	374	-	617	102	515	-	-	-	44	471	7.96%	6.3	0.62	291
Jun-31	128	460	30	-	618	108	510	338	-	-	45	127	7.96%	6.8	0.59	76
Dec-31	126	460	32	-	618	108	510	338	-	-	42	131	7.96%	7.3	0.57	75
Jun-32	125	482	12	-	619	113	506	355	-	-	38	113	7.96%	7.8	0.55	62
Dec-32	124	482	13	-	619	113	506	355	-	-	34	117	7.96%	8.3	0.53	62
Jun-33	119	116	381	-	617	118	499	-	-	-	24	475	7.96%	8.8	0.51	242
Dec-33	100	116	394	-	610	118	492	-	-	-	20	472	7.96%	9.3	0.49	232
Jun-34	80	122	413	-	614	123	491	-	-	-	16	475	7.96%	9.8	0.47	224
Dec-34	59	122	442	-	623	123	499	-	-	-	12	487	7.96%	10.3	0.45	221
Jun-35	36	128	453	-	617	129	488	-	-	-	8	480	7.96%	10.8	0.44	210
Dec-35	13	64	533	-	610	65	545	-	-	-	4	541	7.96%	11.3	0.42	228
Enterprise Value																**5,518**
Adjustments:																
Cash and Cash Equivalents																242
Adjusted Enterprise Value																**5,760**

Appendix 1.9 – Valuation of GNHPL II as on 30th September 2024 under the DCF Method

INR Mn

Period	Finance Income	O&M Income	Changes in Financial Asset	Milestone	Total Inflow from NHAI	Routine O&M Expense	Cash EBITDA	MMR	Capex*	WCap	Tax	FCFF	WACC	CAF	DF	PV of FCFF
	A	B	C	D	E=A+B+C+D	F	G=E-F	H	I	J	K	L=G-H-I-J-K			M	N=L*M
Oct-24	286	425	222	-	933	-7	940	27	353	233	198	130	8.03%	0.1	0.99	129
Apr-25	177	45	115	-	337	42	295	2	-	(12)	50	255	8.03%	0.6	0.95	244
Oct-25	170	45	121	-	336	42	294	2	-	(116)	48	359	8.03%	1.1	0.92	330
Apr-26	162	45	127	-	334	44	290	0	-	-	46	243	8.03%	1.6	0.88	215
Oct-26	154	45	133	-	332	44	288	0	-	-	44	243	8.03%	2.1	0.85	207
Apr-27	146	65	120	-	330	46	284	16	-	-	43	225	8.03%	2.6	0.82	184
Oct-27	139	65	125	-	329	46	282	16	-	-	41	226	8.03%	3.1	0.79	178
Apr-28	131	51	144	-	327	48	279	2	-	-	38	238	8.03%	3.6	0.76	180
Oct-28	122	51	151	-	325	48	277	2	-	-	36	238	8.03%	4.1	0.73	174
Apr-29	112	71	139	-	323	50	273	17	-	-	34	221	8.03%	4.6	0.70	155
Oct-29	104	71	146	-	321	50	271	17	-	-	32	221	8.03%	5.1	0.67	149
Apr-30	96	153	70	-	318	52	266	86	-	-	33	147	8.03%	5.6	0.65	96
Oct-30	91	153	72	-	316	52	263	86	-	-	30	147	8.03%	6.1	0.62	92
Apr-31	85	59	169	-	313	55	259	3	-	-	23	233	8.03%	6.6	0.60	140
Oct-31	75	59	177	-	311	55	256	3	-	-	20	233	8.03%	7.1	0.58	135
Apr-32	64	82	160	-	306	57	249	20	-	-	18	211	8.03%	7.6	0.56	117
Oct-32	54	82	162	-	299	57	242	20	-	-	16	206	8.03%	8.1	0.53	110
Apr-33	44	62	193	-	298	59	239	-	-	-	12	227	8.03%	8.6	0.51	117
Oct-33	31	62	208	-	301	59	242	-	-	-	10	232	8.03%	9.1	0.49	115
Apr-34	19	104	171	-	294	63	231	34	-	-	8	189	8.03%	9.6	0.48	90
Oct-34	8	29	249	-	286	5	281	17	-	-	5	259	8.03%	10.1	0.46	118
Enterprise Value																**3,273**
Adjustments:																
Cash and Cash Equivalents																141
Adjusted Enterprise Value																**3,414**

Appendix 2 – Weighted Average Cost of Capital (WACC) of the SPVs as on 30th September 2024

Particulars	GNHPL	GKBHPL	HHHPL	GRJHPL	GKNHPL	Remarks
Risk Free Rate (Rf)	6.69%	6.69%	6.69%	6.69%	6.69%	Risk Free Rate has been considered based on zero coupon yield curve as at 30th September 2024 of Government Securities having maturity period of 10 years, as quoted on CCIL's website.
Equity Risk Premium (ERP)	7.00%	7.00%	7.00%	7.00%	7.00%	Based on the historical realized returns on equity investments over a risk free rate of as represented by 10 year government bonds, a 7% equity risk premium is considered appropriate for India.
Beta (Relevered)	0.57	0.57	0.57	0.57	0.57	Beta has been considered based on the beta of companies operating in the similar kind of business in India.
Base Cost of Equity	**10.71%**	**10.71%**	**10.71%**	**10.71%**	**10.71%**	**Base Ke = Rf + (β x ERP)**
Company Specific Risk Premium (CSRP)	0.00%	0.00%	0.00%	0.00%	0.00%	Risk Premium/ Discount Specific to the SPVs
Adjusted Cost of Equity (Ke)	**10.71%**	**10.71%**	**10.71%**	**10.71%**	**10.71%**	**Adjusted Ke = Rf + (β x ERP) + CSRP**
Pre-Tax Cost of Debt	8.25%	8.25%	8.25%	8.25%	8.25%	As per Management Representation Letter
Tax Rate of SPV	25.17%	25.17%	25.17%	25.17%	25.17%	Average tax rate for the life of the SPVs have been considered
Post-Tax Cost of Debt (Kd)	**6.17%**	**6.17%**	**6.17%**	**6.17%**	**6.17%**	**Effective cost of debt. Kd = Pre tax Kd * (1-Effective Tax Rate)**
Debt / (Debt+Equity)	70%	70%	70%	70%	70%	The debt - equity ratio computed as [D/(D+E)] is considered as 70% as per industry standard.
WACC	**7.53%**	**7.53%**	**7.53%**	**7.53%**	**7.53%**	**WACC = [Ke*(1-D/(D+E))]+[Kd*(1-t)*(D/(D+E))]**

Appendix 2 – Weighted Average Cost of Capital (WACC) of the SPVs as on 30th September 2024

Particulars	GRSHPL	DUHPL	GBHPL	GNHPL II	Remarks
Risk Free Rate (Rf)	6.69%	6.69%	6.69%	6.69%	Risk Free Rate has been considered based on zero coupon yield curve as at 30th September 2024 of Government Securities having maturity period of 10 years, as quoted on CCIL's website.
Equity Risk Premium (ERP)	7.00%	7.00%	7.00%	7.00%	Based on the historical realized returns on equity investments over a risk free rate of as represented by 10 year government bonds, a 7% equity risk premium is considered appropriate for India.
Beta (Relevered)	0.58	0.57	0.56	0.56	Beta has been considered based on the beta of companies operating in the similar kind of business in India.
Base Cost of Equity	**10.74%**	**10.71%**	**10.58%**	**10.59%**	**Base Ke = Rf + (β x ERP)**
Company Specific Risk Premium (CSRP)	0.00%	0.00%	1.00%	1.00%	Risk Premium/ Discount Specific to the SPVs
Adjusted Cost of Equity (Ke)	**10.74%**	**10.71%**	**11.58%**	**11.59%**	**Adjusted Ke = Rf + (β x ERP) + CSRP**
Pre-Tax Cost of Debt	8.25%	8.25%	9.00%	9.10%	As per Management Representation Letter
Tax Rate of SPV	24.16%	25.17%	28.78%	28.57%	Average tax rate for the life of the SPVs have been considered
Post-Tax Cost of Debt (Kd)	**6.26%**	**6.17%**	**6.41%**	**6.50%**	**Effective cost of debt. Kd = Pre tax Kd * (1-Effective Tax Rate)**
Debt / (Debt+Equity)	70%	70%	70%	70%	The debt - equity ratio computed as [D/(D+E)] is considered as 70% as per industry standard.
WACC	**7.60%**	**7.53%**	**7.96%**	**8.03%**	**WACC = [Ke*(1-D/(D+E))]+[Kd*(1-t)*(D/(D+E))]**

Appendix 3.1 – GNHPL: Summary of approval and licences

Sr. No.	Approvals	Date of Issue	Valid upto	Issuing Authority
1	License for Use of Explosives	01-Mar-16		Directorate General of Mine Safety
2	Grant of Consent for Emission of Air	30-Jan-17		Haryana State Pollution Control
3	Agreement for purchase of Boulders	06-Sep-18		Agreement Between GNHPL & Haryana Mining Company
4	License for crushing mines	30-Apr-19		Agreement Between GNHPL & Licensor
5	NOC for Land Acquisiton			Gram Panchayat, Mahendragarh
6	Water Permit: Memo no-4545	03-Jul-19		Executive Engineer, Public Health Engineering Div No. 3 Narnaul
7	Permission for diversion of Forest Land	02-Aug-19		Ministry of Environment, Forest & Climate Change
8	Submission of Compensation amount for Land Acquisition	20-Aug-19		District Revenue Officer, Narnaul
9	Consent to Establish: HSPCB/Consent/ : 313298219MAHCTE6913339	18-Sep-19	17-Sep-21	Haryana State Pollution Control
10	Permission for diversion of Forest Land	14-Nov-19		Office of Forest Department, Mahendragarh
11	Labour License: CLRA/ALCKARNAL/2019/L-445	18-Nov-19	17-Nov-20	Government of India Office of the Licensing Officer
12	Permission for cutting of Trees	19-Nov-19		Forest Department, Govt. of Haryana
13	Certificate Of Registration For Employer: BOCW/ALCKARNAL/2019/R-103	18-Nov-19		Government of India Office of the Registering Officer

Source: Investment Manager

Appendix 3.2 – GKBHPL: Summary of approval and licences

Sr. No.	Approvals	Date of Issue	Valid upto	Issuing Authority
1	Letter of Award	27-Mar-18		National Highway Authority of India
2	Forest Department Letter for Tree Cutting	11-Jul-18		Office of Deputy Conservator of Forest, Bikaner
3	Forest Department Letter for Tree Cutting	26-Oct-18		Forest Department, Jaisalmer
4	Permission granted for Quarry Location	07-Jan-19		Office of Mining Engineer, Mines and Geology, Bikaner
5	Approval for draining water from bore well	16-Jan-19		Executive Engineer, PHED- Bikaner
6	NOC for Land Acquisition	28-Mar-19		Notary Govt. of India
7	NOC for Land Acquisition	18-Apr-19		GramPanchayat, Ghodu
8	NOC: Ref no-19	23-Apr-19		GramPanchayat, Chhapoli
9	Letter of Land Availability	04-May-19		National Highway Authority of India
10	Approval of Water Pipe line shifting by PHED	20-May-19		National Highway Authority of India
11	Letter of Appointed Date	22-May-19		National Highway Authority of India
12	Permission granted for Borrow Area	24-May-19		Office of Mining Engineer, Mines and Geology, Bikaner
13	Gradation for Granular Sub Base (Grading V)	08-Jun-19		National Highway Authority of India
14	NOC: Ref no-28	20-Jun-19		GramPanchayat, Chhapoli
15	Permission for Borrow Earth	04-Jul-19		Office of Mining Engineer, Mines and Geology, Bikaner
15	Approval of Electrical Utility	30-Jul-19		National Highway Authority of India
16	Labour License	31-Jul-19		Project Director, Bikaner

Source: Investment Manager

Sr. No.	Approvals	Date of Issue	Valid upto	Issuing Authority
18	NOC for Land Acquisition	27-Sep-19		GramPanchayat, 17 KHM
19	Forest Department Letter for Tree Cutting	25-Nov-19		Forest Department, Jodhpur
20	Consent to Establish: 2019-2020/SCMG/4691	19-Nov-19	30-Apr-24	Rajasthan State Pollution Control Board
21	Consent to Establish: 2019-2020/SCMG/4692	19-Nov-19	31-Oct-24	Rajasthan State Pollution Control Board
22	Consent to Establish: 2019-2020/SCMG/4693	19-Nov-19	30-Apr-24	Rajasthan State Pollution Control Board
23	Consent to Establish: 2019-2020/SCMG/4694	19-Nov-19	31-Oct-24	Rajasthan State Pollution Control Board
24	Testing of Schedule-I as per Concession Agreement	16-Dec-20		Sterling Indo Tech
25	Consent to Establish: 2019-2020/SCMG/4694	19-Nov-19	31-Oct-24	Rajasthan State Pollution Control Board

Source: Investment Manager

Appendix 3.3 – HHHPL: Summary of approval and licences

Sr. No.	Approvals	Date of Issue	Valid upto	Issuing Authority
1	No objection certificate	12-Sep-18	NA	Gram Panchayat - Amtaro
2	Consent to operate: JSPCB/HO/RNC/CTO-6175967/2019/2474	15-Dec-19	30-Sep-21	Jharkhand State Pollution Control Board
3	Certificate Of Registration For Employer: BOCW/ALCPATNA/2021/R-47	25-Aug-21	NA	Government of India Office of the Registering Officer
4	Emission Consent Order: ref no-401	18-Mar-21	02-Feb-26	Bihar State Pollution Control Board
5	Discharge Consent Order: ref no-402	18-Mar-21	02-Feb-26	Bihar State Pollution Control Board
6	Permission for Tree cutting	24-Apr-21		Department of Environment, Forest & Climate Change
7	Permission for Tree cutting	01-Jun-21		Department of Environment, Forest & Climate Change
8	CLRA/ALCPATNA/2021/L-227	18-Aug-21	17-Aug-22	Government of India Office of the Licensing Officer
9	GAD Approval: W-3/162/03/ROB/CH: 85+800/NH-31	14-Apr-22		East Central Railway

Source: Investment Manager

Appendix 3.4 – GRJHPL: Summary of approval and licences

Sr. No.	Approvals	Date of Issue	Valid upto	Issuing Authority
1	Water Permit: GAWAR/R/R-J/NH-334B/2018/49	27-Nov-18	NA	Office of executive Engineer, Bahdurgarh
2	Consent to Establish: HSPCB/Consent/ : 313298219JHACTE6557261	15-May-19	02-May-21	Haryana State Pollution Control
3	LOA: UMC/18-19/Aug/018	16-Aug-18		United Mining Corporation
4	Certificate Of Registration For Employer: BOCW/ALCKARNAL/2019/R-6	04-Feb-19		Government of India Office of the Registering Officer
5	Permission for Deep hole drilling and blasting	03-Mar-17		Directorate General of Mines Safety
6	Permission for setting up Cement Mix plant	13-Feb-19		Directorate of Town & Country Planning, Haryana
7	Approval of GAD for ROB	24-Oct-18		CGM cum Regional Officer (Chandigarh), NHAI
8	Permission of clearance from Pollution Control Board for setting up Batching Plant	15-May-19		Haryana State Pollution Control
8	Permission of Village Panchayat and State Government for Borrow Earth	21-Dec-18		
9	Permission for Tree Cutting	01-Oct-18		Divisional Forest Officer, Govt. of Haryana

Source: Investment Manager

Appendix 3.5 – GKNHPL: Summary of approval and licences

Sr. No.	Approvals	Date of Issue	Valid upto	Issuing Authority
1	Permission for Operating facility for generation, storage and disposal of Hazardous Wastes	14-Feb-22	31-Mar-27	H.P. State Pollution Control Board
2	BIL-HWA-FRESH/2021-22-18-WMM Plant			H.P. State Pollution Control Board
3	BIL-HWA-FRESH/2021-22-19- RMC Plant at Vill Alsu			H.P. State Pollution Control Board
4	BIL-HWA-FRESH/2021-22-20- HMP Delag			H.P. State Pollution Control Board
5	BIL-HWA-FRESH/2021-22-21- RMC Plant at Jatta			H.P. State Pollution Control Board
6	BIL-HWA-FRESH/2021-22-22- Mobile Stone Crusher			H.P. State Pollution Control Board
7	BIL-HWA-FRESH/2021-22-23- WMM Plant at Sannour			H.P. State Pollution Control Board
8	BIL-HWA-FRESH/2021-22-240- RMC Plant at Bharari			H.P. State Pollution Control Board
9	Labour License: CLRA/ALCCHANDIGARH/2021/L-190	13-Oct-21	12-Oct-22	Government of India Office of the Licensing Officer
10	No Objection Certificate	05-Mar-21		GramPanchayat, Alsoo, District Mandi

Source: Investment Manager

Appendix 3.6 – GRSHPL: Summary of approval and licences

Sr. No.	Approvals	Date of Issue	Valid upto	Issuing Authority
1	No Objection Certificate	-	-	GramPanchayat, Khedi Battar
2	Permission for Tree Cutting	01-Oct-18		Divisional Forest Officer, Govt. of Haryana
3	Approval of permission for cutting of trees	09-Oct-18		Ministry of Environment, Forest & Climate Change
4	Approval of GAD for ROB	18-Oct-18		General Manager, Engineer- Northern' Railway
5	Approval to Establish of Batching plant by Pollution Control Board	15-May-19		Haryana State Pollution Control
6	NOC for installation of RMC	20-Nov-19		Gram Panchayat, Fatehpur District
7	Approval for Borrow Area	31-Jan-20		Assistant Mining Engineer, Mines & Geology Department
8	Approval to Establish Hot Mix Plant (Asphalt Plant)	03-Mar-20		Haryana State Pollution Control
9	Approval of Extension of Time	06-Aug-20		National Highway Authority of India
10	Approval of Splitting the Contract price weightage as per Schedule G	10-Aug-20		National Highway Authority of India
11	Supplementary Concession Agreement	17-Sep-20		Agreement between GNHPL & NHAI
12	Approval of Revised Pavement Design	24-Jun-20		National Highway Authority of India
13	Approval granted for cutting of trees	25-Jun-20		Forest Department, Sonepat
14	Approval to Establish Hot Mix Plant (Asphalt Plant)	09-Jul-20		Haryana State Pollution Control
15	Approval to Establish of Batching plant by Pollution Control Board	02-Nov-20		Haryana State Pollution Control
16	Water Permit: Memo no-766	16-Jul-19		Municipal Corporation, Sonepat

Source: Investment Manager

Appendix 3.7 – DUHPL: Summary of approval and licences

Sr. No.	Approvals	Date of Issue	Valid upto	Issuing Authority
1	Permission for cutting of Trees	22-Apr-21		National Highway Auhtority of India
2	CTE-Fresh : CTE-89281	12-Jul-21		M.P. Pollution Control Board
3	CCA-Renewal : AW-88161	13-Jun-21	30-Jun-22	M.P. Pollution Control Board
4	Permission for drawing of earth	15-Jun-21		Dsitrict Collector, Dewas
5	CTE-Fresh : CTE-89343	14-Jul-21		M.P. Pollution Control Board
6	No objection certificate : P/Q/2021-22	18-Jun-21		Gram Panchayat- Narwar Janpad, Ujjain
7	Permission for Extraction of Boulders	27-Sep-21		Dsitrict Collector, Dewas
8	Environmental Clearance: 174/DEIAA/2017	17-Oct-17		District level Environmental Impact Assessment Authority (DEIAA), Dewas

Source: Investment Manager

Appendix 3.8 – GBHPL: Summary of approval and licences

Sr. No.	Approvals	Date of Issue	Valid upto	Issuing Authority
1	Consent of Establishment (CFE) - CTE-337851	26-May-23	16-May-28	Karnataka State Pollution Control Board
2	Consent of Operation (CFO-Air,Water) - AW-106717	25-Jun-18	31-Dec-27	Karnataka State Pollution Control Board
3	Consent of Operation (CFO-Air,Water) - AW-107051	30-Jul-18	31-Dec-27	Karnataka State Pollution Control Board
4	Consent of Operation (CFO-Air) - A-316388	20-Dec-19	30-Sep-29	Karnataka State Pollution Control Board
5	CLRA/ALCBANGALORE/2023/120077/L-1	19-May-23	18-May-24	Government of India Office of the Licensing Officer
6	BOCW/ALCBANGALORE/2023/74972/R-51	19-May-23	NA	Government of India Office of the Registering Officer

Source: Investment Manager

Appendix 3.9 – GNHPL II: Summary of approval and licences

Sr. No.	Approvals	Date of Issue	Valid upto	Issuing Authority
1	Provisional Completion Certificate	08-Dec-21		National Highway Authority of India
2	Certificate of incorporation	19-Apr-23		Registrar of Companies, Central Registration Centre
3	In-principle approval by NHAI for the substitution of SNHPL	17-Apr-23		National Highway Authority of India
4	Signing of Endorsment Agreement between SNHPL & GNHPL II	14-Jul-23		Government of India

Source: Investment Manager

Appendix 4.1 – Summary of Ongoing GST Cases

Sr.No	Name of the Company	State	Type of Notice/Summon	Notice Date	Amount (INR Mn)	Status as on 30-09-2024
1	Dew as-Ujjain Highw ay Pvt. Ltd.	MP	Summon u/s 70 issued for making Inquiry	04-Apr-23	104	Reply Filed against DRC-01 Issued on 25.04.24
2	Gaw ar Banglore Highw ays Pvt Ltd.	KTK	Summon u/s 70 issued for making Inquiry	21-Aug-23	Not Quantified	Reply Filed, Pending at department end
3	Gaw ar Banglore Highw ays Pvt Ltd.	KTK	Summon u/s 70 issued for making Inquiry	20-Dec-23	Not Quantified	Reply Filed, Pending at department end
4	Gaw ar Khajuw ala BAP highw ay Pvt. Ltd.	RJ	ASMT-10	19-Jul-23	4	Reply Filed, Pending at department end
5	Gaw ar Khajuw ala BAP highw ay Pvt. Ltd.	RJ	ASMT-10	19-Jul-23	0	Reply Filed, Pending at department end
6	Gaw ar Kiratpur Nerchow k Highw ay Pvt. Ltd.	HP	General Investigation	25-Oct-21	Not Quantified	Reply Filed, Pending at department end
7	Gaw ar Kiratpur Nerchow k Highw ay Pvt. Ltd.	HP	Summon u/s 70 issued for making Inquiry	02-Feb-24	Not Quantified	Reply Filed, Pending at department end
8	Gaw ar Narnaul Highw ay Pvt. Ltd. - HR	HR	Summon u/s 70 issued for making Inquiry	19-Apr-21	Not Quantified	Reply Filed, Pending at department end
9	Gaw ar Narnaul Highw ay Pvt. Ltd. - HR	HR	Summon u/s 70 issued for making Inquiry	15-Sep-21	Not Quantified	Reply Filed, Pending at department end
10	Gaw ar Narnaul Highw ay Pvt. Ltd. - HR	HR	Summon u/s 70 issued for making Inquiry	24-Jul-24	Not Quantified	Reply Filed, Pending at department end
11	Gaw ar Narnaul Highw ay Pvt. Ltd.- Delhi	DLH	DRC-01	12-Jan-24	Not Quantified	Reply Filed, Pending at department end
12	Gaw ar Narnaul Highw ay Pvt. Ltd.- Delhi	HR	Audit Requisition Ref.	18-Sep-24	Not Quantified	NA
13	Gaw ar Rohna Jhajjar Highw ay Pvt. Ltd.	HR	Summon u/s 70 issued for making Inquiry	09-Apr-21	Not Quantified	Reply Filed, Pending at department end
14	Gaw ar Rohna Jhajjar Highw ay Pvt. Ltd.	HR	ADT-01	21-Aug-24	Not Quantified	Reply Filed, Pending at department end
15	Gaw ar Rohna Sonepat Highw ays Pvt. Ltd.	HR	ADT-01 Audit Notice	11-Jul-23	Not Quantified	SPV is under jurisdiction of DGGI.
16	Hardiya Hasanpur Highw ay Pvt. Ltd	BH	General Investigation	12-May-23	Not Quantified	Reply Filed, Pending at department end

Appendix 4.2 – Summary of Ongoing Income Tax Cases

Name of the Company	Forum	Petition/Appeal against	Petition/Appeal filing date	Status	Issue	Amount/Demand Raised
Gawar Kiratpur Nerchowk Highway Private Limited	Faceless Assessment unit	Income Tax Department		Pending	Income tax scurtiny assessment u/s 143(3)	Not Quantified
Gawar Kiratpur Nerchowk Highway Private Limited	CIT(A)	Order u/s 143(3)	26-Apr-24	Pending	Disallow of Finance Expenses	26,26,070
Gawar Narnaul Highway Private Limited	CIT(A)	Intimation u/s 143(1) and Rectification intimation u/s 154	17-Apr-24	Pending	TDS Credit of Rs. Rs.1,36,34,348 is not allowed by CPC applying Rule 37BA as per intimation under section 143(1)	1,17,15,280
Gawar Rohna Sonepat Highways Private Limited	CIT(A)	Intimation u/s 143(1) and Rectification intimation u/s 154	03- May-24	Pending	TDS Credit of Rs.3,53,71,082 is not allowed by CPC applying Rule 37BA as per intimation under section 143(1)	1,75,62,970
Gawar Narnaul Highway Private Limited	ITAT	Refund pending due to rule 37BA		Pending		Not Quantified

Appendix 4.3 – Summary of Ongoing Litigations

Sr. No	SPV/Sponsor	Initiated by	Against	Pending Before	Details of the case
1	GCL	HSRBDCL	Joint Venture of GCL & GR Infrastructure Limited	District and Sessions Court, Panchkula	**Background of the case:** The Sponsor entered into a joint venture with GR Infrastructure Limited to constitute GR-Gawar (JV) for the purpose of tendering and execution of projects. HSRBDCL invited bids for four laning of Rohtak- Bhiwani Road in State of Haryana.The parties signed Concession Agreement on 6th July 2010. The completion of project was delayed by 6 months and 20 days.HSRBDCL imposed liquidated damages on the JV for the delay, which the JV attributed to the HSRBDCL failures. An arbitral tribunal ruled on December 26, 2020, that the HSRBDCL should pay ₹300.1 Mn with interest and GST, return a bank guarantee, and provide post-award interest. The Respondent appealed the decision in the District and Sessions Court, Panchkula. **Current Status:** The matter is currently pending.
2	GCL	HSRBDCL	GCL	District and Sessions Court, Panchkula	**Background of the case:** The HSRBDCL invited bids for the improvement of the Punhana-Jurhera Road and the provision of service lanes and drains on the Gurgaon-Nuh-AlWar road in Gurgaon and Mewat district. The bid submitted by the Sponsor was accepted, and an agreement was signed on July 27, 2010. The project completion was delayed by 7 months and 8 days, leading the HSRBDCL to impose liquidated damages on the Sponsor, who disputed the delay responsibility and invoked arbitration. The arbitral tribunal ruled on December 26, 2020, that the HSRBDCL must pay ₹262.84 million with 13.75% interest amounting to ₹211.96 million plus GST, and post-award interest at 9.40% on ₹474.80 million from December 27, 2020. The HSRBDCL appealed this decision under Section 34 of the Arbitration and Conciliation Act, 1996, in the District and Sessions Court, Panchkula. **Current Status:** The matter is currently pending.
3	GCL	Ms. Mandakini	GCL	Court of Sub-Divisional Officer, Bhusawal Division	**Background of the case:** Ms. Mandakini purchased land in Jalgaon, Maharashtra, and successfully applied to convert it from non-agricultural to agricultural land. She then sought permission to construct a farm pond, for which the Sponsor was appointed. The Additional District Collector granted the construction application and a temporary license to the Respondent for mineral extraction to be used in constructing NH No. 6 from Chikhali to Tarsod. Subsequently, a Special Investigation Team (SIT) led by the Divisional Commissioner of Nashik was formed to probe alleged illegal mining by the Ms. Mandakini and Sponsor, contravening a government resolution from June 14, 2017. The SIT report resulted in a penalty for Ms. Mandakini for illegal mineral extraction. The Sponsor contested their impleadment, claiming lack of opportunity to oppose it. The Sub Divisional Officer's court in Bhusawal issued a stay on the SIT report on March 7, 2024, suspending all related proceedings. **Current Status:** The matter is currently pending.
4	GCL	Government of NCT, Delhi	GCL	Delhi High Court	**Background of the case:** The Government of NCT, Delhi invited bids for constructing a flyover at Shastri Park Intersection (6 lane) and Seelampur (2 lane) ramps, footpath, road work including signage, streetlight works, drainage and other allied works.The selected Sponsor alleged delays beyond their control but completed the Project ahead of schedule, claiming a bonus. The Government disputed this claim, leading to arbitration. The tribunal awarded the Sponsor ₹176.96 million with 10% interest p.a. The Sponsor then sought to enforce this award through the High Court of Delhi. **Current Status:** The matter is currently pending.

Appendix 4.4 – Summary of Scrutiny Assessment

Name of the Company	Notice	Date of Notice	Status	Issue
Gawar Kiratpur Nerchowk Highway Private Limited	u/s 143(2)	19-Jun-24	Pending	Scrutiny Assessment (Faceless)
Gawar Construction Limited	u/s 143(2) and u/s 148	06-Apr-24	Pending	Scrutiny Assessment (Faceless)

Appendix 4.5 – Summary of Rectification Application

Name of the Company	Notice	Date of Notice	Status	Issue
Gawar Construction Limited	Intimation u/s 143(1)	30-Jan-24	Pending	TDS / TCS Credit of Rs. 5,15,34,022/- not allowed by CPC applying Rule 37BA as per intimation under section 143(1)

<< End of Report >>

ANNEXURE II - TECHNICAL REPORT

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Technical Due Diligence for Redesigning, Rehabilitation and Upgradation to Four Lane Strengthening of Rohna/Hassangarh to Jhajjar section from km 44.800 to km 80.250 (Design Chainage) (Length 35.450km) of NH-334B in the State of Haryana on HAM Mode

Technical Due Diligence Report (Private and Confidential)

July 2024

Submitted to:

Gawar Rohna Jhajjar Highway Private Limited

Cube Highways Technologies Private Limited

CUBETECH
Cube Highways Technologies Pvt. Ltd.

Technical Due Diligence for Redesigning, Rehabilitation and Upgradation to Four Lane Strengthening of Rohna/Hassangarh to Jhajjar section from km 44.800 to km 80.250 (Design Chainage) (Length 35.450km) of NH-334B in the State of Haryana on HAM Mode

Documents Submittal and Contents Amendment Record

S. No.	Revision	Description	Date	Sign
1	R0	Technical Due Diligence Report	July 2024	

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ABBREVIATIONS

Abbreviation	Description
ASTM	American Society for testing and Materials
AVC	Automatic Vehicle Classifier
ABP	Allahabad bypass package
BBD	Benkelman Beam Deflection
BC	Bituminous Concrete
BOT	Built, Operate and Transfer
CA	Concession Agreement
CC Drain	Cement Concrete Drains
COD	Commercial Operation Date
CRRI	Central Road Research Institute
CBR	California Bearing Ratio test
DBFOT	Design, Build, Finance, Operate and Transfer
ETC	Electronic Toll Collection
FWD	Falling Weight Deflectometer
GRJHPL	**Gawar Rohna Jhajjar Highway Private Limited**
GOI	Government of India
GCL	Gawar Construction Limited
HPC	Hume Pipe Culvert
IE	Independent Engineer
IRC	Indian Roads Congress
LA	Land Acquisition
LHS	Left Hand Side
LOA	Letter of Acceptance
MBCB	Metal Beam Crash Barrier
MJB	Major Bridge

Abbreviation	Description
MNB	Minor Bridge
MOST	Ministry of Surface Transport
MPR	Monthly Progress Report
NH	National Highway
NHAI	National Highway Authority of India
NSV	Network Survey Vehicle
O&M	Operation and Maintenance
OHLS	Overhead Lane Signal
OHM	Object Hazard Marker
PCOD	Provisional Commercial Operation Date
POS	Point of Sale
POS	Point of sale
RCC	Reinforced Cement Concrete
RHS	Right Hand Side
ROB	Road/Rail Over Bridge
ROW	Right of Way
RPV	Route Petrol Vehicle
RUB	Road/Rail Under Bridge
SH	State Highway
SPV	Special Purpose Vehicle
SR	Service Road
SSWIM	Slow Speed Weigh in Motion
SWB	Static Weigh Bridge
TOT	Toll Operate Transfer
TC	Toll Collector
Team	Team of Cube Highways Technologies Pvt Ltd.
TMS	Toll Management System
WIM	Weigh in Motion

Abbreviation	Description
WMM	Wet Mix Macadam

Chapter 1
INTRODUCTION

CHAPTER 1. INTRODUCTION

1.1 Background

Infrastructure Sector is a key driver for the Indian economy. In 2014, the Government of India have introduced a new investment vehicle which allows investors to participate in the growth story of infrastructure sector, named Infrastructure Investment Trusts (hereinafter referred to as 'InvITs'). InvITs are instruments on pattern of mutual funds and are designed to pool in money from a number of investors to invest in assets that give cash flow over a period of time. The InvITs are regulated by the SEBI (Infrastructure Investment Trusts) Regulations Act, 2014.

In highway sector, InvIT as an instrument provide greater flexibility to investors and is expected to attract patient capitals (for say, 20-30 years) to the market, as these investors are averse to construction risks and are interested in investment in assets which provide long-term stable returns.

InvIT shall have a (i) Trustee, (ii) Sponsor(s) (iii) Investment Manager and (iv) Project Manager, Sponsor and Project Manager are the same entities. During maintenance period of the project highway, Gawar Construction Limited. (In its capacity as the Project Manager of National Infrastructure Trust) has appointed M/s Cube Highways Technologies Private Limited as Technical Consultant for carrying out technical study and assessment of Opex and Major Maintenance requirement (MMR) for balance concession period. The scope includes review of operation and maintenance system and to prepare maintenance schedule for entire duration of concession period based on a technical analysis. In turn, Cube Highways Technologies undertook the site visits to carry out site inspection. The report is based on findings during this period.

National Infrastructure Trust ("Trust") was settled on September 25, 2023, in Gurugram pursuant to the Trust Deed as a contributory irrevocable trust in accordance with the Indian Trusts Act, 1882. The Trust is an Infrastructure Investment Trust (InvIT) established for making investments in special purpose vehicles as defined under Regulation 2(1) (zy) of the InvIT Regulations, or infrastructure projects or securities of Indian companies engaged in the infrastructure sector, as may be permitted in terms of Regulation 18(5) of the InvIT Regulations. Axis Trustee Services Limited (ATSL) is the Trustee to the Trust. Gawar Investment Manager Private Limited (GIMPL) was incorporated as a private limited company on August 26, 2023, under the Companies Act, 2013. GIMPL is a wholly owned subsidiary of Gawar Group. GIMPL has been appointed as the Investment Manager to the NIT InvIT by Axis Trustee Services Limited (ATSL); the trustee to NIT InvIT and is responsible for managing the operations of InvIT in accordance with InvIT regulations.

Table 1-1: Projects comprising the Initial Portfolio Assets of National Infrastructure Trust

S. No.	Name of the Project	Length (km)
1.	**Gawar Rohna Jhajjar Highway Private Limited**	**35.45**
2.	Gawar Khajuwala BAP Highway Private Limited	212.107

S. No.	Name of the Project	Length (km)
3.	Gawar Narnaul Highway Private Limited	45.3
4.	Gawar Rohna Sonepat Highways Private Limited	40.50
5.	Hardiya Hasanpur Highway Private Limited	47.225
6.	Gawar Kiratpur Nerchowk Highway Private Limited	47.753
7.	Dewas Ujjain Highway Private Limited	41.42
8.	Gawar Bangalore Highways Private Limited	164.34
9.	Gawar Nainital Highways Private Limited	43.905

1.2 Asset Background

The National Highway Authority of India (NHAI) on behalf of Ministry of Road Transport and Highways (MoRT&H), Government of India, have taken up the development of various National Highway corridors where the intensity of traffic has increased significantly and there is requirement of augmentation of capacity for safe and efficient movement of traffic. In this regard, NHAI has been entrusted to develop projects for selected corridors through Public Private Partnership (PPP) basis on Design, Build, Operate and Transfer (DBOT) pattern.

As part of this endeavour, the Government of India (GOI) had entrusted to the Authority the development, maintenance, and management of National Highway (NH) 334 B including the section from km 44.800 to km 80.250. The Authority had resolved to augment the existing road from km 44.800 to km 80.250 on the Rohna/Hassangarh to Jhajjar section of National Highway 334 B (hereinafter called the "NH 334 B") in the State of Haryana. By Four-Laning thereof (the "Project") on design, build, operate and transfer (the "DBOT Annuity" or "Hybrid Annuity") basis, which shall be partly financed by the Concessionaire who shall recover its investment and costs through payments to be made by the Authority, in accordance with the terms and conditions as set forth in the Concession Agreement (CA).

The Hybrid Annuity Model (HAM) is a mix of Built, Operate and Transfer (BOT) Annuity and Engineering, Procurement and Construction (EPC) models. As per the design, the Authority will contribute up-to 40% of the Project Cost in five equal instalments of 8% each during the Construction Period of 730 days with the provisions of Clause 23.4 of CA. The remaining payment will be made based on the assets created and the performance of the developer. Here, hybrid annuity means the first 40% payment is made as fixed amount in five equal instalments whereas the remaining 60% is paid as variable annuity amount after the completion of the Project. As per the design, the Authority will contribute 40% of the Bid Project Cost (BPC) and the balance cost is funded by the Concessionaire through debt and equity.

The Authority had adopted a single stage two envelope bidding process and accordingly invited proposals by its Request for Proposals dated 28th December 2017 (the "Request for Proposals" or "RFP") for qualification and short listing of bidders for construction, operation, and maintenance of the above referred Project on Hybrid Annuity basis. The Authority had prescribed the technical and commercial terms and conditions in the RFP and invited bids comprising technical and financial bids from the bidders for undertaking the Project.

After evaluation of the bids received, the Authority had technically qualified certain bidders including, inter alia, the selected bidder and accepted the financial bid of the selected bidder i.e., Gawar Construction Limited (GCL).

The Authority issued its Letter of Award No. NHAI/11012/NH-334- B/UPHBSJ/PKG-2/2017/HR/115224 dated 26th March 2018 (hereinafter called the "LOA") to the selected bidder requiring, inter alia, the execution of this Concession Agreement within 45 (forty-five) days, accordingly, it was executed on 09th May 2018 as per terms of Concession Agreement (CA), of the date of issue thereof.

Accordingly, Special Purpose Vehicle (SPV) Gawar Rohna Jhajjar Highway Private Limited ("GRJHPL") has been formed, for implementing the Project the ("Concessionaire"). As the Concessionaire of this Project, they will be developing the Project, operate and maintain the facilities after completion of construction.

Under Hybrid Annuity Model (HAM), toll collection on the Project shall be responsibility of NHAI. The Concessionaire will be recovering its costs through annuity payments made during Concession Period of 17 years (annuity payments during Construction as well as in Operations Period), including Construction Period of 730 days from the Appointed Date and Operation Period of 15 years from Commercial Operation Date (COD).

1.3 Report Structure

The report contains eight chapters, including this Chapter on Introduction.

Chapter 2 Project Overview

Chapter 3 Asset Status

Chapter 4 Review of Structures

Chapter 5 Review of the pavement condition survey

Chapter 6 General Safety Concerns along the Project stretch and Improvements

Chapter 7 Operation and Maintenance Cost

Chapter 8 Overall Review

Chapter 2
PROJECT OVERVIEW

CHAPTER 2. PROJECT OVERVIEW

2.1 Location

The Project includes Rohna/Hassangarh section starts from km 44+800 and ends at km 80+250 Jhajjar. The Start co-ordinate of the Project is Latitude 28°50'44.6744" N and Longitude 76°51'47.667924" E. The end co-ordinate of the Project is Latitude 28°37'18.979572" N and Longitude 76°39'51.89742" E. The Project corridor also includes 3 new bypasses at Hassangarh, Sampla and Bhaproda and 1 existing bypass at Chhara along with minor realignment at two locations.

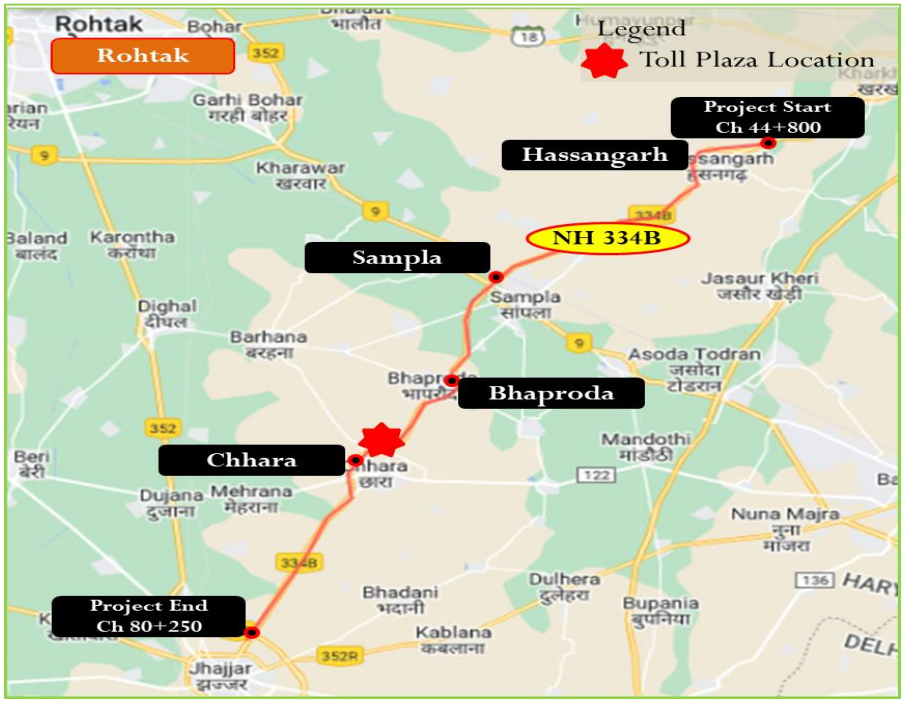

Figure 2-1: Project Alignment

2.2 Salient features

The salient features of the Project are summarised in the table below:

Table 2-1 Project Salient Features

S. No	Scope	Description
1.	Name of the Project	Redesigning, Rehabilitation and Upgradation to Four Lane Strengthening of Rohna/Hassangarh to Jhajjar section from km 44.800 to km 80.250 of NH 334B in the State of Haryana HAM mode.
2.	Name of Client	National Highways Authority of India
3.	Name of Concessionaire	M/s Gawar Rohna Jhajjar Highway Pvt. Ltd.
4.	Independent Engineer	M/s MSV International INC. In Association with MSV International Tech Pvt. Ltd.
5.	Length of the Project	35.450 km
6.	Bid Project Cost	Rs. 718 crores
7.	Letter of award	26th March 2018
8.	Signing of Concession Agreement date	09th May 2018
9.	Appointed Date	18th December 2018
10.	Construction Period	730 days from Appointed Date
11.	Operation Period	15 years from PCOD/COD
12.	Commercial Operation Date	31st July 2020 for a length of 35.450 km

2.3 Scope of the Project

The scope of the Project (the "Scope of the Project") shall mean and include,

- Construction of the Project on the site set forth in Schedule-A and as specified in Schedule-B together with provision of Project Facilities as specified in Schedule- C, and in conformity with the Specifications and Standards set forth in Schedule- D of the Concession Agreement.
- Operation and Maintenance of the Project in accordance with the provisions of Concession Agreement; and

- Performance and fulfilment of all other obligations of the Concessionaire in accordance with the provisions of Concession Agreement and matters incidental there to or necessary for the performance of any or all the obligations of the Concessionaire under Concession Agreement.

2.4 Physical features of the Project

The Concessionaire shall operate, manage and maintain the project stretch for entire Concession Period, subject to and in accordance with the provisions of this Agreement. The Concessionaire shall visit the Site and assess the durability and strength of Project Assets and make his own assessment for operation, management. and maintenance as per Specifications and Standards and bear and pay all costs, expenses and charges in connection with or incidental to the performance of operation, management and maintenance.

The project includes the following physical features.

Table 2-2: Project Physical Features

S.no	Project Physical Features	As per CA	As per Site	Remarks
1	Total Length of Project Highway	35.450 km	35.450 km	
2	Total length of Service Road & slip roads	34.816 km	34.816 km	
3	Number of Toll Plaza's	01 Nos	01 Nos	
4	Major bridges	Nil	Nil	
5	Minor Bridges	05 Nos	05 Nos	5 number minor bridges are in service road in COS
6	ROB	01 Nos	01 Nos	
7	Flyover	04 Nos	04 Nos	
8	Pipe culverts & Box culverts	42 Nos	42 Nos	
10	Grade Separated Intersection without Ramps	16 Nos	16 Nos	
11	At-Grade Intersections	26 Nos	26 Nos	
12	Vehicular Underpass	10 Nos	10 Nos	
13	Pedestrian Underpass	Nil	Nil	
14	Bus Shelters	22 Nos	22 Nos	
15	Truck Lay Byes	02 Nos	02 Nos	
16	Rest Areas	NIL	Nil	

All the above features as per site have been accounted for the estimation of routine maintenance, repair and rehabilitation, major maintenance and operation expenditure.

2.5 Review of Concession Agreement

The Authority had adopted a single stage two envelope bidding process and accordingly invited proposals by its Request for Proposals dated 28th December 2017 (the "Request for Proposals" or "RFP") for qualification and short listing of bidders for construction, operation and maintenance of the above referred Project on Hybrid Annuity basis.

The Authority had prescribed the technical and commercial terms and conditions in the RFP and invited bids comprising technical and financial bids from the bidders for undertaking the Project.

After evaluation of the bids received, the Authority had technically qualified certain bidders including, inter alia, the selected bidder and accepted the financial bid of the selected bidder i.e., M/s Gawar Constructions Ltd. and issued its Letter of Award No. NHAI/11012/NH-334-B/UPHBSJ/PKG-2/2017/HR/115224 dated 26th March 2018 (hereinafter called the "LOA") to the selected bidder requiring, inter alia, the execution of this Concession Agreement within 45 (forty-five) days and on 9th May 2018 it was accepted.

Table 2-3: Review of CA

Article /Clause of CA	Subject	Description in brief	*Remarks*
Article 3	**Concession period**	Concession period includes construction period of 730 days and operational period of 15 years from COD	
Clause 23.2	**Adjusted bid project cost**	Project cost shall be inflation indexed (through a Price Index Multiple) (PIM), which is the weighted average of Wholesale Price Index (WPI) and Consumer Price Index (CPI) (IW) in the ratio of 70:30 The bid project cost adjusted for variation between the price index occurring between the reference index preceding the bid date and reference index date immediately preceding the appointed date shall be deemed to be the bid project cost at commencement of construction. Bid project cost shall be changed to variation in PIM (price index multiple) on monthly basis till the achievement of commercial operations date (COD).	

Article /Clause of CA	Subject	Description in brief	*Remarks*
14.3.2	**Completion certificate**	Upon completion of the construction works and the independent engineer determining the tests to be successful, it shall forthwith issue to the Concessionaire and the Authority a certificate substantially in the form set forth in Schedule-J (the "Completion Certificate").	
Article 16	**Change in scope**	The Authority shall pay to Concessionaire any increase in scope of work approved by Independent Engineer. While in the case of reduction of scope due to reasons attributed by the Authority, cost of such reduced cost is to be accessed by the Independent Engineer, as per the schedule of rates applicable on the Bid Due Date. The civil cost of the reduced Scope shall be multiplied by the 1.05 to arrive at the estimated cost of reduced Scope. The estimated cost of reduced Scope shall then be multiplied by the ratio of Bid Project Cost to Estimated Project Cost to arrive at the Total Cost of Reduced Scope.	
Article 31	**Termination payment**		
	Termination payment in the event of default by Concessionaire during operation	The Authority shall pay to the Concessionaire an amount equal to 65% (sixty-five per cent) of the sum of Annuity Payments remaining unpaid for and in respect of the Concession Period, including interest thereon up to the Transfer Date.	
	Termination payment in the event of default by Authority during operation Period	An amount equal to the sum of Annuity Payments remaining unpaid for and in respect of the Concession Period, including interest thereon up to the Transfer Date.	
Article 35	**Change in law**		

Article /Clause of CA	Subject	Description in brief	*Remarks*
	Increase in cost	If the Concessionaire suffers aggregate financial effect due to change in law, which exceeds by Rs 1.15 crores or 2% of the total annuity payments in any accounting year the Concessionaire may notify Authority and propose amendments to this agreement so as to place the Concessionaire in the same financial position w/o change in law	*Concessionaire is protected*
	Reduction in cost	If the Concessionaire benefits from reduction in costs and the aggregate financial effect due to change in law, exceeds by Rs 1.15 crores or 2% of the total annuity payments in any accounting year the Authority may notify Concessionaire and propose amendments to this agreement so as to place the Concessionaire in the same financial position w/o change in law	
Clause 6.3	Obligations relating to refinancing	The Authority shall permit and enable Concessionaire for refinancing as per prevailing guidelines upon written request. Authority shall respond within 30 days of the receipt of proposal.	*Positive for the developers and lenders*
Article 28	**Force majeure**		
	Time Extension		
	c) After COD	After COD, the Concessionaire shall be entitled to receive Annuity Payments plus interest due and payable under this Agreement. Provided any payment to be made under this clause shall be subject to deduction of outstanding dues of the Authority, if any	
	Cost arising out of force majeure event		
	b) After Appointed Date	Non-Political Event: Cost to be shared by respective parties Indirect Political event: To be shared Direct Political: Cost compensated by Authority to concessionaire	*Concessionaire is protected*

Article /Clause of CA	Subject	Description in brief	*Remarks*
Clause 17.8	Damages for breach of Maintenance Obligation	if the Concessionaire fails to repair or rectify any defect or deficiency set forth in the Maintenance Requirements within the period specified the Authority shall be entitled to recover damages, to be calculated and paid for each day of delay until the breach is cured, at the higher of (a) 2% of the Performance Security, and (b) 0.1% of the cost of such repair or rectification as estimated by the Independent Engineer	*Concessionaire is made more responsible*
Clause 17.16	Advertising on the site	The Concessionaire shall not undertake or permit any form of commercial advertising, display or hoarding at any place on the site	
Article 20	Traffic aid post, medical aid post etc.	Concessionaire shall construct a traffic aid post of 25 sqm, medical aid post and two residential quarters at its own cost and hand them over to authority.	
		The Concessionaire shall provide to the State Police Department or a substitute thereof one Jeep or similar vehicle in good working condition along with chauffeurs for round-the-clock patrolling. The operating costs of such vehicle including the salaries and allowances of the chauffeurs shall be borne by Concessionaire.	
		The Concessionaire shall provide to the State Medical Department or a substitute thereof to be designated by the Authority one ambulance in good working condition along with chauffeurs for round-the-clock ambulance services. the operating costs of such ambulance including the salaries and allowances of the chauffeurs	

Article /Clause of CA	Subject	Description in brief	*Remarks*
		The Concessionaire shall also reimburse to the State Medical Department (or a substitute thereof to be designated by the Authority) the actual expenditure incurred by it in each Accounting Year on the medical equipment, and the pay and allowances of up to 2 medical personnel deployed exclusively for the Medical Aid Posts and ambulance and shall maintain the Medical Aid Post buildings.	
Clause 21.3	Payment to independent engineer	The remuneration, cost and expenses of the Independent Engineer shall be paid by Authority and subject to the limits set Schedule-M, one-half of such remuneration, cost and expense shall be reimbursed by the Concessionaire to the Authority within 15 days of receiving a statement of expenditure from the Authority	

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Chapter 3
ASSET STATUS

CHAPTER 3. ASSET STATUS

3.1 Review of Highway Current Status

As per letter NHAI/PIU/SNP/NH-334 (B) PKG-II/2020/D-8707, the Project has achieved COD on 31st July 2020. SPV is addressing the defects/deficiencies as and when arises and pointed out by the Independent Engineers regularly.

As per our visual inspection, the pavement found good, fair and distress condition, the observations made by our team are presented below.

Figure 3-1: Project start and end location

The team had following general observations during the visit,

- The median plantation watering process was noted during the site visit, ensuring proper care for the greenery.
- During the site inspection, the installation of road studs and painting of pavement markings was observed, indicating ongoing improvement and safety measures.
- The completion of the Thrie/W-Beam, Wire Rope and RCC crash barrier for enhanced safety.

- A cantilever gantry was found to be in good condition.

3.2 Drain

Based on the site inventory, side drain and median drain along the project stretches, which includes lined drain. Drain provided along the project stretch is found clean and it is in good condition.

Figure 3-2: Drains

3.3 Junctions

Based on the site observation, there are 26 at grade junctions found along the project stretch. All junctions are made of rigid pavement and are beneath MCW connecting the slip road with nearby villages.

Figure 3-3:- Junctions

3.4 Road Furniture

Following are the details of road furniture provided along the project stretch as per site.

Table 3-1: List of project furniture's

Type furniture	Unit	Quantity
Thrie Beam/W-Beam	km	23.568
Wire Rope barrier	km	32.140
RCC Crash Barrier	km	2.860
Foot Over Bridge	Nos	02
Streetlights		
Single arm	Nos	222
Double arm	Nos	163
High mast	Nos	04

Crash barrier

Thrie/W-Beam, Wire Rope Barrier and RCC crash barriers have been installed along the entire project stretch on shoulder side of the main carriageway and are being well-maintained.

Figure 3-4: Crash barrier along the project stretch

Overhead & Cantilever Gantry boards

Overhead Gantry and Cantilever Gantry boards are provided at the Project Stretch. They were newly installed so found in really good condition.

Figure 3-5: Overhead & Cantilever Gantry boards

Highway Lighting

Highway lighting such as single arm, double arm, and high mast lights have been provided along the project stretch, which includes main carriageway, service roads toll plazas etc. As per site observations, streetlights provided along the project stretch are in good condition.

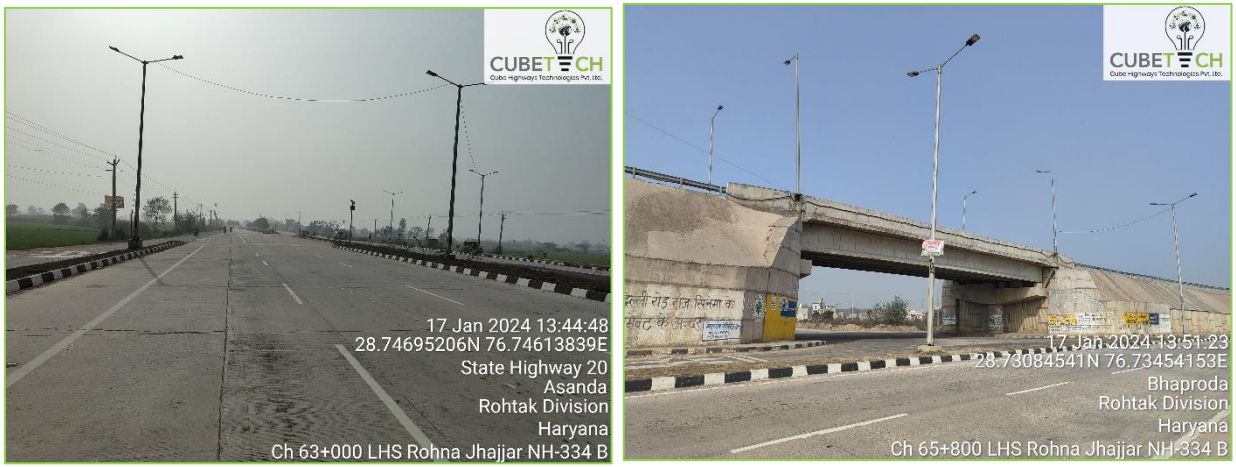


Figure 3-6: Highway lighting

3.5 Project facilities

Following are the details of project facilities along the project stretch,

Table 3-2: List of project facilities

Type facility	Unit	Quantity
Bus shelters	Nos.	22
Truck lay bye	Nos.	02
Emergency call box (ECB)	Nos. (Pairs)	06

3.6 Toll Plaza and Toll Collection System

One toll plaza (Chhara Toll Plaza) is present in the entire stretch. TheToll Collection System isinstalled at the toll plaza and is provided by Vaaan Infra Private Limited in the year 2019-2020.

The toll plazas have 16 (14 physical + 2 reversible) lanes. All lanes are installed with ETC equipment. View of the toll plazas are shown in figure below.

Figure 3-7: Toll Plaza.

Figure 3-8 Toll Building.

3.6.1 Lane Equipment

Lane hardware and equipment installed at each toll plaza are the following:

- RFID ETC Transceiver
- Lane Controller with Industrial PC
- AVC Sensors
- Automatic Lane Barrier (ALB)
- Incident Capture Camera
- Overhead Lane Signals
- Traffic Lights
- Toll Booth Equipment

3.6.1.1 RFID ETC Transceiver

- RFID ETC Transceiver reads tags installed on the windshield of vehicles and ETC RFID transceiver near Pay-axis-mounted on pole. Handheld RFID readers are provided (1 no. in each direction)in case a tag is not detected by the fixed reader.
- ETC system lanes are present in 14 Lanes.
- Kathrein brand RFID readers are installed at the toll plaza.
- ETC System is Running on ICD 2.5.

Figure 3-9: RFID reader.

3.6.1.2 Lane Controller with Industrial PC

- Toll Lane Controller is located within the Electronic Enclosure placed inside tunnel. which is connected to the common server and are capable of independent storage of data.
- TLCs are installed in 14 lanes.

Figure 3-10: Toll Lane Controller at Tunnel

3.6.1.3 Automatic Vehicle Classification (AVC) Sensors

The AVC equipment is installed in 16 lanes. The AVC equipment comprises of a pair of height sensor poles and axle sensors.

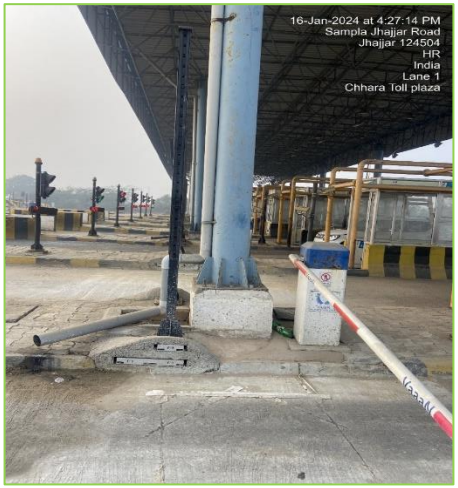


Figure 3-11: AVC IR Sensor.

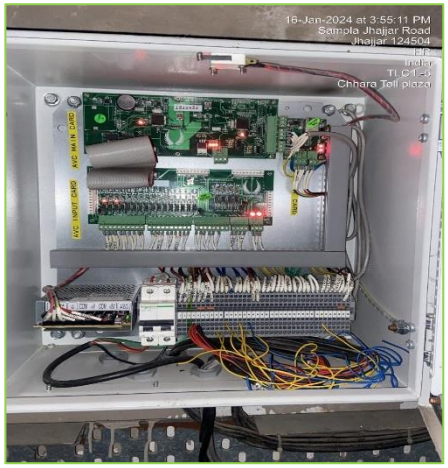


Figure 3-12: AVC enclosure.

3.6.1.4 Automatic Lane Barrier

Boom barriers installed in 16 lanes and have a working time of 0.6 s.

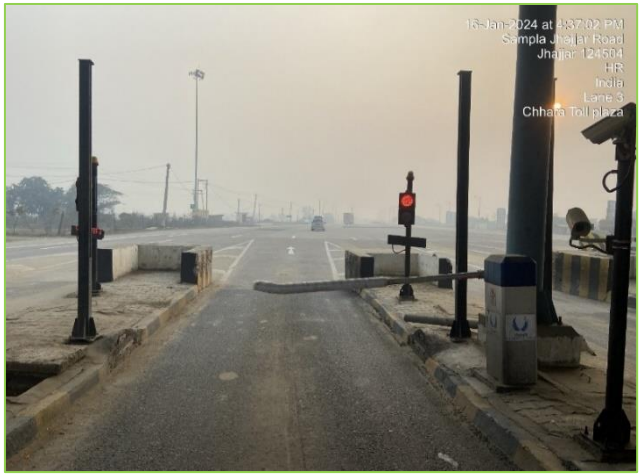


Figure 3-13: Boom Barrier.

3.6.1.5 Lane Traffic Light (LTL) and User Fare Display (UFD)

Lane Traffic Light (LTL) is used to instruct vehicles to stop or pass through the lane. TheLTL is RED when the toll collector is expecting the vehicle at the booth. After the transaction is done, the LTL turns Green to instruct the vehicle to pass through the lane. The User Fare Display is a part of electronic toll collection equipment located at the toll booth. It is a mini variable message sign (VMS) made of Light Emitting Diodes (LED

TL and UFD are present in 16 lanes.

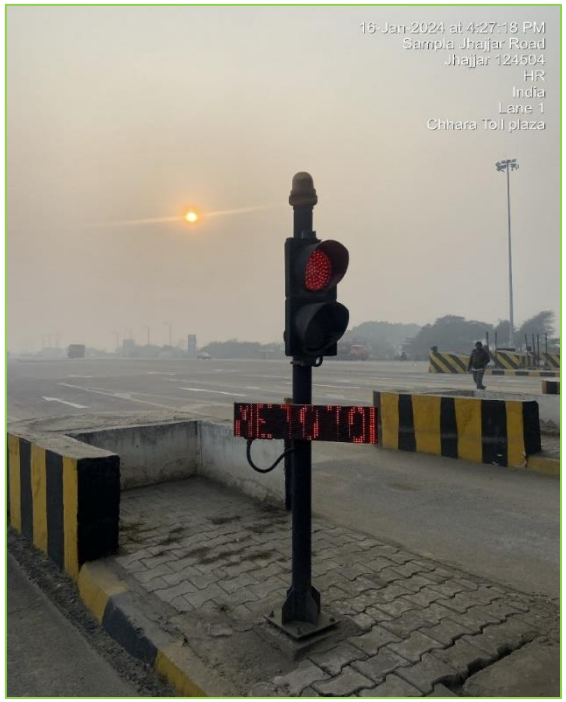


Figure 3-14: Traffic Light (TL) and User Fare Display (UFD).

3.6.1.6 Incident Capture Camera (ICS Camera)

- The incident capture camera is installed on a pole near to the booth to capture the image of the vehicle from the back side. The AVC triggers the Image capture system.
- ICS cameras are installed in 14 lanes.

3.6.1.7 License Plate Image Capture Camera (LPIC)

- License Plate Image capture camera is installed on a pole facing incoming vehicle to capture the image of the vehicle number plate.
- LPIC Cameras are installed in 14 lanes.

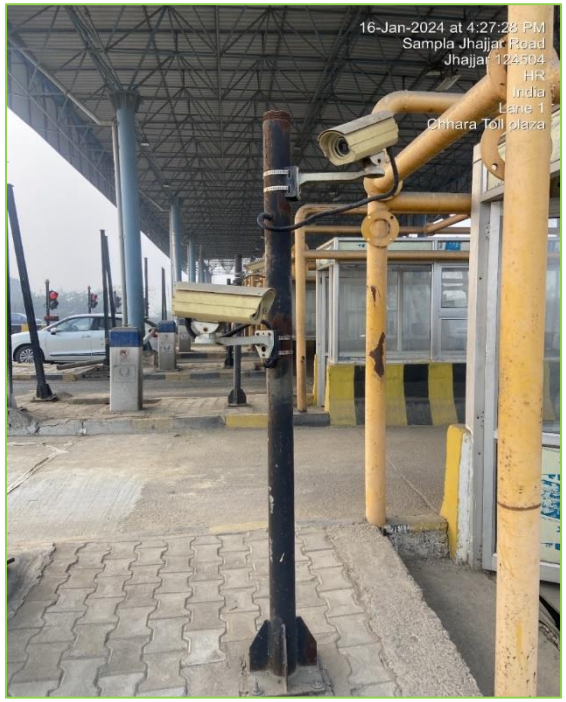


Figure 3-15: LPIC and ICS Cameras.

3.6.1.8 Over Head Lane Signal (OHLS)

- The **Overhead Lane Signal (OHLS)** for lane "Open" and "Close" sign consists of a pair of"GREEN" (arrow) and "RED" (cross) lights. The OHLS is located at the vehicle approaching side of the canopy to show the drivers whether the lane is open or closed.
- OHLS is present in 16 lanes.

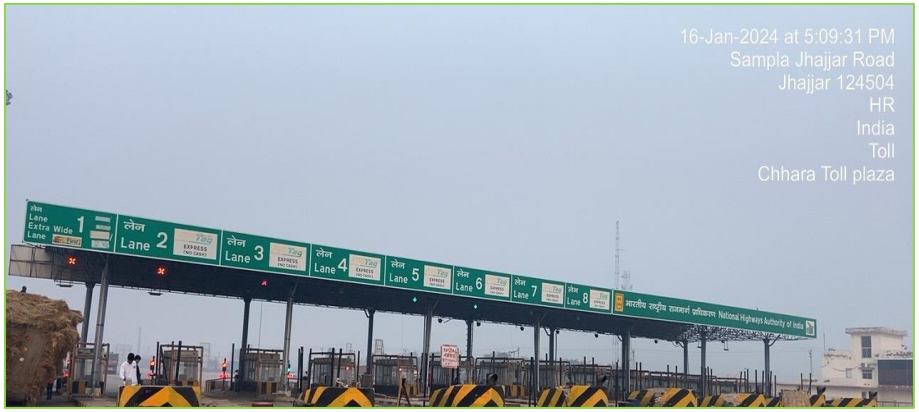


Figure 3-16: Over Head Lane Signal (OHLS).

3.6.1.9 Toll Booth Equipment

Toll Booth Hardware / Equipment provided are:

- Toll Collector Display (Operator Monitor)
- Normal Keyboard
- Receipt Printer
- Intercom Slave unit
- Violation Light and alarm
- Manual Booth Control (MBC)
- Booth Camera

The operator monitor termed as Toll Collector Display (TCD) is located on the toll collector's desk. It is the system's interface to the toll collector, to display the status of transactions and status of the lane peripherals.

The keyboard on the toll terminal is a normal keyboard for Registration of toll operations and for different vehicle types and type of ticket.

Figure 3-17: Booth Equipment.

Thermal Printers are installed at the toll booths to print tickets. Intercom slave unit facilitates communication with the master unit located in the control room.

The violation system has an alarm switch which is triggered whenever there is a violation suchas run-through happening on the lane. When there is an emergency, a foot switch pressedby the booth operator alerts the control room.

Booth Cameras are provided on the inside roof corner of the booth to provide surveillancethrough CCTV screen located in the control room. Manual Booth Controller is used to release exempt vehicles. Booth cameras are installed in 14 lanes.

Toll booth equipment is installed in 14 lanes.

3.6.1.10 Medium Speed Weigh in Motion (MSWIM)

- Medium Speed Weigh in Motion (MSWIM) is installed on entry lanes. Bending plate strain gauge technology is used with hardware and software support to calculate weight of vehicles running through it. MSWIM is installed in 16 lanes but not operational at the time of visit.
- SWB is installed at both sides of the toll plaza.

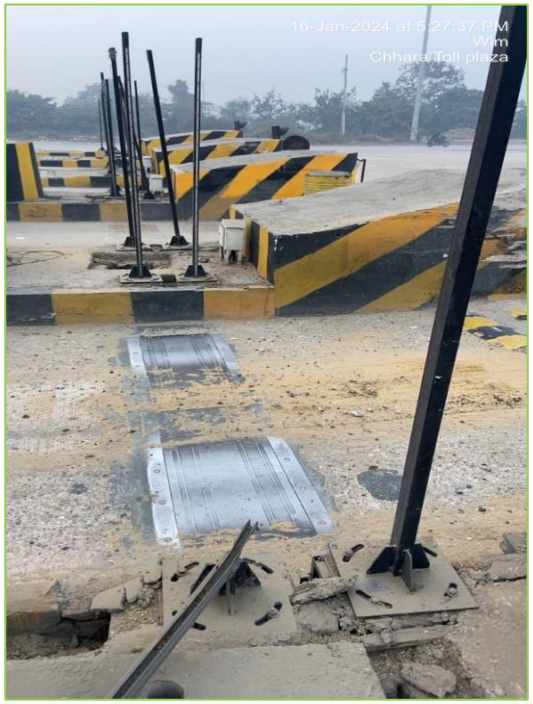


Figure 3-18: Medium Speed Weigh in Motion (MSWIM).

3.6.2 Plaza Equipment

3.6.2.1 TMS Server

- One Plaza Server is provided with a switch rack, 28 channel switch. Firewall and broadband internet connectivity are available.
- The server is HP ProLiant ML350 Gen 10

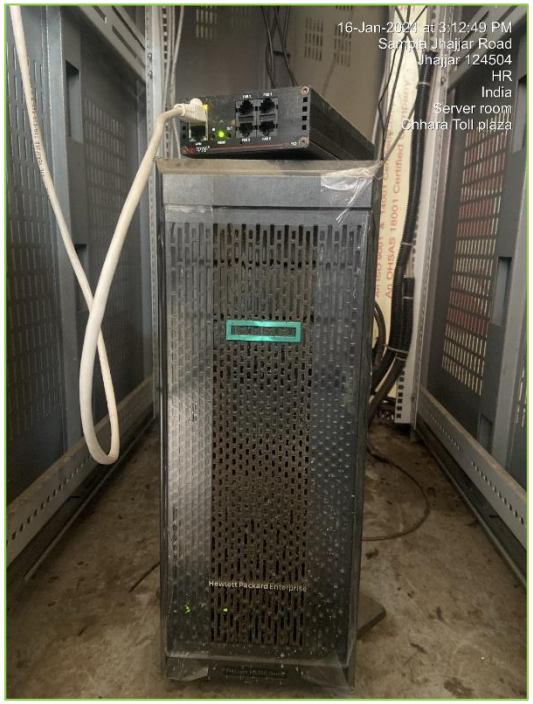


Figure 3-19: Server

3.6.2.2 32" LED screen for CCTV monitoring

One number of 32" inch LED screens for CCTV monitoring installed at the toll plaza admin block provides a viewof all the toll booths, important zones within the plaza where cash transactions take place(server room, control room, cash up).

Figure 3-20: CCTV screen at the Toll Plaza Control Room.

The toll plaza manager can observe the activities at the toll lanes and toll booth. When the toll collector calls up on the intercom, the manager can comprehend the situation at the lane by a zoomed view of the lane.

3.6.2.3 Workstations in Control Room, PoS and Cash up room

Three Workstations are available in the control room for lane monitoring, administration, and audit with 4 GB/2GB RAM and 500GB/1 TB HDD

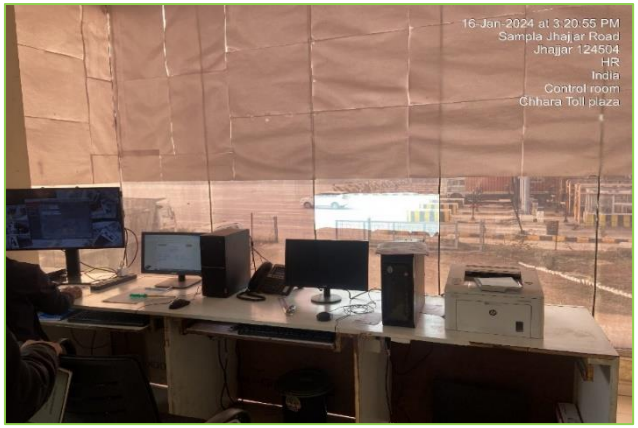


Figure 3-21: Workstations at Control room.

3.6.2.4 UPS

Following observations were made at toll plaza.

- One 6 KVA UPS is present.
- 2 KVA UPS is present 16 lanes.

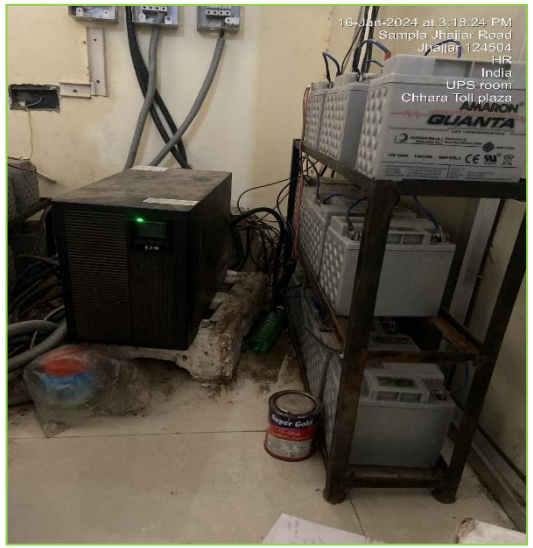


Figure 3-22: UPS room.

Figure 3-23: Lane UPS in Tunnel.

3.7 Advanced Traffic Management System (ATMS)

Advanced Traffic Management System (ATMS) is installed by Trafiksol ITS Technologies Pvt. Ltd in the year 2021 for the project road is controlledby the ATMS Centre at the toll plaza location. It comprises of the following:

- Emergency Call Back System (ECB)
- Mobile Radio communication system (MRCS)
- Meteorological Data system (MDS)
- Variable Message Signboards (VMS)
- Automatic Traffic Counter cum Classifier (ATCC)
- CCTV system
- **V**ideo Incident Detection System

3.7.1 Emergency Call Back System (ECB)

6 pairs of Emergency Call Booths are installed along the project road stretch.

Figure 3-24: Emergency Call Box.

3.7.2 Mobile Radio communication system (MRCS)

MRCS is installed at one location km.67+900. MRCS is used for Communication between patrol vehicles, ambulances, crane operators and the control Centre is managed.

3.7.3 MDS system.

MET is installed at km 67+900. Meteorological sensors comprise of sensors to measure the atmospheric temperature, humidity, pavement surface temperature, visibility, and equipment for measuring wind speed and direction.

Figure 3-25: MDS Equipment

3.7.4 Variable Message Signboards (VMS)

Variable message sign boards (VMS) are installed at 4 locations km 45+000, km 49+700, km 53+400 and km 63+700

Figure 3-26: VMS.

3.7.5 Automatic Traffic Counter cum Classifier (ATCC)

Piezo-Loop-Piezo architecture based Automatic Traffic Counter cum Classifiers (ATCC) is installed at km 68+400

Figure 3-27: PLP Architecture based ATCC.

3.7.6 CCTV and Surveillance Cameras

Surveillance Cameras are installed at 4 locations KM.58+600, KM.68+900, KM.71+970 and KM.80+000

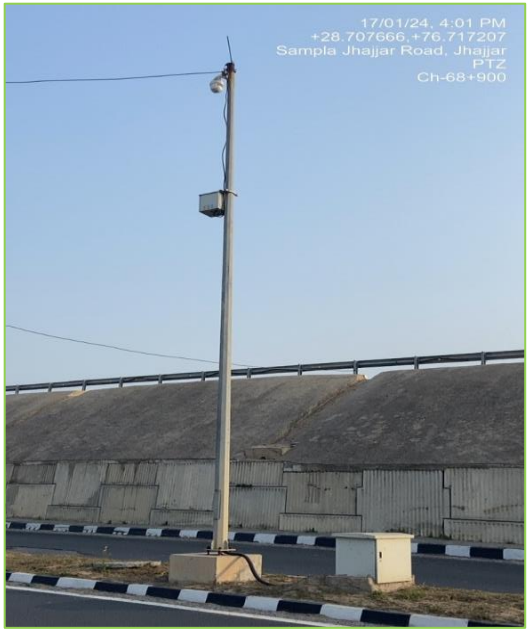


Figure 3-28: CCTV.

3.7.7 Video Incident Detection System

Video Incident Detection System is installed at 2 locations km 58.600, km 80.000 but not operational. VIDS and CCTV cameras are installed on the same pole.

Figure 3-29: VIDS.

3.8 ATMS Control Room.

Server:

- One Plaza Server is provided in a hot standby configuration and provided with a Server rack, 24 channel switch and broadband internet connectivity are available.
- The server is HP ProLiant ML30 Gen 10.

Figure 3-30: ATMS Server.

3.8.1 Control room equipment.

- 3x2 Video wall
- 6 Workstations with 4GB RAM and 1TB HDD
- One network printer
- 12 channel NVR with 4TB HDD
- 24 port LIU Switch Rack.
- ATMS Software Application is not working.

Figure 3-31: ATMS Control Room.

Figure 3-32: ATMS Application.

3.8.2 UPS

Following observations were made at ATMS.

- Two 6 KVA UPS is present in ATMS UPS room.

Chapter 4
REVIEW OF STRUCTURES

CHAPTER 4. REVIEW OF STRUCTURES

4.1 Structural investigations

Review of structures inventory and detailed condition survey of structures are the essential requirements for preparation of estimates for Capex and also for O&M cost for highway structures. Keeping in view of importance of this task, review of inventory and conducting visual condition survey were carried out as per procedure and guidelines prescribed in IRC: SP:35 bridge engineers. The details of condition survey of structures were furnished below.

4.2 Visual Condition Survey

Salient features for which data is collected as part of conditional survey are in accordance with IRC: SP: 35 Proforma. Main features recorded as part of detailed condition survey are listed below.

- New drainage spouts assembly shall need to be provided with G.I gratings and extension of down take pipe need to be extended up to 500mm down from slab to prevent water spillage. New strip seal elastomer shall need to be fixed for all expansion joints as the existing strip seal is either missing or completely damaged.
- Vegetation shall need to be removed.
- New strip seal elastomer shall need to be fixed for all expansion joints as the existing strip seal is either missing or completely damaged.
- Visible honeycombs on the concrete surfaces.
- Overall structures are in sound and satisfactory condition. However, some treatment has been suggested based on our observations and the Concessionaire has taken up the rectification work and Cost of the same has been factored in O&M Cost

4.3 General

Details of various types of structures as per CA as well as site inventory survey are furnished below,

Table 4-1: Summary of structures

S. no.	Type of Structure	As per CA (Nos.)	As per Site inventory (Nos.)	Remarks
1.	Minor Bridges	05	05	

S. no.	Type of Structure	As per CA (Nos.)	As per Site inventory (Nos.)	Remarks
2.	Road Over Bridges	01	01	
3.	Flyover	04	04	
4.	Vehicular Underpasses	10	10	
5.	FOB	02	02	
6.	Box/Slab Culverts	36	38	Including COS
7.	Hume Pipe Culvert	06	06	
	Total	**64**	**66**	

The next section presents the observations on Structures. The visual inspection of all the major structures was conducted by team of Bridge experts to assess the present condition of structures. The detailed condition survey is furnished in subsequent sections of this report.

4.3.1 Minor Bridges:

There are 05 no. of Minor Bridges on the Project Stretch. Detailed condition survey, necessary repair and pending maintenance works for all the Minor Bridges along the Project Stretch are given below, **the cost for repair and rectification has been factored in the O&M estimation and the Concessionaire has taken up the rectification works. The Structures are found in sound and satisfactory condition.**

Table 4-2: Existing condition and required repairs /maintenance works for Minor Bridges

S. no.	Chainage, km	Span Arrangement, m	Total Length, m	Side	Condition of Structure	Proposed repair and pending maintenance works
1	45.291	1 x 9.97	9.97	LHS	1.The Median wall was observed in damaged condition.	1.Median wall shall need to be reconstructed.
		1 x 9.97	9.97	RHS		
		1 x 9.97	9.97	RSR		
2	54.114	1 x 23.00	23.00	LSR	1. Strip seals of expansion joint were filled with dirt & debris, also strip seal elastomer were damaged/punctured.	1. New strip seal elastomer shall need to be fixed for all expansion joints as the existing strip seal is either missing or completely damaged.

S. no.	Chainage, km	Span Arrangement, m	Total Length, m	Side	Condition of Structure	Proposed repair and pending maintenance works
					2. Drainage spouts assembly was missing.	2. New drainage spouts assembly shall need to be provided with G.I gratings and extension of down take pipe need to be extended up to 500mm down from girder to prevent water spillage.
				LHS	1. Strip seals of expansion joint were filled with dirt & debris, also strip seal elastomer were damaged/punctured. 2. Accumulation of dirt and debris was observed on abutment cap. 3. Drainage spouts assembly was missing only 100mm dia hole was made in deck slab.	1. New strip seal elastomer shall need to be fixed for all expansion joints as the existing strip seal is either missing or completely damaged. 2. Dirt and debris shall need to be removed. 3. New drainage spouts assembly shall need to be provided with G.I gratings and extension of down take pipe need to be extended up to 500mm down from girder to prevent water spillage.
				RHS	1. Accumulation of dirt and debris was observed on abutment cap. 2. Drainage spouts assembly was missing only 100mm dia hole was made in deck slab. 3. Soil nailing was carried out for some of the RE wall facia panels.	1. Dirt and debris shall need to be removed. 2. New drainage spouts assembly shall need to be provided with G.I gratings and extension of down take pipe need to be extended up to 500mm down from girder to prevent water spillage.
				RSR	1. Strip seals of expansion joint were filled with dirt & debris, also strip seal elastomer were damaged/punctured. 2. Drainage spouts assembly was missing.	1. New strip seal elastomer shall need to be fixed for all expansion joints as the existing strip seal is either missing or completely damaged.

S. no.	Chainage, km	Span Arrangement, m	Total Length, m	Side	Condition of Structure	Proposed repair and pending maintenance works
						2. New drainage spouts assembly shall need to be provided with G.I gratings and extension of down take pipe need to be extended up to 500mm down from girder to prevent water spillage.
3	58.370	1 x 10.60	10.60	LSR	1. Drainage spouts assembly was missing.	1. New drainage spouts assembly shall need to be provided with G.I gratings and extension of down take pipe need to be extended up to 500mm down from girder to prevent water spillage.
		1 x 10.60	10.60	LHS	1. Drainage spouts assembly was missing.	1. New drainage spouts assembly shall need to be provided with G.I gratings and extension of down take pipe need to be extended up to 500mm down from girder to prevent water spillage.
		1 x 10.60	10.60	RHS	1. Drainage spouts assembly was missing. 2. Soil nailing was carried out for some of the RE wall facia panels.	1. New drainage spouts assembly shall need to be provided with G.I gratings and extension of down take pipe need to be extended up to 500mm down from girder to prevent water spillage.
		1 x 10.60	10.60	RSR	1. Drainage spouts assembly was missing.	1. New drainage spouts assembly shall need to be provided with G.I gratings and extension of down take pipe need to be extended up to 500mm down from girder to prevent water spillage.

S. no.	Chainage, km	Span Arrangement, m	Total Length, m	Side	Condition of Structure	Proposed repair and pending maintenance works
4	59.667	1 x 30.00	30.00	LSR	1. Strip seals of expansion joint were filled with dirt & debris, also strip seal elastomer were damaged/punctured.	1. New strip seal elastomer shall need to be fixed for all expansion joints as the existing strip seal is either missing or completely damaged.
				LHS	1. Strip seals of expansion joint were filled with dirt & debris, also strip seal elastomer were damaged/punctured. 2. Drainage spouts assembly was missing. 3. Accumulation of dirt and debris was observed on abutment cap.	1. New strip seal elastomer shall need to be fixed for all expansion joints as the existing strip seal is either missing or completely damaged. 2. Dirt and debris shall need to be removed. 3. New drainage spouts assembly shall need to be provided with G.I gratings and extension of down take pipe need to be extended up to 500mm down from girder to prevent water spillage.
				RHS	1. Strip seals of expansion joint were filled with dirt & debris, also strip seal elastomer were damaged/punctured. 2. Drainage spouts assembly was missing. 3. Accumulation of dirt and debris was observed on abutment cap.	1. New strip seal elastomer shall need to be fixed for all expansion joints as the existing strip seal is either missing or completely damaged. 2. New drainage spouts assembly shall need to be provided with G.I gratings and extension of down take pipe need to be extended up to 500mm down from girder to prevent water spillage. 3. Dirt and debris shall need to be removed.
				RSR	1. Strip seals of expansion joint were filled with dirt & debris, also strip seal elastomer were damaged/punctured.	1. New strip seal elastomer shall need to be fixed for all expansion joints as the existing

S. no.	Chainage, km	Span Arrangement, m	Total Length, m	Side	Condition of Structure	Proposed repair and pending maintenance works
						strip seal is either missing or completely damaged.
5	68.311	1 x 10.515	10.515	LHS	1. Drainage spouts assembly was missing.	1. New drainage spouts assembly shall need to be provided with G.I gratings and extension of down take pipe need to be extended up to 500mm down from slab to prevent water spillage.
				RHS	1. Drainage spouts assembly was missing.	1. New drainage spouts assembly shall need to be provided with G.I gratings and extension of down take pipe need to be extended up to 500mm down from slab to prevent water spillage.

Figure 4-1: Condition of Minor Bridges

4.3.2 Road Over Bridges:

There are 01 Road Over Bridge on the Project Stretch. Present condition and required repair/ maintenance works for the Road Over Bridge are given below, **the cost for repair and rectification has been factored in the O&M estimation and the Concessionaire has taken up the rectification works. The Structures are found in sound and satisfactory condition.**

Table 4-3: Existing condition and required repairs /maintenance works for Road Over Bridge

S. no.	Chainage, km	Span Arrangement, m	Total Length, m	Side	Condition of Structure	Proposed repair and pending maintenance works	Remarks
1	57.880	30.00 + 63.50 + 30.00	123.50	LHS	1. Strip seals of expansion joint were filled with dirt & debris, also some strip seal elastomers were damaged/punctured. 2. Honeycombing was observed on the pier cap. 3. Wider gaps were observed on the RE wall. 5. Soil nailing was carried out for some of the RE wall facia panels.	1. New strip seal elastomer shall need to be fixed for all expansion joints as the existing strip seal is either missing or completely damaged. 2. Remove the loose material around the affected area and honeycombing, voids shall need to be sealed with epoxy mortar 3. Gaps shall need to be sealed and rectified with epoxy mortar.	
				RHS	1. Strip seals of expansion joint were filled with dirt & debris, also some strip seal elastomers were damaged/punctured. 2. Honeycombing was observed on the pier cap. 3. Wider gaps were observed on the RE wall. 5. Soil nailing was carried out for some of the RE wall facia panels.	1. New strip seal elastomer shall need to be fixed for all expansion joints as the existing strip seal is either missing or completely damaged. 2. Remove the loose material around the affected area and honeycombing, voids shall need to be sealed with epoxy mortar 3. Gaps shall need to be sealed and rectified with epoxy mortar.	

Figure 4-2: Condition of ROB

4.3.3 Flyover:

There are 04 nos. of Flyover on the Project Stretch. Present condition and required repair/ maintenance works for the Flyover are given below, **the cost for repair and rectification has been factored in the O&M estimation and the Concessionaire has taken up the rectification works. The Structures are found in sound and satisfactory condition.**

Table 4-4: Existing condition and required repairs /maintenance works for Flyover

S. no.	Chainage, km	Span Arrangement, m	Total Length, m	Side	Condition of Structure	Proposed repair and pending maintenance works	Remarks
1	58.620	20.00 + 2 x 30.00 +20.00	100.00	LHS	1. Strip seal of expansion joints were completely filled with dirt & debris. Also, it is observed that edge angles are damaged and strip seal elastomer is damaged/punctured.	1. New strip seal elastomer shall need to be fixed for all expansion joints as the existing strip seal is either missing or completely damaged.	

S. no.	Chainage, km	Span Arrangement, m	Total Length, m	Side	Condition of Structure	Proposed repair and pending maintenance works	Remarks
					2. Drainage spouts are clogged with dirt, debris and horizontal/vertical down take pipes were missing, which resulted rainwater falling on road users. 3. Wider gaps were observed on the RE wall. 4. Vegetation growth was observed on the RE wall panel gaps. 5. Soil nailing was carried out for some of the RE wall facia panels.	2. Drainage spouts shall need to be cleaned, make it functional and horizontal drainage pipe shall need to provide connecting all drainage spouts in each span and further run along the external wall down to ground level drains. 3. Gaps shall need to be sealed and rectified with epoxy mortar. 4.Vegetation shall need to be removed.	
				RHS	1. Leaching cracks were observed on the abutment cap. 2. Wider gaps and cracks were observed on the RE wall. 3. Soil nailing was carried out for some of the RE wall facia panels.	1. Leaching shall need to be clean and apply sealing agent on that location. 2. Gaps and cracks shall need to be sealed and rectified with epoxy mortar.	
2	65.700	1 x 30.00	30.00	RHS	1. Horizontal/vertical down take pipes were missing, which resulted rainwater falling on road users. 2. Wider gaps were observed on the RE wall. 3. Soil nailing was carried out for some of the RE wall facia panels.	1. Horizontal/Vertical drainage pipe shall need to provide connecting all drainage spouts in each span and further run along the external wall down to ground level drains. 2. Gaps shall need to be sealed and rectified with epoxy mortar.	
3	68.730	1 x 30.00	30.00	LHS	1. Strip seal of expansion joints were completely filled with dirt & debris. Also, it is observed that edge angles are damaged and strip seal elastomer is damaged/punctured.	1. Periodic observation is required on RE wall using tell-tale glass, if found any further outward moment in the observations soil nailing may be required for the bulged panels.	

S. no.	Chainage, km	Span Arrangement, m	Total Length, m	Side	Condition of Structure	Proposed repair and pending maintenance works	Remarks
4	72.030	1 x 30.00	30.00	LHS	1. Horizontal/vertical down take pipes were missing, which resulted rainwater falling on road users. 2. Wider gaps were observed on the RE wall. 3. Soil nailing was carried out for some of the RE wall facia panels.	1. Horizontal/Vertical drainage pipe shall need to provide connecting all drainage spouts in each span and further run along the external wall down to ground level drains. 2. Gaps shall need to be sealed and rectified with epoxy mortar.	

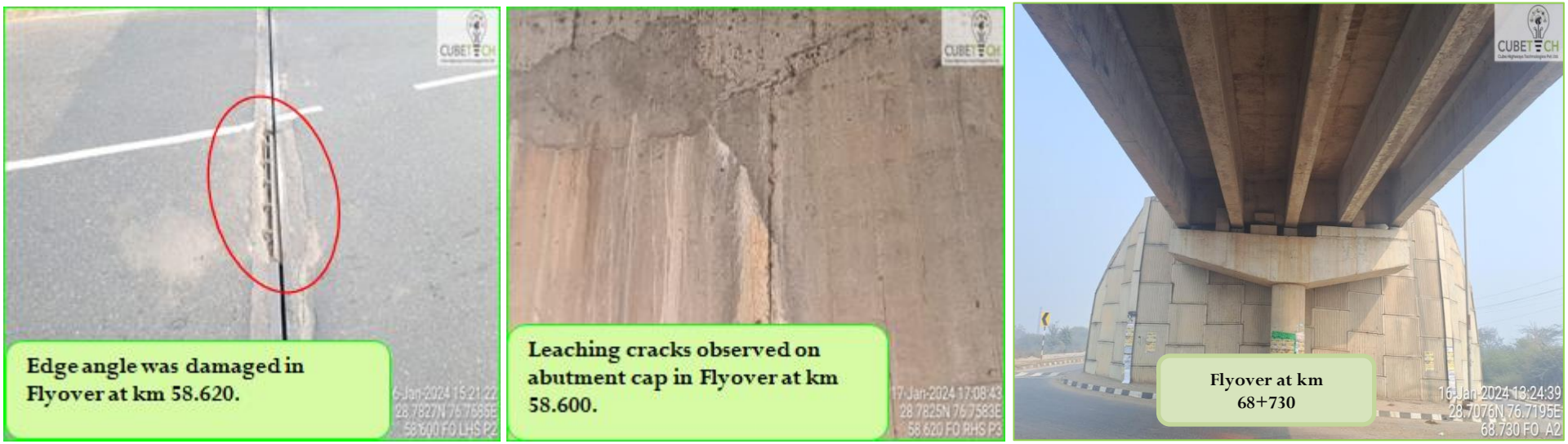


Figure 4-3: Condition of Flyover

4.3.4 Foot Over Bridge:

There are 02 no. of Foor Over Bridge on the Project Stretch. Present condition and required repair/ maintenance works for the Foot Over Bridge are given below, **the cost for repair and rectification has been factored in the O&M estimation and the Concessionaire has taken up the rectification works. The Structures are found in sound and satisfactory condition.**

Table 4-5: Existing condition and required repairs /maintenance works for Foot Over Bridge

S. no.	Chainage, km	Span Arrangement, m	Total Length, m	Side	Condition of Structure	Proposed repair and pending maintenance works	Remarks
1	51 & 70.100				1. Wider gaps were observed on the RE wall. 2. Strip seal of expansion joints were completely filled with dirt & debris. Also, it is observed that edge angles are damaged and strip seal elastomer is damaged/punctured.	1. Gaps shall need to be sealed and rectified with epoxy mortar. 2. New strip seal elastomer shall need to be fixed for all expansion joints as the existing strip seal is either missing or completely damaged.	

Figure 4-4: Condition of Foot Over Bridge

4.3.5 Vehicular Underpasses:

There are 10 no. of Vehicular Underpasses on the Project Stretch. Present condition and required repair/ maintenance works for the Vehicular Underpasses are given below, **the cost for repair and rectification has been factored in the O&M estimation and the Concessionaire has taken up the rectification works. The Structures are found in sound and satisfactory condition.**.

Table 4-6: Existing condition and required repairs /maintenance works for Vehicular Underpasses

S. no.	Chainage, km	Span Arrangement, m	Total Length, m	Side	Condition of Structure	Proposed repair and pending maintenance works	Remarks
1	45.800	1 x 12.00 x 5.50	12.00	LHS	1.Honeycombing was observed on the soffit of top slab. 2. Wider gaps were observed on the RE wall. 3. Drainage spouts assembly was missing, and horizontal/vertical down take pipes were missing, which resulted rainwater falling on road users.	1.Remove the loose material around the affected area and honeycombing, voids shall need to be sealed with epoxy mortar. 2. Gaps shall need to be sealed and rectified with epoxy mortar. 3. New drainage spouts assembly shall need to be provided with G.I gratings and down take pipe shall need to connect to horizontal and vertical pipes.	
				RHS	1. Wider gaps were observed on the RE wall. 2. Drainage spouts assembly was missing, and horizontal/vertical down take pipes were missing, which resulted rainwater falling on road users.	1. Gaps shall need to be sealed and rectified with epoxy mortar. 2. New drainage spouts assembly shall need to be provided with G.I gratings and down take pipe shall need to connect to horizontal and vertical pipes.	
2	47.400	1 x 12.00 x 5.50	12.00	LHS	1. Wider gaps were observed on the RE wall. 2. Drainage spouts assembly was missing, and horizontal/vertical down take pipes were missing, which resulted rainwater falling on road users. 3. Soil nailing was carried out for some of the RE wall facia panels.	1. Gaps shall need to be sealed and rectified with epoxy mortar. 2. New drainage spouts assembly shall need to be provided with G.I gratings and down take pipe shall need to connect to horizontal and vertical pipes.	

S. no.	Chainage, km	Span Arrangement, m	Total Length, m	Side	Condition of Structure	Proposed repair and pending maintenance works	Remarks
				RHS	1. Wider gaps were observed on the RE wall. 2. Drainage spouts assembly was missing, and horizontal/vertical down take pipes were missing, which resulted rainwater falling on road users.	1. Gaps shall need to be sealed and rectified with epoxy mortar. 2. New drainage spouts assembly shall need to be provided with G.I gratings and down take pipe shall need to connect to horizontal and vertical pipes.	
3	48.850	1 x 12.00 x 5.50	12.00	LHS	1. Drainage spouts assembly was missing, and horizontal/vertical down take pipes were missing, which resulted rainwater falling on road users.	1. New drainage spouts assembly shall need to be provided with G.I gratings and down take pipe shall need to connect to horizontal and vertical pipes.	
				RHS	1. Drainage spouts assembly was missing, and horizontal/vertical down take pipes were missing, which resulted rainwater falling on road users.	1. New drainage spouts assembly shall need to be provided with G.I gratings and down take pipe shall need to connect to horizontal and vertical pipes.	
4	54.300	1 x 12.00 x 5.50	12.00	LHS	1. Honeycombing was observed on the soffit of top slab. 2.Wider gaps were observed on RE wall. 3. Drainage spouts assembly was missing, and horizontal/vertical down take pipes were missing, which resulted rainwater falling on road users. 4. Vertical down take pipes were missed on RE wall.	1. Remove the loose material around the affected area and honeycombing, voids shall need to be sealed with epoxy mortar. 2. Gaps shall need to be sealed and rectified with epoxy mortar. 3. New drainage spouts assembly shall need to be provided with G.I gratings and down take pipe shall need to connect to horizontal and vertical pipes. 4. Missed down take pipes shall need to be restored.	
				RHS	1.Wider gaps were observed on RE wall. 2. Drainage spouts assembly was missing, and horizontal/vertical down take pipes were missing, which resulted rainwater falling on road users.	1.Gaps shall need to be sealed and rectified with epoxy mortar. 2. New drainage spouts assembly shall need to be provided with G.I gratings and down take pipe shall need to connect to horizontal and vertical pipes.	

S. no.	Chainage, km	Span Arrangement, m	Total Length, m	Side	Condition of Structure	Proposed repair and pending maintenance works	Remarks
					3. Vertical down take pipes were missed on RE wall.	3. Missed down take pipes shall need to be restored.	
5	56.726	1 x 12.00 x 4.00	12.00	LHS	1. Drainage spouts assembly was missing, and horizontal/vertical down take pipes were missing, which resulted rainwater falling on road users.	1. New drainage spouts assembly shall need to be provided with G.I gratings and down take pipe shall need to connect Missed down take pipes shall need to be restored.to horizontal and vertical pipes.	
				RHS	1. Drainage spouts assembly was missing, and horizontal/vertical down take pipes were missing, which resulted rainwater falling on road users.	1. New drainage spouts assembly shall need to be provided with G.I gratings and down take pipe shall need to connect to horizontal and vertical pipes.	
6	60.190	1 x 12.00 x 4.00	12.00	LHS	1. Leaching cracks were observed on the soffit of top slab. 2. Drainage spouts assembly was missing, and horizontal/vertical down take pipes were missing, which resulted rainwater falling on road users. 3. Wider gaps were observed on the RE wall.	1. Leaching shall need to be clean and apply sealing agent on that location. 2. New drainage spouts assembly shall need to be provided with G.I gratings and down take pipe shall need to connect to horizontal and vertical pipes. 3.Gaps shall need to be sealed and rectified with epoxy mortar.	
				RHS	1.Honeycombing was observed on the soffit of top slab. 2. Drainage spouts assembly was missing, and horizontal/vertical down take pipes were missing, which resulted rainwater falling on road users. 3. Wider gaps were observed on the RE wall.	1.Remove the loose material around the affected area and honeycombing, voids shall need to be sealed with epoxy mortar. 2. New drainage spouts assembly shall need to be provided with G.I gratings and down take pipe shall need to connect to horizontal and vertical pipes. 3. Gaps shall need to be sealed and rectified with epoxy mortar.	
7	62.350	1 x 12.00 x 5.50	12.00	LHS	1. Drainage spouts assembly was missing, and horizontal/vertical down take pipes	1. New drainage spouts assembly shall need to be provided with G.I gratings	

S. no.	Chainage, km	Span Arrangement, m	Total Length, m	Side	Condition of Structure	Proposed repair and pending maintenance works	Remarks
					were missing, which resulted rainwater falling on road users.	and down take pipe shall need to connect to horizontal and vertical pipes.	
				RHS	1. Drainage spouts assembly was missing, and horizontal/vertical down take pipes were missing, which resulted rainwater falling on road users.	1. New drainage spouts assembly shall need to be provided with G.I gratings and down take pipe shall need to connect to horizontal and vertical pipes.	
8	64.438	1 x 12.00 x 4.00	12.00	LHS	1. Scratches were observed on the soffit of a deck slab due to oversized vehicle movement. 2. Drainage spouts assembly was missing, and horizontal/vertical down take pipes were missing, which resulted rainwater falling on road users.	1. Height guard should be provided on both sides of underpass to avoid the entry of oversized vehicle movement. 2. New drainage spouts assembly shall need to be provided with G.I gratings and down take pipe shall need to connect to horizontal and vertical pipes.	
				RHS	1. Scratches were observed on the soffit of a deck slab due to oversized vehicle movement. 2. Drainage spouts assembly was missing, and horizontal/vertical down take pipes were missing, which resulted rainwater falling on road users.	1. Height guard should be provided on both sides of underpass to avoid the entry of oversized vehicle movement. 2. New drainage spouts assembly shall need to be provided with G.I gratings and down take pipe shall need to connect to horizontal and vertical pipes.	
9	71.130	1 x 12.00 x 5.50	12.00	LHS	1.Horizontal/vertical down-take pipe was missing at one location. 2. Drainage spouts assembly was missing, and horizontal/vertical down take pipes were missing, which resulted rainwater falling on road users. 3. Wider gaps were observed on the RE wall. 4. Soil nailing was carried out for some of the RE wall facia panels.	1.Horizontal drainage pipe shall need to provide connecting all drainage spouts and further run along the external wall down to ground level drains. 2. New drainage spouts assembly shall need to be provided with G.I gratings and down take pipe shall need to connect to horizontal and vertical pipes. 3. Gaps shall need to be sealed and rectified with epoxy mortar.	

S. no.	Chainage, km	Span Arrangement, m	Total Length, m	Side	Condition of Structure	Proposed repair and pending maintenance works	Remarks
				RHS	1.Honeycombing was observed on the soffit of top slab. 2. Drainage spouts assembly was missing, and horizontal/vertical down take pipes were missing, which resulted rainwater falling on road users. 3. Wider gaps were observed on the RE wall. 4. Vertical down take pipes were missed on RE wall.	1.Remove the loose material around the affected area and honeycombing, voids shall need to be sealed with epoxy mortar. 2. New drainage spouts assembly shall need to be provided with G.I gratings and down take pipe shall need to connect to horizontal and vertical pipes. 3. Gaps shall need to be sealed and rectified with epoxy mortar. 4. Missed down take pipes shall need to be restored.	
10	79.057	1 x 12.00 x 5.50	12.00	LHS	1. Drainage spouts assembly was missing, and horizontal/vertical down take pipes were missing, which resulted rainwater falling on road users. 2. Wider gaps were observed on the RE wall. 3. Vertical down take pipes were missed on RE wall.	1. New drainage spouts assembly shall need to be provided with G.I gratings and down take pipe shall need to connect to horizontal and vertical pipes. 2. Gaps shall need to be sealed and rectified with epoxy mortar. 3. Missed down take pipes shall need to be restored.	
				RHS	1. Drainage spouts assembly was missing, and horizontal/vertical down take pipes were missing, which resulted rainwater falling on road users. 2. Wider gaps were observed on the RE wall. 3. Vertical down take pipes were missed on RE wall.	1. New drainage spouts assembly shall need to be provided with G.I gratings and down take pipe shall need to connect to horizontal and vertical pipes. 2. Gaps shall need to be sealed and rectified with epoxy mortar. 3. Missed down take pipes shall need to be restored.	

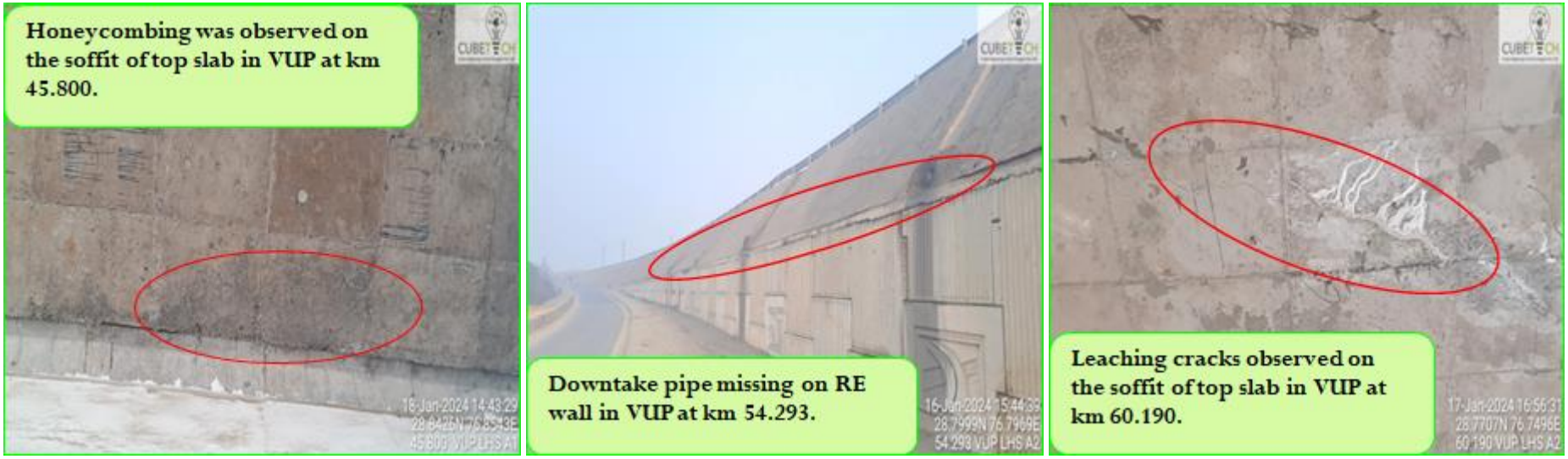


Figure 4-5: Condition of Vehicular Underpasses

4.3.6 Culverts:

There are 42 nos. of Culverts on the Project Stretch out of which 36 nos. were box /slab culverts and 4 nos. were pipe culverts.

Common defects and / or pending maintenance works observed in condition survey, necessary repair and pending maintenance works for all the box culverts along the project stretch are given below, **the cost for repair and rectification has been factored in the O&M estimation and the Concessionaire has taken up the rectification works. The Structures are found in sound and satisfactory condition**.

Table 4-7: Existing condition and required repairs /maintenance works for Culverts

S. no.	Type of Culverts	No. of Culverts	Condition of Structure	Proposed repair and pending maintenance works
1	Box/Slab Culverts	36	1. Silt and debris accumulation was observed in the vent area and few culverts were fully / partially buried. 2. Quadrant pitching was disturbed at a few culverts. 3. Stagnated water observed at some of the culverts. 4.Honeycombing was observed on the parapet wall. 5. Hazard marker was missing at some locations.	1. Silt and debris accumulation shall be removed from the vent area. 2. Quadrant pitching shall need to be rectified. 3. Both U/s and D/s shall be regarded for free flow water. 4. Remove the loose material around the affected area and honeycombing, voids shall need to be sealed with epoxy mortar. 5.Hazard marker shall need to be provided.
2	Pipe Culverts	06	1.Quadrant pitching was disturbed at some locations.	1. Quadrant pitching shall be rectified.

Figure 4-6: Condition of Culverts

Chapter 5
CONDITION ASSESSMENT OF EXISTING PAVEMENT

CHAPTER 5. CONDITION ASSESSMENT OF EXISTING PAVEMENT CONDITION

To evaluate the existing pavement condition of a Project Highway, investigations are to be carried out on the field to collect data from the field. The collected data is processed and analysed to obtain complete information on the pavement condition.

5.1 Pavement Condition Assessment for Technical Due Diligence

As a part of technical due diligence, the different investigations performed on the Project site are listed below.

- Assessment of Pavement Condition based on Visual Condition Survey

Based on the visual condition survey, the type of distress, its quantity, and severity for each Stretch are obtained. The same is used to evaluate the present condition of pavement, which classifies pavement conditions ranging from 'Good' to 'Fair'.

The pavement investigation studies carried out on the Project Highway from 17th January to 18th January 2024 as a part of technical due diligence and their outcomes are detailed in the sections below.

5.2 Review of Concession Agreement

As per Schedule K of the Concession Agreement, the Concessionaire shall repair and rectify the defects and deficiencies as specified below

Table 5-1: Major maintenance criteria as per CA

S .No	Nature of Defect or Deficiency	Time limit for Repair/Rectification
1	Roughness value exceeding 2750 mm in a stretch of 1km (as measured by a standardized rough meter/bump integrator)	180 Days
2	Cracking in more than 5% of road surface in a stretch of 1 km	30 days
3	Rutting exceeding 10mm in more than 2% of road surface in a stretch of 1km (measured with 3m straight edge)	30days

5.3 Review of Pavement Design Report

- The Schedule-B of concession agreement stipulates that design of Flexible pavement shall be carried out, but the Rigid pavement type is considered for main carriageway due to poor performance of existing flexible pavement.

- The design of Rigid pavement has been carried out in accordance with guidelines of IRC-58-2015.
- The thickness of Rigid-layers is designed for a period of 30 years and adopted Subgrade CBR is taken as 10%.
- The pavement for the service/slip road has been designed as per IRC: 37-2018; Design traffic is 10 MSA and Subgrade CBR is taken as 10%.

Table 5-2: Pavement Design Thicknesses of Rigid Pavement for Main carriageway as per Pavement Design Report

Layer	Thickness(mm)
Pavement Quality Concrete (PQC)	260
Dry Lean Concrete	150
Granular Sub-base (GSB)	150

Table 5-3: Pavement Design Thicknesses for service/slip roads as per Pavement Design Report

Layer	Thickness(mm)
Bituminous Concrete (BC)	30
Reclaimed Asphalt Pavement (RAP)	120
Cement Treated Sub-base (CTSB)	200

5.4 Key Observations

Few observations made during the site visit by the pavement investigation team are as follows,

- Majority of the Pavement condition was observed to be to good on LHS side of the project stretch.
- Majority of the Pavement condition was observed to be to good to fair on RHS side of the project stretch.
- Heavily loaded traffic was observed on both sides of the project stretch.
- Most of the heavily loaded trucks choose the inner lane as a travel path.
- Medium to high severity cracks, Patchwork and Raveling were predominant distresses on the project stretch.
- Crack sealing has been observed along the project stretch.

  These are routine maintenance work and cost of the same captured in Y-o-Y O&M and concessionaire has taken up the rectification works.

Based on the observations made during the visual condition survey, the pavement condition is categorized into three categories 'Good', 'Fair', and 'Distress'. The visual survey data and summary of the pavement condition of Project Stretch is given below.

Table 5-4: Pavement Visual Condition Survey Results

Condition	LHS		RHS	
	Length (km)	Length (%)	Length (km)	Length (%)
Good	25000	71%	18200	51%
Fair	9450	27%	16250	46%
Distress	1000	3%	1000	3%

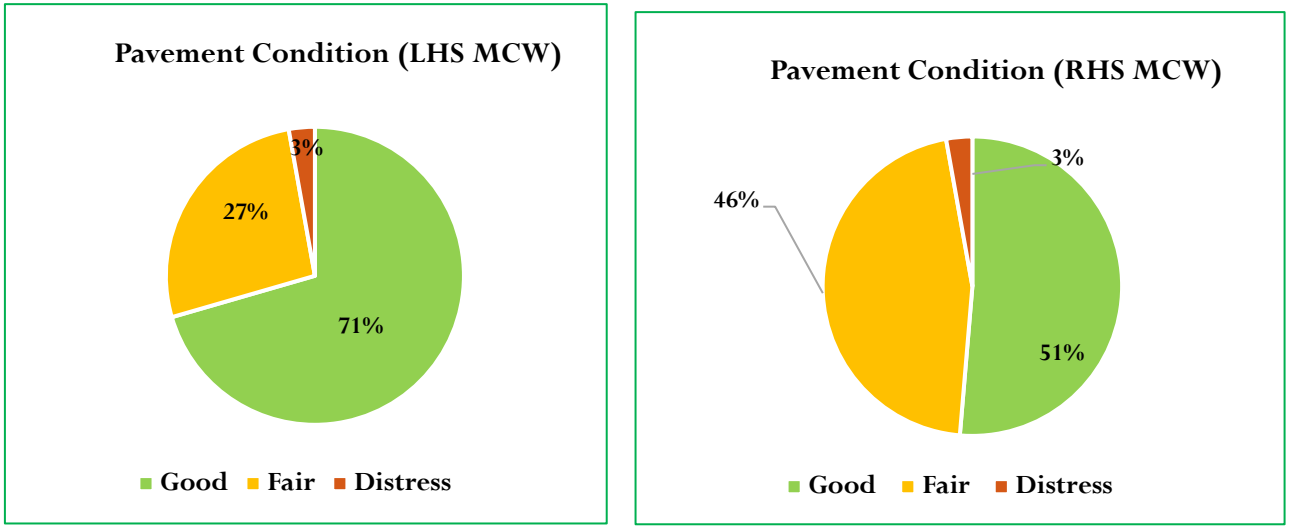


Figure 5-1: Pavement condition based on Visual condition survey

5.5 Pavement Roughness

Roughness is one of the important parameters for determining the functional characteristics of pavements. According to the American Society for Testing and Materials (ASTM), roughness is defined as "the deviations of a pavement surface from a true planar surface with characteristic dimensions that affect vehicle dynamics, ride quality, dynamic loads, and drainage, for example, longitudinal profile, transverse profile and cross-slope".

The roughness of road surfaces is measured using different equipment/techniques such as rod and level survey, dip stick profiler, profilographs, response type road roughness meters, and profiling devices.

In India, the roughness is measured using the fifth wheel bump integrator (developed by CRRI) and is reported as Unevenness Index (UI) in mm/km. In this report, Roughness is measured using an NSV profilometer on 01st May 2024, and a summary of the results are presented below:

Table 5-5: Summary of the Roughness values using NSV

Surface Condition	Roughness Criteria as per IRC SP-16 2019		LHS MCW						RHS MCW					
	Bituminous Surface	Cemented Surface	Lane 1 (m)	Lane 1 (%)	Lane 2 (m)	Lane 2 (%)	Lane 3 (m)	Lane 3 (%)	Lane 1 (m)	Lane 1 (%)	Lane 2 (m)	Lane 2 (%)	Lane 3 (m)	Lane 3 (%)
Good	**<1800**	**<2000**	25200	71.09%	28550	80.54%	11410	74.58%	30350	85.61%	28450	80.25%	14040	98.53%
Fair	**1800-2400**	**2000-2400**	8850	24.96%	5400	15.23%	3890	25.42%	4800	13.54%	6600	18.62%	110	0.77%
Distress	**>2400**	**>2400**	1400	3.95%	1500	4.23%	0	0.00%	300	0.85%	400	1.13%	100	0.70%

Chapter 6
ROAD SAFETY ASSESSMENT ALONG THE PROJECT STRETCH

CHAPTER 6. ROAD SAFETY ASSESSMENT ALONG THE PROJECT STRETCH

6.1 General

This chapter presents general road safety concerns observed along the Project Road (Rohna to Jhajjar) and improvements suggested to address the same.

6.2 Site visit

Road Safety along the highway depends upon the condition of various components of the highway, such as coordination between horizontal and vertical alignment, provision and placement of road furniture, intersection geometry, availability of adequate sight distance, night-time visibility along the highway, etc. It is essential to understand all these aspects of the highway from a point of view of safety of each type of road user. The purpose of this assignment is to understand the road safety worthiness of Project Road and quantify road furniture items that are required as per the provisions of the Concession Agreement (CA). The report also summarizes high-risk safety concerns that persist for a reasonable length along the Project Road that helps improve the safety of road user upon implemented. It may be noted that, few minor observations that are part of regular O&M activities have not been quantified in this report and also geometrical improvements along with blackspots are not reviewed as part of this assignment. The scope has been constrained keeping in view the operational status of the Project Road and the focus is largely on the major safety concerns and deviations from CA provisions in road furniture, if any.

The Safety Team of CUBE Highways Technologies Pvt Ltd. visited the Project Road from 16th to 17th Jan 2024.

It may be noted that the Findings and Recommendations in this chapter are based on an independent inspection during a site visit along the Project Road and review of available information / documents. This chapter mainly focuses on high-risk safety concern and work zones related issues along the Project Road, and any major geometrical improvements, or location-specific improvements are not covered. However, based on visual observations and safety requirements identified by the safety team during the site visit, the requirement for additional safety furniture in line with CA provisions has been broadly identified and presented in the report.

Along with manual observations, the entire Project Road is video graphed using Vehicle Video Recorder Driver's Eye Level Video, a snapshot of output obtained from the app view is shown below:

Figure 6-1: Snapshot-displaying output format of driver's eye level video

As can be seen in above image, the Vehicle Video Recorder records following details along with video:

- Video recording (front view – Driver's Eye Level View)
- Location of Video on the Google Map (along with coordinates of the location)
- Speed of the Recording Vehicle, in km/hour

6.3 Review of Project Documents and Communications related to road safety aspects

The following documents have been reviewed as a part of the Road Safety Assessment.

Table 6-1: Review of Project Documents and Communications related to road safety aspects

Document	Broad comments from Road Safety aspects
Concession Agreement (CA) -Signed on 09/05/2018 *(Concessionaire – M/s Gawar Rohna Jhajjar Highway Pvt. Ltd)*	Clauses and warrants of various facilities along the Project Road, applicable manual and specifications, deviations from specifications manual, etc., are reviewed. The Project Road has been developed as per IRC: SP:84-2014 (applicable manual). It may be noted that, warrants or BOQ of road furniture items except that of overhead sign boards have not been mentioned in the CA. All furniture items are to be provided in accordance with the applicable manual.

Document	Broad comments from Road Safety aspects
Monthly progress report (MPR) by IE *(IE -M/s MSV International INC)*	About 4 IE MPRs i.e., from September 2023 to December 2023 have been received from the Project Company for review. This report provides a project overview, executive summary on project aspects, physical progress of site activities, financial progress, strip chart, and details of NCR etc.
Appointed date, and COD correspondences	As per, e-Stamp the appointed date of the Project is declared as 18-Dec-2018. COD of Project Road as per Clause 14.2 and 14.3 has been received on 31/07/2020.
Plan & Profile, TCS, COS, and approved drawings	• TCS, Plan and profile drawings have been received and reviewed with respect to CA provisions. However, as mentioned earlier, location-specific/Black Spots-related geometrical aspects are not studied as part of this assignment.
Accident Data	• As per the IE MPE of January, March, April and May 2024 in these four months no accident has been reported

Chapter 7
OPERATION & MAINTENANCE COST

CHAPTER 7. OPERATION AND MAINTENANCE COST

7.1 General

This Chapter presents details on the O&M expenditure to be incurred. The expenses are divided into four heads.

- Routine Maintenance Expenses to maintain the asset to the standards set forth in the Concession Agreement.
- Major/ Periodic Maintenance Expenses
- Operating Expenses

7.2 Estimation of Operation & Maintainance cost

The Routine Maintenance activities related to pavement include pothole repair, crack sealing, shoulder repair, drain maintenance, renewal of road markings, maintenance of cross drainage works etc. A before-hand estimate of repairs to be carried annually, must be determined to calculate the anticipated routine maintenance cost of the Project. Most of the annual routine maintenance activities are estimated based on experience and the past data of the Project as these activities varies Project to Project and there are no hard and fast rules to obtain exact quantity.

Routine maintenance cost for this Project is summarized in next section of Cost Estimates. The list of items considered in routine maintenance are summarized in the table below,

Table 7-1: List of Items Considered in Routine Maintenance Cost Estimate

S. No	Description of Item
1	**HIGHWAY**
	Flexible Pavement
	▪ Potholes ▪ Cracks ▪ Rutting/Depression/Settlement ▪ Ravelling/Stripping ▪ Re-surfacing
	Rigid Pavement

S. No	Description of Item
	▪ Slab Replacement ▪ Crack Sealing ▪ Ravelling/honeycombing, scaling, Polished Surface
	Hard/Earth shoulders, side slopes
	▪ Edge drop at shoulders ▪ Blading/reshaping to restore proper slopes and sides so as to maintain the standard formation width ▪ Rain cuts/gullies in slope ▪ Repairs of Stone Pitching/Turfing
2	**STRUCTURES**
	Superstructure of Bridges
	▪ Cracks ▪ Temporary Measures ▪ Permanent Measures ▪ Spalling / Scaling
	Foundation of Bridges
	▪ Scouring and /or Cavitation
	Piers, abutments, return walls and wing walls of bridges
	▪ Cracks and damages including settlement and tilting
	Joints in bridges
	▪ Loosening and malfunctioning of joints
	Other items relating to bridges
	▪ Gathering of dirt in bearings and joints or clogging of spouts, weep holes and vent-holes ▪ Damage or deterioration in parapets and handrails ▪ Rain-cuts or erosion of banks of the side slopes of approaches ▪ Damage to wearing coat ▪ Damage or deterioration in approach slabs, pitching, apron, toes, floor or guide bunds ▪ Growth of vegetation affecting the structure or obstructing the waterway

S. No	Description of Item
3	**ROAD FURNITURES, SIGNAGES AND PAVEMENT MARKING**
	▪ Repair to road signs -damage to shape or position; Poor visibility or loss of retro-reflectivity ▪ Replacing/installing delineators ▪ Replacing uninstalling delineators & all type of road sign ▪ Repairs MBCB ▪ Replacing of MBCB /New jersey crash barrier ▪ Repairs to Handrails /Pedestrian guard rails /flyover railings etc. ▪ Replace Handrails /Pedestrian guardrails/flyover railings etc. ▪ Fixing of distance measurement stone ▪ Hectometre stones ▪ Kilometre stones ▪ 5th Kilometre stones ▪ Boundary stones ▪ Painting ▪ Hectometre stones ▪ Pavement Marking ▪ Hot applied thermoplastic compound ▪ Painting kerb with synthetic enamel paint
4	**MISCELLANEOUS ITEMS**
	Street Lighting, Electrical systems repair and maintenance etc

The routine maintenance expenses to maintain the asset to the standards set forth in the Concession Agreement are given in the table below.

Table 7-2: Routine maintenance cost of the Project

S. No.	Particulars	Frequency	Cost including GST (Cr.)	Remarks
1	**Routine Maintenance Cost**	**Annual**		
	Highway		0.50	
	Structures		0.97	
	Road Furniture, Signage & Pavement marking		0.80	
	Project Facilities		0.15	
	Total RM cost		**2.43**	

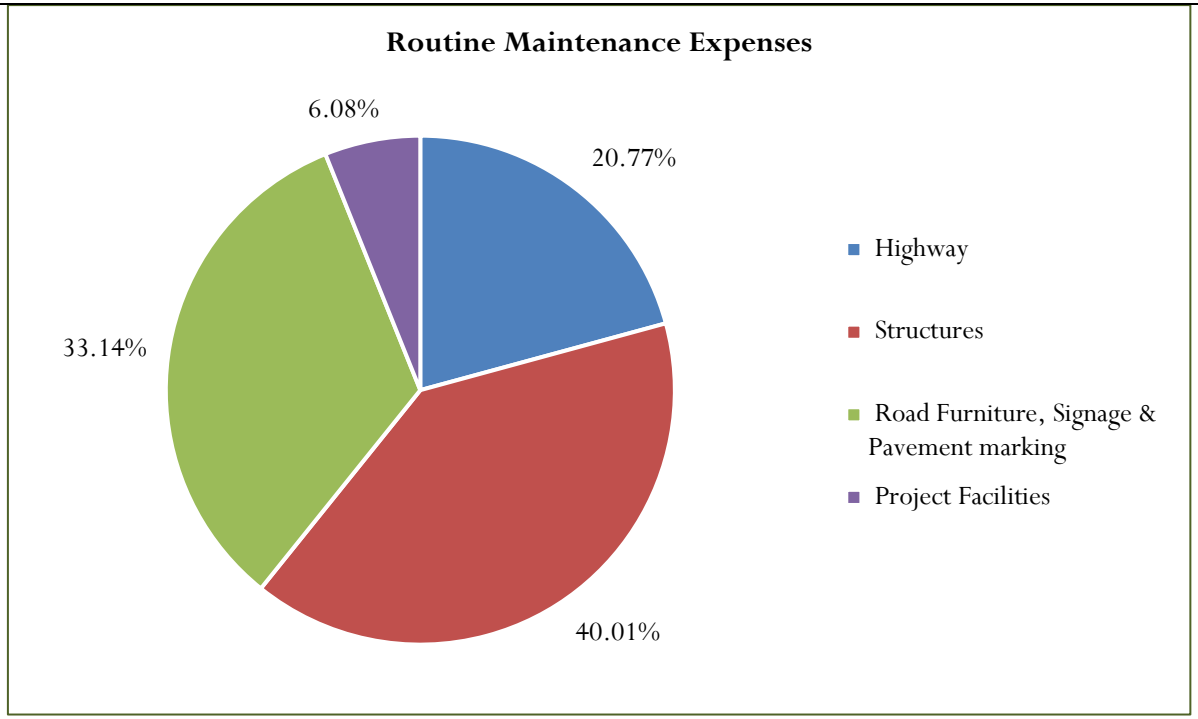


Figure 7-1: Breakup of Routine Maintenance

Table 7-3: Operational Expenditure of the Project for the Base Year FY 25

The calculation of operational expenditure for the base year FY 25 is given below:

S. no.	Description	Manpower	Annual Exp. (in Lakhs)
A.1	SPV staff and salaries	11.75	58.9
A.2	Tolling Operations Services_Outsourced	0	0.0
A.3	Security Services_Outsourced	4	15.9
A.4	Incident Management Services	29	126.7
A.5	RoW and Horticulture Works_ Manpower		65.0
A.6	Electricity and Diesel Charges		52.5
A.7	TMS/HTMS System Expenses		33.9
A.8	Office Operating Expenses		4.9
A.9	Vehicle Running Expenses		18.2
A.10	Professional Fee		35.1
A.11	Community Development		2.0
A.12	Communication Expenses		1.2
A.13	Conveyance Expenses		2.4
A.14	Insurance Expenses		86.2
A.15	IE Fees		60.0
A.16	Contingency	1%	5.6
	OPEX		568.6

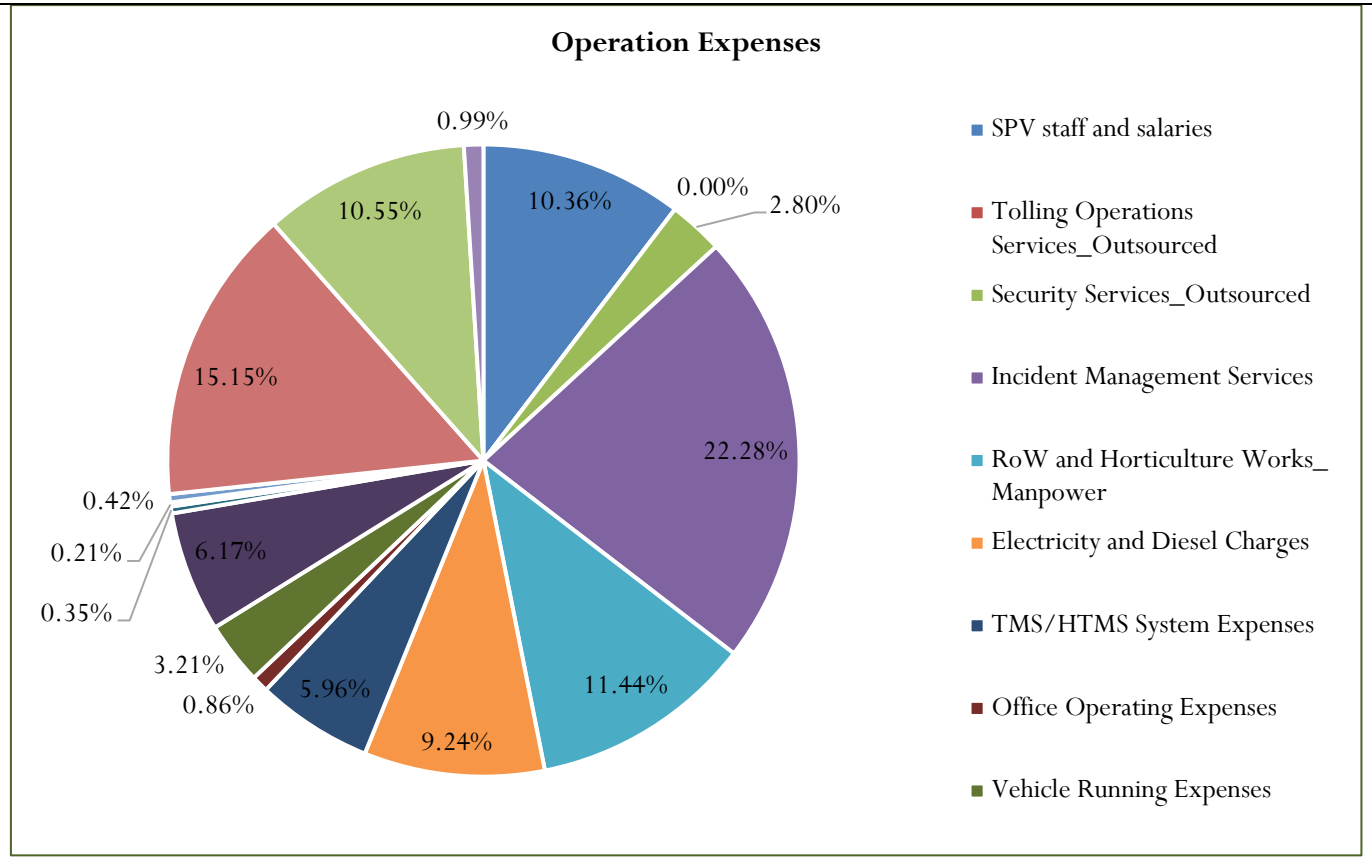


Figure 7-2: Breakup of Operation Cost

7.3 Major Maintenance Estimate

Cube Tech has considered 2 cycles for Major Maintenance. In both the cycles, for main carriageway PQC slab replacement is considered and for service road microsurfacing is considered.

The estimate for Major Maintenance activities of the Project Stretch is as detailed below:

Table 7-4: Major Maintenance Cost for MM Cycle 1

Major Maintenance - 1st Cycle					
S. No.	**Description**	**Unit**	**Qty**	**Rate**	**Amount**
1	Slab replacement cost (PQC)	Cum	4,141.89	7,177	2,97,26,333
2	Joint seal defects, spalling and faulting of joints	Rm	34,850.00	120	41,82,000
3	PQC Taxing	Sqm	3,98,258.50	100	3,98,25,850
4	Road Marking	Sqm	38,876.95	520	2,02,16,015
5	Kerb Painting	Sqm	7,695.00	90	6,92,550
6	Tack coat	Sqm	1,52,587.17	13	19,83,633
7	Earthen Shoulder	Cum	4,918.00	375	18,44,250
8	Bituminous Concrete	Cum	4,577.62	9,924	4,54,28,253
9	Microsurfacing	Sqm	1,52,587.17	150	2,28,88,076
10	ATMS equipment replacement	LS	1.00	1,00,00,000	1,00,00,000
11	Miscellaneous and Contingencies (1%)				17,67,870
			Grand Total		**17,85,54,829.86**
			Grand Total including GST (18%)		**21,06,94,699.24**
			Grand Total (In Cr)		**21.07**

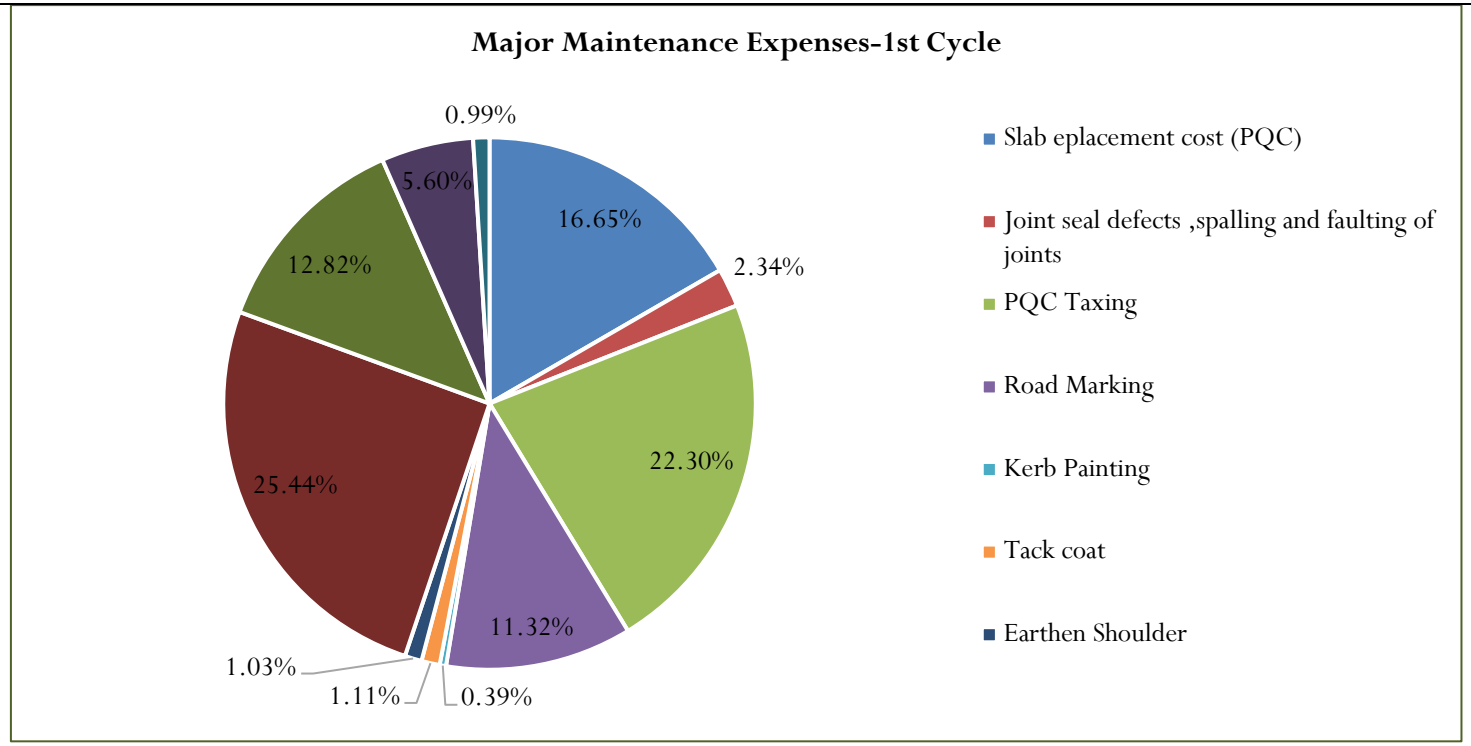


Figure 7-3: Breakup of Major Maintenance Expenses 1st Cycle

Table 7-5: Major Maintenance Cost for MM Cycle 2

Major Maintenance – 2nd Cycle					
S. No.	**Description**	**Unit**	**Qty**	**Rate**	**Amount**
1	Slab replacement cost (PQC)	Cum	4,141.89	7,177	2,97,26,333
2	Joint seal defects, spalling and faulting of joints	Rm	34,850.00	120	41,82,000
3	PQC Taxing	Sqm	3,98,258.50	100	3,98,25,850
4	Road Marking	Sqm	38,876.95	520	2,02,16,015
5	Kerb Painting	Sqm	7,695.00	90	6,92,550
6	Tack coat	Sqm	1,52,587.17	13	19,83,633
7	Earthen Shoulder	Cum	4,918.00	375	18,44,250

Major Maintenance – 2nd Cycle					
S. No.	**Description**	**Unit**	**Qty**	**Rate**	**Amount**
8	Bituminous Concrete	Cum	4,577.62	9,924	4,54,28,253
9	Microsurfacing	Sqm	1,52,587.17	150	2,28,88,076
10	ATMS equipment replacement	LS	1.00	1,00,00,000	1,00,00,000
11	Miscellaneous and Contingencies (1%)				17,67,870
			Grand Total		**17,85,54,829.86**
			Grand Total including GST (18%)		**21,06,94,699.24**
			Grand Total (In Cr)		**21.07**

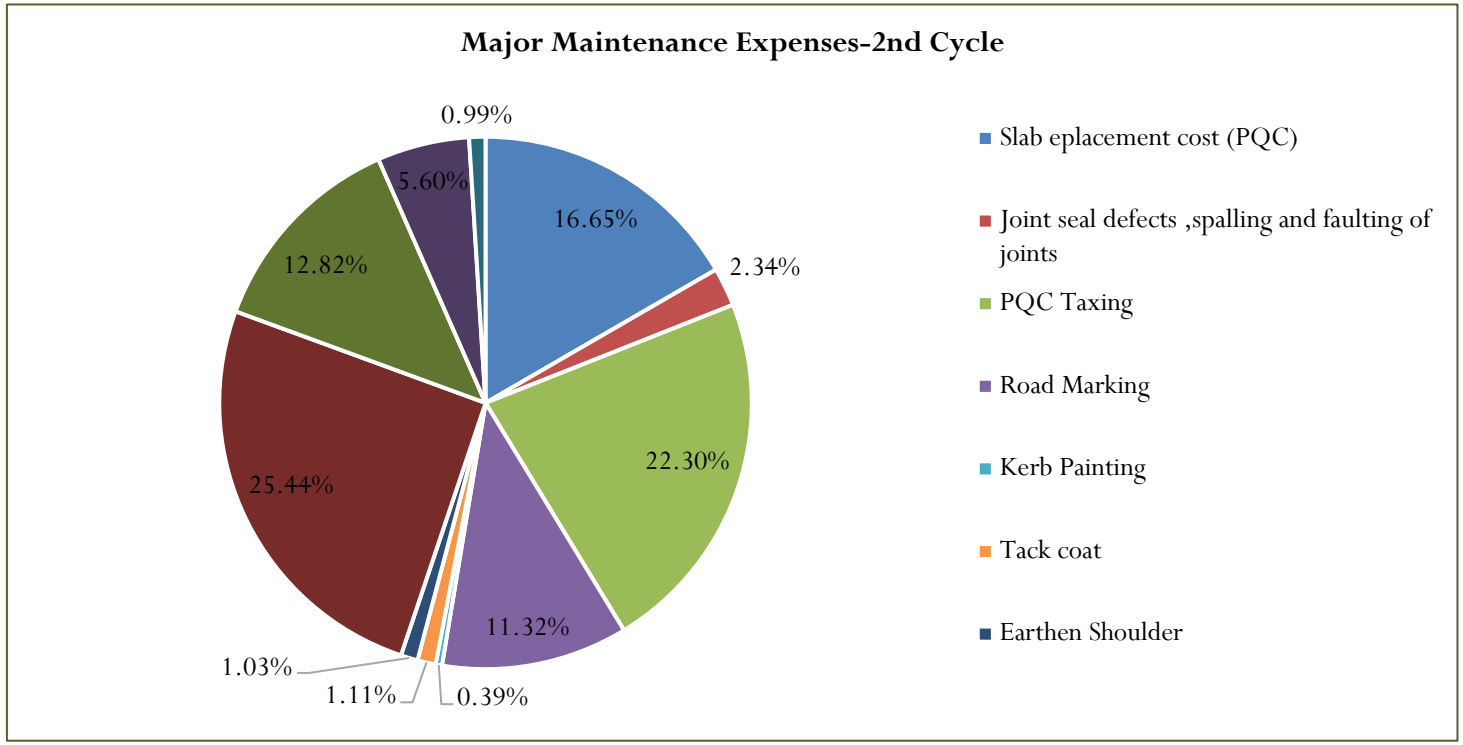


Figure 7-4: Major Maintenance Expenses 2nd Cycle

7.3.1 Major Maintenance expenses during O&M period

As per the Cube Tech estimate, the total Major Maintenance expense including the escalation is Rs.53.25 cr.

7.4 Projections of O&M Expenses

The O&M expenses for the entire Concession Period is presented in this section .

The following escalations are considered:

Table 7-6:Escalation Factors

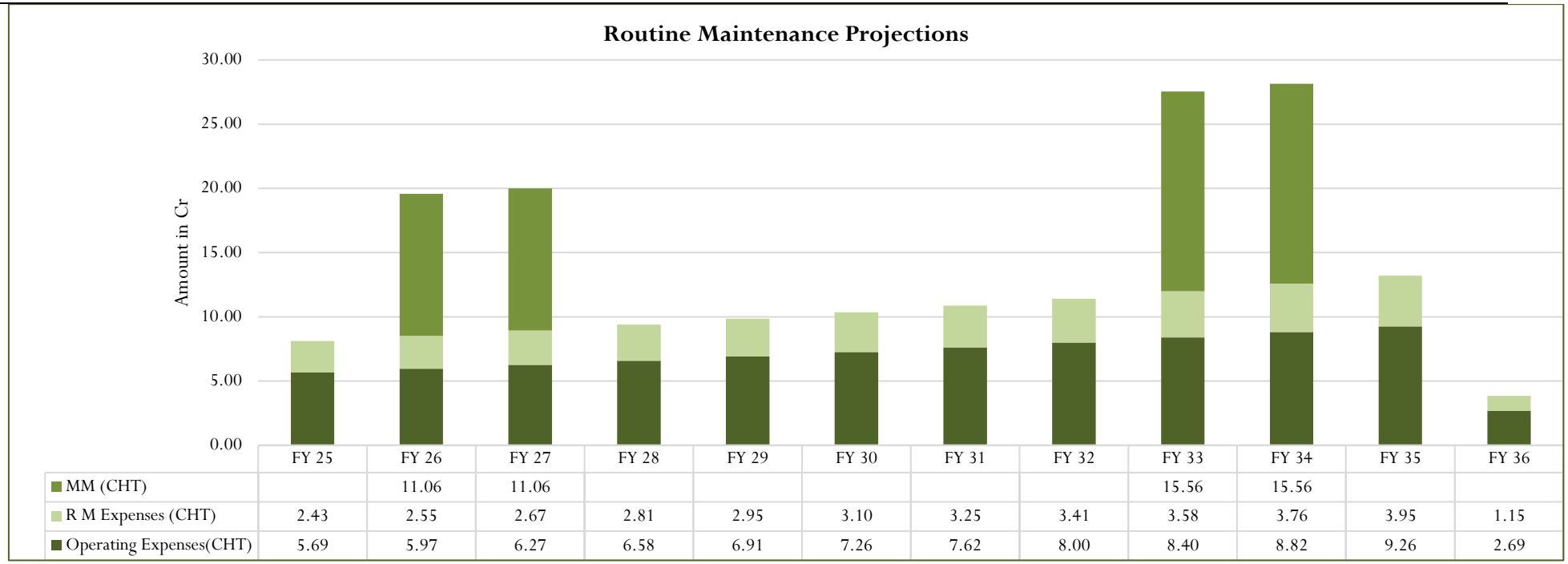
Items	Escalation
Operating Expenses	5.00%
Routine Maintenance	5.00%
Major Maintenance	5.00%

The Projections of total O& M expenses including Major Maintenance for 2 Cycles of the Project Company and CHT is given in the table below

Table 7-7: Projections of total O&M expenses of the Project during O&M period

Particulars	Total Expense (In Cr.)	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	FY 32	FY 33	FY 34	FY 35	FY 36
Operating Expenses (CHT)	**83.47**	5.69	5.97	6.27	6.58	6.91	7.26	7.62	8.00	8.40	8.82	9.26	2.69
R M Expenses (CHT)	**35.61**	2.43	2.55	2.67	2.81	2.95	3.10	3.25	3.41	3.58	3.76	3.95	1.15
MM (CHT)	**53.25**		11.06	11.06						15.56	15.56		
O&M and MM (CHT)	**172.34**	8.11	19.58	20.01	9.39	9.86	10.35	10.87	11.41	27.55	28.15	13.21	3.84

The graph for the total cost Projections of expenses during O&M period given by the Cube Highways Technologies is shown in the figure below.



	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	FY 32	FY 33	FY 34	FY 35	FY 36
MM (CHT)		11.06	11.06						15.56	15.56		
R M Expenses (CHT)	2.43	2.55	2.67	2.81	2.95	3.10	3.25	3.41	3.58	3.76	3.95	1.15
Operating Expenses(CHT)	5.69	5.97	6.27	6.58	6.91	7.26	7.62	8.00	8.40	8.82	9.26	2.69

Figure 7-5: O&M, RM and MM Expenses Projections

The total O&M cost including Major Maintenance estimated by the CHT is Rs.172.34 Cr.

ANNEXURES

Annexure I: Pavement Visual Condition Survey data

Remarks	LHS Condition	From	To	RHS Condition	Remarks
50m Patch+200m Crack	Fair	44+800	46+000	Good	50m Patch
50m Patch+50m Crack	Good	46+000	47+000	Good	No distress
No distress	Good	47+000	48+000	Good	No distress
No distress	Good	48+000	49+000	Good	No distress
No distress	Good	49+000	50+000	Good	100m Crack+50m Patch
No distress	Good	50+000	51+000	Good	50m Crack
No distress	Good	51+000	52+000	Fair	200m Crack
No distress	Good	52+000	53+000	Fair	100m Patch+400m crack
No distress	Good	53+000	54+000	Fair	400m Crack
No distress	Good	54+000	55+000	Fair	300m Patch+100m Crack
No distress	Good	55+000	56+000	Good	No distress
No distress	Good	56+000	57+000	Fair	200m Crack+100m Patch
5om Patch+50m Staple	Good	57+000	58+000	Fair	200m Crack
50m Staple on shoulder	Good	58+000	59+000	Poor	300m Crack
50m Staple	Good	59+000	60+000	Good	100m Patch
No distress	Good	60+000	61+000	Good	50m Patch
No distress	Good	61+000	62+000	Good	100m Patch
No distress	Good	62+000	63+000	Good	No distress
No distress	Good	63+000	64+000	Good	No distress
200m Crack	Fair	64+000	65+000	Good	200m Crack
No distress	Good	65+000	66+000	Good	200m Crack
50m Crack	Good	66+000	67+000	Good	200m Crack+50m Patch
No distress and toll plaza@ch 67+900	Good	67+000	68+000	Good	200m Crack+50m Patch
200m Crack	Fair	68+000	69+000	Fair	200m Crack+50m Patch
200m Crack	Fair	69+000	70+000	Good	100m Crack+100m Patch

Remarks	LHS Condition	From	To	RHS Condition	Remarks
200m Patch+200m Crack	Fair	70+000	71+000	Fair	200m Crack+100m Patch
100m Patch+200m Cracks	Poor	71+000	72+000	Fair	200m Crack+50m Patch
50m Patch+200m Crack	Fair	72+000	73+000	Fair	400m Crack
50m Crack	Good	73+000	74+000	Good	No distress
20m Patch+200m Crack	Fair	74+000	75+000	Fair	100m Crack
50m Crack	Good	75+000	76+000	Fair	200m Crack
No distress	Good	76+000	77+000	Fair	200m Crack+50m Patch
100m Crack+50m Patch	Fair	77+000	78+000	Fair	300m Crack+50m Patch
50m Crack	Good	78+000	79+000	Fair	300m Crack
300m Crack+50m Patch	Fair	79+000	80+250	Fair	200m Crack+50m Patch

Annexure II: List of barrier issues

S. No.	Chainage (km)		Direction	Location	Remarks	Length (m)
	From	To				
1	51+200		RHS	Median	Damaged Wire Rope Barrier	50
2	54+600	54+620	LHS	Shoulder	PGR Damaged	20
3	56+800		LHS	Median	Damaged Wire Rope Barrier	50
4	74+250		LHS	Median	Damaged Wire Rope Barrier	50
5	74+300		RHS	Median	Damaged Wire Rope Barrier	50
6	80+800		RHS	Median	Damaged Wire Rope Barrier	100

Annexure III: Pavement Distress Survey

A pavement condition survey gives an indication of the serviceability of the road pavement and is vital in deciding the maintenance activities. Some methods to conduct this survey are the Visual Condition Survey method (manual), Network Survey Vehicle (NSV) method, etc. However, Visual Condition Survey was conducted in this Project.

In a visual condition survey, the technical experienced staff makes a traverse along the project stretch, observing the different types of distresses on the pavement surface, and observations are made on each distress type.

Distresses on bituminous pavements include

- Cracks – Longitudinal, Transverse, and Alligator cracks
- Corner breaks
- Spalling of Joints
- Raveling
- Rutting
- Bleeding
- Potholes
- Patches

Observations made during the visual condition survey are detailed below.

Longitudinal Cracks

Structural cracks like longitudinal cracks develop parallel to the traffic direction and extend through the depth of the bituminous pavement layer/Concrete layer, which can be bottom-up or top-down crack.

These cracks are proposed for route and seal, partial depth repair, full depth repair based on their severity.

Longitudinal cracks were observed at some locations along the project Stretch. These are routine maintenance work and cost of the same captured in Y-o-Y O&M and concessionaire has taken up the rectification works.

Figure: Longitudinal Cracks

Transverse Cracks

Structural cracks like transverse cracks develop perpendicular to the traffic direction and extend through the depth of the bituminous pavement layer/Concrete layer.

Transverse cracks were observed at some locations along the project Stretch. These are routine maintenance work and cost of the same captured in Y-o-Y O&M and concessionaire has taken up the rectification works.

Figure: Tranverse Cracks

Alligator Cracks

Alligator cracking also referred to as fatigue cracking or crocodile cracking, refers to a pattern of asphalt damage that resembles the scales on an alligator's skin. The cracks form co-joined, irregular "blocks' that are often four-sided, such as rectangles, but they can also have more sides and, on occasion, as few as three sides.

Alligator cracks were observed at few isolated locations of the project Stretch. These are routine maintenance work and cost of the same captured in Y-o-Y O&M and concessionaire has taken up the rectification works.

Figure: Alligator Cracks

Corner Break

A portion of the slab is separated by a crack, which intersects the adjacent transverse and longitudinal joints, describing approximately a 45-degree angle with the direction of traffic. The length of the sides is from 0.3 m to half the width of the slab on each side of the corner.

Corner breaks were observed at few locations along the Project. These are routine maintenance work and cost of the same captured in Y-o-Y O&M and concessionaire has taken up the rectification works.

Spalling of Joint

Cracking, breaking, chipping, or fraying of slab edges within 0.3 m from the face of the joint.

Spalling of joint was observed along the Project Stretch. These are routine maintenance work and cost of the same captured in Y-o-Y O&M and concessionaire has taken up the rectification works.

Figure: Spalling of joints

Raveling

Raveling is wearing away of the pavement surface due to loss of bitumen binder and dislodged aggregate particles. This distress indicates that either the bitumen binder has hardened appreciably, or a poor-quality mixture is present. In addition, ravelling may be caused by certain types of traffic, for example, tracked vehicles. Softening of the surface and dislodging of the aggregates due to oil spillage and weathering are also included under ravelling.

Low severity Raveling was observed at some locations along the project Stretch. These are routine maintenance work and cost of the same captured in Y-o-Y O&M and concessionaire has taken up the rectification works.

Figure: Raveling

Rutting

A rut is a surface depression of pavement in the wheel paths, and pavement uplift may occur along the sides of the rut. Rutting stems from a permanent deformation in any pavement layers or subgrade usually caused by consolidated or lateral movement of the materials due to traffic load.

Low severity Rutting associated with bleeding was observed at isolated locations of the project Stretch. These are routine maintenance work and cost of the same captured in Y-o-Y O&M and concessionaire has taken up the rectification works.

Bleeding

A surface having a thin film of excess or free bituminous binder on it, which creates a shiny, glass like reflecting surface tending to become soft in hot weather and slippery in cold and wet weather, eventually developing low skid resistance is referred to as bleeding or fatty bituminous surface.

Bleeding was observed at some locations of the project Stretch. These are routine maintenance work and cost of the same captured in Y-o-Y O&M and concessionaire has taken up the rectification works.

Potholes

Potholes are small (or big, based on severity) bowl-shaped depressions on the pavement surface. In general, potholes are formed in later stages of highly ravelled or cracked pavement surface resulting in bowl-shaped depressions.

Potholes were not observed in the the project Stretch.

Patches

The patch is an area of the pavement which have been repaired or replaced by new material to remove a certain defect on the pavement. The patch is considered a defect no matter how well it is performing, and some roughness is associated with this type of distress.

Patches were observed at some locations along the project Stretch. These are routine maintenance work and cost of the same captured in Y-o-Y O&M and concessionaire has taken up the rectification works.

Figure: Patchwork

Annxexure IV: Identified Safety concerns along the Project Road

Keeping in view the scope of assignment, safety concerns have been recorded on site and reported in the table below. Remarks and recommendation column includes information on clauses of CA & applicable manual, any observations in the IE reports/project documents and our recommendations against the highlighted safety concern. Risk and priority of each safety concern are also included as per the following criteria given in line with IRC: SP:88-2019 (Manual on Road Safety Audit).

- **Risk categories for identified safety concern: Very High, High, and Medium**
- **Priority level for recommendations: Essential, Highly Desirable and Desirable**

Table: Safety concerns observed along the Project Road

S. No.	Safety concern		Recommendation		Type of concern
	Current Situation	Risk	Recommendation and Remarks	Priority	
1	**Safety Barrier**				
A	**Issue with connection between MBCB and Rigid barrier**	-		-	**No Issue**
	The fishplate arrangement between the MBCB and the rigid crash barrier along the project road is adequate.		No issue was observed.		
B	**Improper start and end treatment of MBCB**	**Very High**		**Essential**	**No Issue**
	As shown in the Improper Start and End Treatment of MBCB photograph below, the W-beam start/end treatment is not provided as per the applicable manual. W-beam barrier end terminals directly terminated into the ground without proper start treatment (MELT) and end (TT) arrangement. This might launch the high-speed errant vehicle in the air and lead to severe accidents.		As per the IRC: SP: 84-2014, Clause 9.7.2 – Roadside steel Barrier, (b) – End Treatment: *The end treatment on approach shall be Modified Eccentric Loader Terminal (MELT) arrangement and on departure side it shall be Trailing Terminal (TT) arrangement. The recommended end treatment arrangement shall be as per Figure no. 9.11 and 9.12 of IRC: SP: 84-2014.* It is recommended to review these locations in accordance with the applicable manual of CA.		

S. No.	Safety concern		Recommendation		Type of concern
	Current Situation	Risk	Recommendation and Remarks	Priority	
C	**Damaged Metal beam crash barrier**	**-**		**-**	**No Issue**
	During site visit, the team has not encountered any damaged MBCB along the Project Road. However, proactive rectification of damaged furniture is key for safety of road users.				
D	**Wrong overlapping of MBCB plates**	**-**		**-**	**No Issue**
	No wrong overlapping was observed during the site visit.				
E	**Improper Arrangement of MBCB and Kerb**	**-**		**-**	**No Issue**
	No issue was observed				
F	**MBCB Setback distance**	**-**		**-**	**No Issue**
	Based on visual inspection, the MBCB setback distance is observed to be adequate.				
G	**Height of Crash barriers**	**-**		**-**	**No Issue**
	Based on visual inspection, the height of the crash barrier is adequate.				
I	**Welded connection of MBCB Plates**	**-**		**-**	**No Issue**
	No issue was observed				
J	**Wire Rope Barrier Setback distance**	**-**		**-**	**No Issue**
	Based on visual inspection, Wire rope barrier setback distance is observed to be adequate.		No issue observed		
K	**Wire Rope Barriers Distance from face of the kerb**	**-**		**-**	**No Issue**
	Wire rope barriers are provided at the depressed wide median locations and hence kerb is not required.		No issue observed		
L	**Damaged Wire Rope Barrier**	**High**		**High**	**New Installation**
	During the inspection, it was observed that at a few locations wire rope barriers		Suggested to review and rectify such locations on priority.		

S. No.	Safety concern		Recommendation		Type of concern
	Current Situation	Risk	Recommendation and Remarks	Priority	
	were damaged (~300m).				
M	**Start of RCC crash barrier with respect to grade separator structure**	**-**		**-**	**No Issue**
	Adequate arrangement observed.				
N	**RCC crash barrier at Bridges**	**-**		**-**	**No Issue**
	No issue was observed				
2	**New Installation of Rigid Crash Barrier at base of FOB column (SR separator)**	**Very High**		**Highly Essential**	**New Installation**
	During the site visit, it was observed that unshielded FOB columns are present within the Clear Zone of travel on the SR separator. The following photographs represent the site scenario. Missing Rigid Crash Barrier at the base of FOB column		Suggested to review and rectify such locations on priority.		
3	**Pedestrian Guard Rail**				
A	**New installation of PGR at built up section**	**-**		**-**	**No Issue**
	No issue was observed				
B	**PGR and rigid barrier connection**	**-**		**-**	**No Issue**
	NA		NA		
C	**Damaged PGR**	**High**		**High**	**New Installation**
	During our site visit, the team has encountered damaged PGR (~20m) at few Damaged PGR		Suggested to review and rectify such locations on priority.		

S. No.	Safety concern		Recommendation		Type of concern
	Current Situation	Risk	Recommendation and Remarks	Priority	
	locations along the Project Road.				
4	**Pedestrian Facilities**	**-**		**-**	**No Issue**
	Pedestrian facilities such as pedestrian cross marking, sign at every median opening and three foot over bridges has been provided.		Provision of rigid crash barriers at the base of foot bridge column on SR and MCW separator shall be reviewed.		
5	**Median walls in b/w structures**	**-**		**-**	**No Issue**
	No issue was observed.				
5	**Highway Lighting**				
A	**Highway Lighting underside of Grade separated structures**	**High**		**Essential**	**New Installation**
	Adequate highway lighting is observed below grade separator structures. However, at the time of inspection, it was noted that at some locations floodlights below underpass are missing and non-functional at few locations. Missing Flood lights below underpasses		Suggested to review and rectify such locations on priority.		
B	**Highway Lighting Lux**	**-**		**-**	**NA**
	Upon visual inspection, it has been observed that highway lighting is provided only on the deck of the grade-separated structures. Highway lighting is not provided on the approaches to grade separate structures. Additionally, the provided highway lighting was not functional at a few locations along the Project Road. Highway lighting at grade-separated structures		As per clause 12.3.3, IRC: SP:84-2014, Highway lighting shall be provided at *Grade separated Structures, Interchanges, Flyovers, Underpasses (vehicular/ pedestrian) and Overpasses: Lighting shall be provided as per Para 3.3.4 of the Manual.* As per Clause 3.3.4 of IRC: SP:84-2014, *"The top and underside of the grade-separated structures and interchange area at the ground* ***level up to 50 m beyond the point*** *from where flaring of the main carriageway takes place shall be provided with lighting"*		
6	**Solar Blinker**				

S. No.	Safety concern		Recommendation		Type of concern
	Current Situation	Risk	Recommendation and Remarks	Priority	
A	**Non-Functional solar blinkers and missing blinker lights**	**-**		**-**	**No Issue**
	Adequate solar blinkers have been observed along the Project Road and same were in working condition.		No issue was observed.		
B	**Height of solar blinkers**	**-**		**-**	**No Issue**
	Based on visual inspection, it was observed that the height of solar blinker was adequate.		No issue was observed		
C	**LED Traffic Beacons/Solar Blinkers arrangement**	**-**			**No Issue**
	No issue was observed		No issue was observed		
D	**New Installation of Solar Blinkers**	**-**		**-**	**No Issue**
	There is no requirement of additional solar blinkers as per the site condition.		No issue was observed.		
7	**Night-time visibility**	**-**		**-**	**No Issue**
	Adequate delineation of the Project Road with retroreflective stickers on the road furniture is provided wherever required.		No issue was observed.		
8	**Sign Board**				
A	**Issue with an existing installation of sign boards (Damaged, faded, visibility, etc.,)**	**-**		**-**	**No Issue**

S. No.	Safety concern		Recommendation		Type of concern
	Current Situation	**Risk**	**Recommendation and Remarks**	**Priority**	
	As per the visual inspection, all the sign boards provided are as per the applicable manual and in good condition.		No issue was observed.		
9	**Object and Kerb Painting**	**Medium**		**Essential**	**New Installation**
	During the site visit, it was observed that kerb painting and object painting of structures were adequate along the Project Road. However, a few of the soffits of the superstructures lack object painting. The current scenario of these concerns is depicted below. Object hazard painting on structures		**Object Hazard Marking on Fixed Objects:** *All the entry and exit of the VUP/PUPs, face of the wall of VUP/PUP shall be marked with OHM to enhance safety during nighttime.*		
10	**Safety Measures at critical locations, i.e., Transverse Bar Marking**	**-**		**-**	**No Issue**
	Transverse Bar Marking has been provided at median openings and hazardous approaches.		No issue was observed		
11	**Road Studs**	**-**		**-**	**No Issue**
	Road studs have been provided for most locations along the Project Road.		No issue was observed		
12	**Road Delineator**	**-**		**-**	**No Issue**
	No issue was observed				
13	**Road Geometry**				
A	**Improper connections of Minor Roads**	**-**		**-**	**No Issue**
	During the site visit, it has been observed that, minor roads are properly connected to the service road.		No issue observed		
B	**Absence of storage lane at median opening/U-turn locations**	**-**		**-**	**No Issue**
	All existing median openings are equipped with storage lanes on BHS.		No issue was observed		
C	**Un-Authorized Median Openings (UMO)**	**-**		**-**	**No Issue**

S. No.	Safety concern		Recommendation		Type of concern
	Current Situation	**Risk**	**Recommendation and Remarks**	**Priority**	
	No issues are currently observed. If any UMO is encountered in the future, it will be addressed with priority and closed promptly.				
14	**Landscaping and Tree Plantation**				
A	**Avenue plantation condition**	**-**		**-**	**No Issue**
	During the site visit it was observed that adequate plantation is provided all along the project road.		No issue was observed		
B	**Median Plantation in No Plantation Zone**	**-**		**-**	**No Issue**
	No issue was observed				
15	**Truck Lay Bays/Bus Bays/Wayside Amenities**				
A	**Truck Lay Bye Layout**	**-**		**-**	**No Issue**
	No issue was observed		No issue was observed		
B	**Bus Bays and Bus Shelters**	**High**		**-**	**Other general safety concern**
	Bus bays are equipped with road markings and studs. However, one single-arm lights are provided at each bus-bay as shown in the image.		As per applicable manual Clause 12.5.8 of IRC: SP:84-2014, *"**The entire bus bay** shall be provided with lighting (minimum illumination of 40lux)"* It is recommended to review the lighting arrangement for all the bus bays.		
C	**Rest Areas / Wayside Amenities**	**-**		**-**	**NA**
	As per the CA, there is no proposal for rest area along the project road.				
16	**Other General Issues**				
A	**Water Stagnation**	**-**		**-**	**No Issue**
	Water stagnation was not observed during our site visit. However, a review of drainage plan is essential to eliminate situations of water stagnation in future.		No issue was observed		

S. No.	Safety concern		Recommendation		Type of concern
	Current Situation	Risk	Recommendation and Remarks	Priority	
C	**Encroachment by temporary shops**	**-**		**-**	**No Issue**
	During the site visit, encroachment is not observed along the project road.				
17	**High Transmission Line Vertical clearance**	**-**		**-**	**No Issue**
	No issue was observed				
18	**Ongoing Construction-Related Issues**	**-**		**-**	**No Issue**
	No ongoing construction activities were observed during the site visit.		No issue was observed		

Summary of recommendations

It may be noted that during the safety inspection, few safety concerns which can be attributed to deviation from the applicable manual have been identified and presented in the Report. However, it is acknowledged that the site has been mostly constructed in accordance with the approved drawings. Also, the safety concerns highlighted in this report were not identified in any project communications and IE MPRs submitted for review. It shall be noted that, the identified safety concerns may deteriorate the safe operation of the project over the years. To rectify these issues cost intensive measures would be required. However, due to the limitation of the study, quantification of all the identified safety concerns could not be carried out that has been notified in this report.

Following points below provides a summary of recommendation based on the site visit and review of submitted documents that shall help in elevating the overall profile of the Project Road.

Engineering measures that can be reviewed for implementation:

- Provision of safety barriers on either side of rigid crash barriers, at the base of overhead signs, and along high embankment sections.
- Improve the start/end treatments of MBCB, to enhance road safety.
- Rectify the damaged wire rope barrier and PGR along the project road.
- Install the missing OHM to highlight hazards close to the travel path.
- Install Chevron signs along the curve section.
- Provide information about authorized parking at regular intervals and discourage parking on paved shoulders.

- Enhance the visibility of superstructures and safety of road users by providing object painting and hazard markers.

It may be noted that apart from above mentioned safety concerns, overall road safety scenario along the Project Road is satisfactory. Coost of suggested rectification has been captured in Y-o-Y O&M and concessionaire has taken up the rectification works.

Annxexure IV: Completion Certificate

Schedule-J

COMPLETION CERTIFICATE

1.) We M/s MSV International Inc. acting as Independent Engineer, under and in accordance with the Concession Agreement dated 09.05.2018, for Redesigning, Rehabilitation and Upgradation to Four Lane configuration & Strengthening of Rohna/Hassangarh to Jhajjar section from km 44.80 to km 80.250 (Design Chainage) (Length 35.450 km) of NH-334B in the State of Haryana on HAM Mode, Project on design, build operate and transfer (the DBOT Annuity or Hybrid Annuity) basis through M/s Gawar Rohna Jhajjar Highway Pvt. Ltd. hereby certify that the Test specified in Article-14 and Schedule-I of the agreement have been successfully undertaken to determine compliance of the Project with the provisions of the Agreement, and We are satisfied that the project can be safely and reliably placed in commercial service of the Users thereof.

2.) It is certified that, in terms of the aforesaid Agreement all works forming part of the Project have been completed and the project is hereby declared fit for entry into commercial operation on 31st day of July 2020.

For and on behalf of
INDEPENDENT ENGINEER BY
MSV International Inc.

Pushkar Malik
Authorized Representative

For and on behalf of
INDEPENDENT ENGINEER BY
MSV International Inc.

N.P. Gupta
Team Leader
Independent Engineer

Technical Due Diligence for Upgradation to 2 lanes with paved shoulder/ 4 lane of Khajuwala - Poogal section (Design Chainage 0.000to Chainage 30.812) and Poogal – Dantour – Jaggasar – Gokul – Goddu – Ranjeetpura – Charanwala – Naukh – Bap section of NH – 911 section (Design Chainage 1.430 to Chainage 182.725) (Total Length 212.107 km) under Bharatmala Pariyojna in the state of Rajasthan on Hybrid Annuity Mode

Technical Due Diligence Report (Private and Confidential

July 2024

Submitted to:

Gawar Khajuwala Highway Private Limited

Cube Highways Technologies Private Limited

CUBETECH
Cube Highways Technologies Pvt. Ltd.

Technical Due Diligence for Upgradation to 2 lanes with paved shoulder/ 4 lane of Khajuwala - Poogal section (Design Chainage 0.000to Chainage 30.812) and Poogal – Dantour – Jaggasar – Gokul – Goddu – Ranjeetpura – Charanwala – Naukh – Bap section of NH – 911 section (Design Chainage 1.430 to Chainage 182.725) (Total Length 212.107 km) under Bharatmala Pariyojna in the state of Rajasthan on Hybrid Annuity Mode

Documents Submittal and Contents Amendment Record

S. No.	Revision	Description	Date	Sign
1	R0	Tech DD Report	July 2024	

Confidentiality

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ABBREVIATIONS

Abbreviation	Description
ASTM	American Society for testing and Materials
AVC	Automatic Vehicle Classifier
BBD	Benkelman Beam Deflection
BC	Bituminous Concrete
BOT	Built, Operate and Transfer
CA	Concession Agreement
CC Drain	Cement Concrete Drains
COD	Commercial Operation Date
CRRI	Central Road Research Institute
CBR	California Bearing Ratio test
DBFOT	Design, Build, Finance, Operate and Transfer
ETC	Electronic Toll Collection
FWD	Falling Weight Deflectometer
GOI	Government of India
GCL	Gawar Construction Limited
HPC	Hume Pipe Culvert
IE	Independent Engineer
IRC	Indian Roads Congress
LA	Land Acquisition
LHS	Left Hand Side
LOA	Letter of Acceptance
MBCB	Metal Beam Crash Barrier
MJB	Major Bridge
MNB	Minor Bridge
MOST	Ministry of Surface Transport
MPR	Monthly Progress Report
NH	National Highway
NHAI	National Highway Authority of India

Abbreviation	Description
NSV	Network Survey Vehicle
O&M	Operation and Maintenance
OHLS	Overhead Lane Signal
OHM	Object Hazard Marker
PCOD	Provisional Commercial Operation Date
POS	Point of Sale
RCC	Reinforced Cement Concrete
RHS	Right Hand Side
ROB	Road/Rail Over Bridge
ROW	Right of Way
RPV	Route Petrol Vehicle
RUB	Road/Rail Under Bridge
SH	State Highway
SPV	Special Purpose Vehicle
SR	Service Road
SSWIM	Slow Speed Weigh in Motion
SWB	Static Weigh Bridge
TOT	Toll Operate Transfer
TC	Toll Collector
Team	Team of Cube Highways Technologies Pvt Ltd.
TMS	Toll Management System
WIM	Weigh in Motion
WMM	Wet Mix Macadam

Chapter 1
INTRODUCTION

CHAPTER 1. INTRODUCTION

1.1 Background

Infrastructure Sector is a key driver for the Indian economy. In 2014, the Government of India have introduced a new investment vehicle which allows investors to participate in the growth story of infrastructure sector, named Infrastructure Investment Trusts (hereinafter referred to as 'InvITs'). InvITs are instruments on pattern of mutual funds and are designed to pool in money from a number of investors to invest in assets that give cash flow over a period of time. The InvITs are regulated by the SEBI (Infrastructure Investment Trusts) Regulations Act, 2014.

In highway sector, InvIT as an instrument provide greater flexibility to investors and is expected to attract patient capitals (for say, 20-30 years) to the market, as these investors are averse to construction risks and are interested in investment in assets which provide long-term stable returns.

InvIT shall have a (i) Trustee, (ii) Sponsor(s) (iii) Investment Manager and (iv) Project Manager, Sponsor and the Project Manager are the same entity. During maintenance period of the Project Stretch, Gawar Construction Limited. (In its capacity as the Project Manager of National Infrastructure Trust) has appointed M/s Cube Highways Technologies Private Limited as Technical Consultant for carrying out technical study and assessment of Opex and Major Maintenance requirement (MMR) for balance concession period. The scope includes review of operation and maintenance system and to prepare maintenance schedule for entire duration of concession period based on a technical analysis. In turn, Cube Highways Technologies undertook the site visits to carry out site inspection. The report is based on findings during this period.

National Infrastructure Trust ("Trust") was settled on September 25, 2023, in Gurugram pursuant to the Trust Deed as a contributory irrevocable trust in accordance with the Indian Trusts Act, 1882. The Trust is an Infrastructure Investment Trust (InvIT) established for making investments in special purpose vehicles as defined under Regulation 2(1) (zy) of the InvIT Regulations, or infrastructure projects or securities of Indian companies engaged in the infrastructure sector, as may be permitted in terms of Regulation 18(5) of the InvIT Regulations. Axis Trustee Services Limited (ATSL) is the Trustee to the Trust. Gawar Investment Manager Private Limited (GIMPL) was incorporated as a private limited company on August 26, 2023, under the Companies Act, 2013. GIMPL is a wholly owned subsidiary of GCL. GIMPL has been appointed as the Investment Manager to the NIT InvIT by Axis Trustee Services Limited (ATSL); the trustee to NIT InvIT and is responsible for managing the operations of InvIT in accordance with InvIT regulations,

Table 1-1: Projects comprising the Initial Portfolio Assets of National Infrastructure Trust

S. No.	Name of the Project	Length (km)
1.	Gawar Rohna Jhajjar Highway Private Limited	35.45

S. No.	Name of the Project	Length (km)
2.	**Gawar Khajuwala BAP Highway Private Limited**	**212.107**
3.	Gawar Narnaul Highway Private Limited	45.3
4.	Gawar Rohna Sonepat Highways Private Limited	40.5
5.	Hardiya Hasanpur Highway Private Limited	47.225
6.	Gawar Kiratpur Nerchowk Highway Private Limited	47.753
7.	Dewas Ujjain Highway Private Limited	41.42
8.	Gawar Bangalore Highways Private Limited	164.34
9.	Gawar Nainital Highways Private Limited	43.905

1.2 Asset Background

The National Highway Authority of India (NHAI) on behalf of Ministry of Road Transport and Highways (MoRTH), Government of India, have taken up the development of various National Highway corridors where the intensity of traffic has increased significantly and there is requirement of augmentation of capacity for safe and efficient movement of traffic. In this regard, NHAI has been entrusted to develop projects for selected corridors through Public-Private Partnership (PPP) basis on Design, Build, Operate and Transfer (DBOT) Pattern.

The Government of India had entrusted National Highways Authority of India (NHAI – the "Authority") for the development, maintenance and management of National Highway No. 911. The Authority had resolved to augment the existing road from Khajuwala - Poogal Section (Design Chainage 0+000 To 30+812) and Poogal - Bap section of NH-911 (Design Chainage 1+430 to 182+725) of National Highway No. 911 (hereinafter called the "NH-911") in the State of Rajasthan by Two lane with paved shoulder/Four-Laning thereof (the "Project") on Design, Build, Operate and Transfer (the "DBOT Annuity" or "Hybrid Annuity") basis. The Hybrid Annuity Model (HAM) is a mix of BOT Annuity and EPC models. As per the design, the Government will contribute up-to 40% of the project cost in five equal instalments of 8% each during the construction period of 730 days with the provisions of the Concession Agreement (CA). The remaining payment will be made based on the assets created and the performance of the developer. Here, hybrid annuity means the first 40% payment is made as fixed amount in five equal instalments whereas the remaining 60% is paid as variable annuity amount after the completion of the project. "During construction stage, Authority pays 40% of the EPC and the balance cost is funded by Concessionaire through debt and equity".

After evaluation of the bids received, the Authority had technically qualified certain bidders including, interalia, the selected bidder and accepted the financial bid of the selected bidder i.e., M/s Gawar Construction Limited.

The Authority issued its Letter of Award No. NHAI/11012/Raj/Poogal-Bap/BM/1059 dated 27.03.2018 (hereinafter called the "LOA") to the selected bidder.

M/s Gawar Construction Limited has formed an SPV, namely, Gawar Khajuwala Bap Highway Private Limited (GKBHPL- the "Concessionaire").

The Concession Agreement (CA) for the Project was signed between GKBHPL and NHAI on 28th September 2018.

As the Concessionaire of this project, GKBHPL will develop the project and maintain the facilities after completion of construction. GKBHPL will recover its costs through Annuity Payments made during Concession Period of 15 years (annuity payments during construction as well as in operations period), including construction period of 730 days from the appointed date.

1.3 Report Structure

The report contains eight chapters, including this Chapter on Introduction.

Chapter 2 Project Overview

Chapter 3 Asset Status

Chapter 4 Review of Structures

Chapter 5 Review of the pavement condition survey

Chapter 6 General Safety Concerns along the Project stretch and Improvements

Chapter 7 Operation and Maintenance Cost

Chapter 8 Overall Review

Chapter 2
PROJECT OVERVIEW

CHAPTER 2. PROJECT OVERVIEW

2.1 Location

The Project Stretch connects Khajuwala-Poogal and Poogal – Dantour – Jaggasar – Gokul – Goddu – Ranjeetpura-Charanwala – Naukh – Bap sections in the State of Rajasthan. It serves movement of army vehicles to the border area and also a number of remote villages are also provided connectivity by this road. The total length of the project corridor is 212.107 km (existing length). The Project Road passes through three districts namely Bikaner, Jaisalmer and Jodhpur.

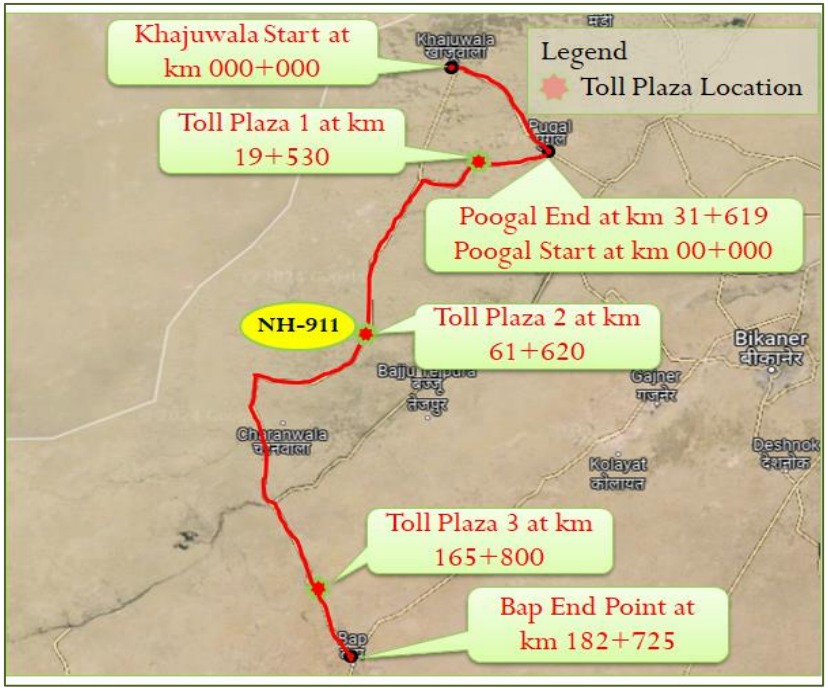

Figure 2-1: Project Alignment

2.2 Salient features

The salient features of the Project are summarised in the table below:

Table 2-1 Project Salient Features

S. No	Scope	Description
1	Name of the Project	Upgradation to 2 lanes with paved shoulder/ 4 lane of Khajuwala - Poogal section (Design Chainage 0.000to Chainage 30.812) and Poogal – Dantour – Jaggasar – Gokul – Goddu – Ranjeetpura – Charanwala – Naukh – Bap section of NH – 911 section (Design Chainage 1.430 to Chainage 182.725) (Total Length 216.616 Km) under Bharatmala Pariyojna in the state of Rajasthan on Hybrid Annuity Mode.
2	Name of Client	National Highways Authority of India
3	Name of Concessionaire	M/S Gawar Khajuwala Bap Highway Pvt. Ltd.
4	Independent Engineer	M/s TPF GETINSA EUROESTUDIOS, S.L. in Association with Sterling Indo Tech Consultants Pvt. Ltd.
5	Length of the Project	212.107 km
6	Project Cost	Rs. 895 crores
7	Letter of award	NHAI/11012/Raj/Poogal-Bap/BM/1059 dated 27.03.2018
8	Signing of Concession Agreement date	28th September 2018
9	Appointed Date	22nd May 2019
10	Construction Period	730 days from Appointed Date
11	Operation Period	15 years from COD
12	Commercial Operations Start date	20th January 2021 for a length of 210.509 km

The Final Completion Certificate was issued on 30th October 2021 for a total length of 212.107 km and the copy is attached as Annexure I.

2.3 Scope of the Project

The scope of the Project (the "Scope of the Project") shall mean and include,

- Construction of the Project on the site set forth in Schedule-A and as specified in Schedule-B together with provision of Project Facilities as specified in Schedule- C, and in conformity with the Specifications and Standards set forth in Schedule- D of the Concession Agreement.
- Operation and Maintenance of the Project in accordance with the provisions of Concession Agreement; and
- Performance and fulfilment of all other obligations of the Concessionaire in accordance with the provisions of Concession Agreement and matters incidental there to or necessary for the performance of any or all the obligations of the Concessionaire under Concession Agreement.

2.4 Physical features of the Project

The Concessionaire shall operate, manage and maintain the project stretch for entire Concession Period, subject to and in accordance with the provisions of this Agreement. The Concessionaire shall visit the Site and assess the durability and strength of Project Assets and make his own assessment for operation, management. and maintenance as per Specifications and Standards and bear and pay all costs, expenses and charges in connection with or incidental to the performance of operation, management and maintenance.

The project includes the following physical features.

Table 2-2: Project Physical Features

S. No	Project Physical Features	UoM	As per CA	As per Site	Remarks
1	Total Length of project stretch	km	212.107 km	212.107 km	
2	Total length of Service Road	km	6.600 km	5.800 km	Remaining not constructed due to hinderance
3	Major Bridges	No's	Nil	Nil	
4	Minor Bridges	No's	06 No	05 No	1 no descope
5	Flyover	No's	Nil	Nil	
6	Vehicular Underpass	No's	03 No	03 No	
7	Box Culverts	No's	107 No	107 No	
8	Pipe Culverts	No's	24 No	24 No	
9	Syphon Pipe Culverts	No's	54 No	54 No	

S. No	Project Physical Features	UoM	As per CA	As per Site	Remarks
10	Major Junctions	No's	13 No	13 No	
11	Minor Junctions	No's	81 No	81 No	
12	Toll Plaza	No's	3 No	3 No	

All the above features as per site have been accounted for the estimation of routine maintenance, repair and rehabilitation, major maintenance and operation expenditure.

2.5 Review of Concession Agreement

The Authority had adopted a single stage two envelope bidding process and accordingly invited proposals by its Request for Proposals dated 19.01.2018 (the "Request for Proposals" or "RFP") for qualification and short listing of bidders for construction, operation and maintenance of the above referred Project on Hybrid Annuity basis.

The Authority had prescribed the technical and commercial terms and conditions in the RFP and invited bids comprising technical and financial bids from the bidders for undertaking the Project.

After evaluation of the bids received, the Authority had technically qualified certain bidders including, inter alia, the selected bidder and accepted the financial bid of the selected bidder i.e. Gawar Construction Limited and issued its Letter of Award No. NHAI/11012/Raj/Poogal-Bap/BM/1059 dated 27th March 2018 to the selected bidder requiring, inter alia, the execution of this Concession Agreement within 45 (forty five) days however due to technical constraints it was executed on 28th September 2018.

Table 2-3: Review of CA

Article /Clause of DCA	Subject	Description in brief	Remarks
Article 3	**Concession period**	Concession period includes construction period of 730 days and operational period of 15 years from COD	
Clause 23.2	**Adjusted bid project cost**	Project cost shall be inflation indexed (through a Price Index Multiple) (PIM), which is the weighted average of Wholesale Price Index (WPI) and Consumer Price Index (CPI) (IW) in the ratio of 70:30 The bid project cost adjusted for variation between the price index occurring between the reference index preceding the bid date and	

Article /Clause of DCA	Subject	Description in brief	Remarks
		reference index date immediately preceding the appointed date shall be deemed to be the bid project cost at commencement of construction. Bid project cost shall be changed to variation in PIM (price index multiple) on monthly basis till the achievement of commercial operations date (COD).	
Article 16	**Change in scope**	Authority shall pay the Concessionaire any increase in scope of work approved by independent engineer. While in case of reduction in scope due to reasons attributed to the authority, cost of such reduced cost is to be accessed by the independent engineer and bid project cost would be reduced by 106% of the civil cost to get estimated cost of reduced scope. The estimated cost of reduced scope shall then be multiplied by ratio of Bid Project Cost to Estimated Project Cost to arrive at the Total Cost of Reduced Scope. Change of Scope O&M payments shall also be increased or reduced in proportion of change in the length of Project Stretch due to change in scope.	
Article 35	**Change in law**		
	Increase in cost	If the Concessionaire suffers aggregate financial effect due to change in law, which exceeds by Rs 1 crore or 2% of the total annuity payments in any accounting year the Concessionaire may notify authority and propose amendments to Concession Agreement so as to place the Concessionaire in the same financial position w/o change in law	*Concessionaire is protected from change in law*
	Reduction in cost	If the Concessionaire benefits from reduction in costs and the aggregate financial effect due to change in law, exceeds by Rs 1 crore or 2% of the total annuity payments in any accounting year the Authority may notify Concessionaire and propose amendments to Concession Agreement so as to place the Concessionaire in the same financial position w/o change in law	
Clause 6.3	**Obligations relating to refinancing**	Authority shall permit and enable Concessionaire for refinancing as per prevailing guidelines upon written request. Authority shall respond within 30 days of the receipt of proposal.	*Positive for the developers and lenders*

Article /Clause of DCA	Subject	Description in brief	Remarks
Article 28	**Force majeure**		
	Time Extension		
	c) After COD	Concession period not extended. But Concessionaire will continue to receive Annuity	
	Cost arising out of force majeure event		
	b) After Appointed Date	Non-Political Event: Cost to be shared by respective parties	
		Indirect Political event: To be shared	
		Direct Political: Cost compensated by Authority to Concessionaire	*Concessionaire is protected*
Clause 17.8	**Damages for breach of Maintenance Obligation**	if the Concessionaire fails to repair or rectify any defect or deficiency set forth in the Maintenance Requirements within the period specified the Authority shall be entitled to recover damages, to be calculated and paid for each day of delay until the breach is cured, at the higher of (a) 2% of the Performance Security, and (b) 0.1% of the cost of such repair or rectification as estimated by the Independent Engineer	*Concessionaire is made more responsible*
Clause 17.16	**Advertising on the site**	The Concessionaire shall not undertake or permit any form of commercial advertising, display or hoarding at any place on the site	
Article 20	**Traffic aid post, medical aid post etc. at each Toll Plaza**	Concessionaire shall construct a traffic aid post of 25 sqm, medical aid post and two residential quarters at its own cost and hand them over to authority. Concessionaire shall provide the State Police Department or a substitute thereof one Jeep or similar vehicle in good working condition along with chauffeurs for round-the-clock patrolling. The operating costs of such vehicle including the salaries and allowances of the chauffeurs shall be borne by Concessionaire. Concessionaire shall provide to the State Medical Department or a substitute thereof to be designated by the Authority one ambulance in good working condition along with chauffeurs for round-the-clock	

Article /Clause of DCA	Subject	Description in brief	Remarks
		ambulance services. the operating costs of such ambulance including the salaries and allowances of the chauffeurs The Concessionaire shall also reimburse to the State Medical Department (or a substitute thereof to be designated by the Authority) the actual expenditure incurred by it in each Accounting Year on the medical equipment, and the pay and allowances of up to 2 (two) medical personnel deployed exclusively for the Medical Aid Posts and ambulance and shall maintain the Medical Aid Post buildings.	
Clause 21.3	**Payment to Independent Engineer**	The remuneration, cost and expenses of the Independent Engineer shall be paid by Authority and subject to the limits set Schedule-M, one-half of such remuneration, cost and expense shall be reimbursed by the Concessionaire to the Authority within 15 days of receiving a statement of expenditure from Authority	

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Chapter 3
ASSET STATUS

CHAPTER 3. ASSET STATUS

3.1 Review of Project Stretch

As per our visual inspection, the pavement is in good condition, the observations made by our team are presented below.

Figure 3-1: Project start and end location

3.2 Service Road

Based on site inspection, service road of 5.800 km was found on site. Service / Slip roads were found in good condition. The detailed list of service road along the project stretch is enclosed in **Annexure II**.

Figure 3-2: Service Road

3.3 Footpath Drain

Based on the site inventory, closed RCC footpath drain along the project stretches measures 8.580 km on both sides. Drain provided along the project stretch was found clean. The detailed list of drains along the project stretch is enclosed in **Annexure III**.

Figure 3-3: Footpath Drains

3.4 Junctions

Based on the site observation, 13 Major and 81 Minor Junctions were found along the project stretch. All junctions were properly made with pavement marking.The list of at Major and minor junctions along the project stretch are enclosed in **Annexure IV.**

Figure 3-4:- Junctions

3.5 Road Furniture

Following are the details of road furniture provided along the project stretch as per site.

Table 3-1: List of project furniture's

Type furniture	Unit	Quantity
Metal beam Crash barrier	km	36.020
Overhead Gantry	Nos	5
Cantilever Gantry	Nos	8
Pedestrian Guard Rail	Km	4.940
Retaining Wall	Km	8820
Streetlights		
Single arm	Nos	39
Double arm	Nos	109

Type furniture	Unit	Quantity
High mast	Nos	6

Metal beam crash barrier

Metal beam crash barriers of 36.020 km have been installed along the project stretch on the shoulder side and are being well-maintained. A list of metal beam crash barrier is enclosed in **Annexure V**.

Figure 3-5: Metal beam crash barrier (MBCB) along the project stretch

Overhead & Cantilever Gantry boards

Overhead Gantry and Cantilever Gantry boards are provided at the Project Stretch. They were found in really good condition. A list of Overhead & Cantilever Gantry boards is enclosed in **Annexure VI**.

Figure 3-6: Overhead & Cantilever Gantry boards

Pedestrian guard rail

Pedestrian guard rails of 4.940 km have been provided at the Project Stretch in urban areas. They were found in really good condition. A list of pedestrian guard rail chainages is enclosed in **Annexure VII**.

Figure 3-7: Pedestrian guard rail

Retaining wall

Retaining wall of 8.820 was provided along the project stretch. It is provided at sand dune cutting locations. The list of retaining wall chainages along the project stretch are enclosed in **Annexure VIII.**

Figure 3-8: Retaining wall

Highway Lighting

Highway lighting such as single arm, double arm, and high mast lights have been provided along the project stretch, which includes main carriageway, service roads, toll plazas, bus bay, truck lay bye etc. As per site observations, streetlights provided along the project stretch are in good condition. The list of streetlights installed along the project stretch are enclosed in **Annexure IX.**

Figure 3-9: Highway lighting

3.6 Project facilities

Following are the details of project facilities along the project stretch,

Table 3-2: List of project facilities

Type facility	Unit	Quantity
Bus shelter with bay / Bus shelter without bay	No's	70 / 1
Truck lay bye	No's	2

Bus bays/shelters

Bus bays along with bus shelters are provided at 70 locations along the Project stretch. All are found in good condition. The list of bus bays /shelters installed along the project stretch are enclosed in **Annexure X.**

Figure 3-10: Bus bays / shelters

Truck lay bye

Truck Lay bye has been provided along the project stretch with toilet blocks at 2 locations.

Figure 3-11: Truck Lay bye

3.7 Toll Plaza and Toll Collection Systems

There are 3 toll plazas present in the entire stretch namely Gangajali toll plaza (TP-1), Barsalpur toll plaza (TP-2) and Sawra toll plaza (TP-3). The Toll Collection System is installed at the toll plaza and is provided by Qualix Information System Private Limited in the year 2023 at TP-1 and in the year 2022 at TP-2 and TP-3.

Each toll plaza consists of 2 lanes. All lanes are installed with ETC equipment. The view of the toll plazas is shown in the figures below.

Figure 3-12: Gangajali and Barsalpur Toll plaza.

Figure 3-13: Sawra Toll Plaza and Toll Building

3.7.1 Lane Equipment

Following lane hardware and equipment are installed at each toll plaza:

- RFID ETC Transceiver
- Lane Controller with Industrial PC
- AVC Sensors
- Automatic Lane Barrier (ALB)
- Lane Traffic Light (LTL) and User Fare Display (UFD).
- License Plate Image Capture Camera (LPIC).
- Toll Booth Equipment.

3.7.1.1 RFID ETC Transceiver

- RFID ETC Transceiver reads tags installed on the windshield of vehicles and ETC RFID transceiver near Pay-axis-mounted over booth container.
- The ETC system is present in 2 Lanes at TP-1, TP-2 and TP-3.
- Zebra Brand ETC Readers are installed at all 3 toll plazas.

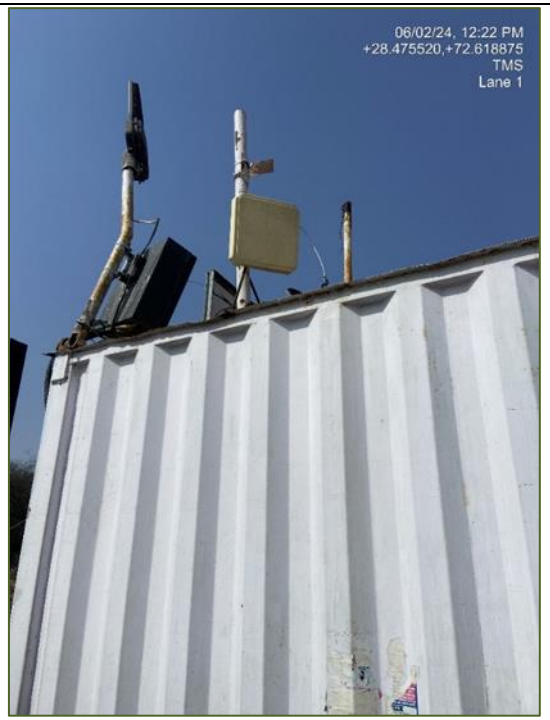


Figure 3-14: RFID Reader.

3.7.1.2 Lane Controller with Industrial PC

- Toll Lane Controller is located within the electronic enclosure placed inside the booth container which is connected to the common server and is capable of independent storage of data.
- TLCs are installed in 2 lanes at all 3 toll plazas. Each TLC consists of a motherboard, loop detector,6 port switch and SMPS etc. Each TLC has the specification of 4GB RAM and 1TB HDD with Linux OS installed.

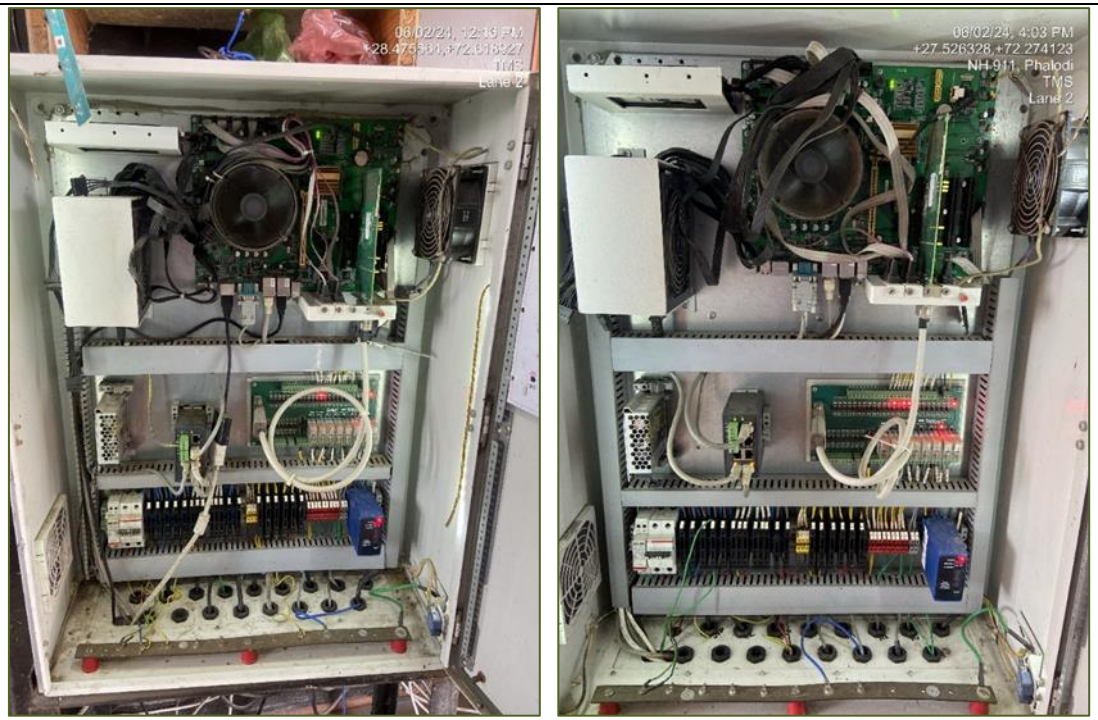


Figure 3-15: TLC at TP-1&3.

3.7.1.3 Automatic Vehicle Classification (AVC) Sensors

The AVC equipment is installed in 2 lanes at TP-1, TP-2 and TP-3. The AVC utilized height sensors and axle sensors at all 3 toll plazas.

Figure 3-16: AVC.

3.7.1.4 Automatic Lane Barrier

Boom barriers are installed in 2 lanes at all 3 toll plazas and have a working time of 0.6 s.

Figure 3-17: Boom Barrier.

3.7.1.5 Lane Traffic Light (LTL) and User Fare Display (UFD)

Lane Traffic Light (LTL) is used to instruct vehicles to stop or pass through the lane. The LTL is RED when the toll collector is expecting the vehicle at the booth. After the transaction is done, the LTL turns Green to instruct the vehicle to pass through the lane. The User Fare Display is a part of electronic toll collection equipment located at the toll booth. It is a mini variable message sign (VMS) made of Light Emitting Diodes (LED). Theuser fare display is used to display the toll fare that is due and that must be paid by the motorist and the classification of vehicle selected by the collector.

LTL and UFD are installed in 2 lanes at TP-1, TP-2 and TP-3.

Figure 3-18: LTL and UFD.

3.7.1.6 License Plate Image Capture Camera (LPIC)

- License Plate Image capture camera is installed on a pole facing incoming vehicle to capture the image of the vehicle number plate.

Figure 3-19: LPIC camera.

3.7.1.7 Toll Booth Equipment

Toll Booth Hardware / Equipment provided are:

- Toll Collector Display (Operator Monitor)
- Normal Keyboard.
- Receipt Printer.
- Booth Camera.

- The operator monitor termed as Toll Collector Display (TCD) is located on the toll collector's desk. It is the system's interface to the toll collector, to display the status of transactions and status of the lane peripherals.
- The keyboard on the toll terminal is a normal keyboard for Registration of toll operations.
- Thermal Printers are installed at the toll booths to print tickets.
- One Booth camera is installed at TP-3.
- Toll booth equipment is installed in 2 lanes at TP-1, TP-2 and TP-3.

Figure 3-20: Booth equipments.

Figure 3-21: Cameras at TP-3

3.7.2 Plaza Equipment

3.7.2.1 TMS Server

- Each toll plaza has one server with 24 channel switch, Firewall, and broadband internet connectivity.
- The server is HP ProLiant micro server Gen 10 plus with the specification of 16GB RAM and 3TB HDD.

Figure 3-22: Server.

3.7.2.2 Workstations in Control Room.

Each toll plaza has one workstation with 4 GB RAM and 1 TB HDD with windows 7 OS installed. Workstation is placed inside the booth container.

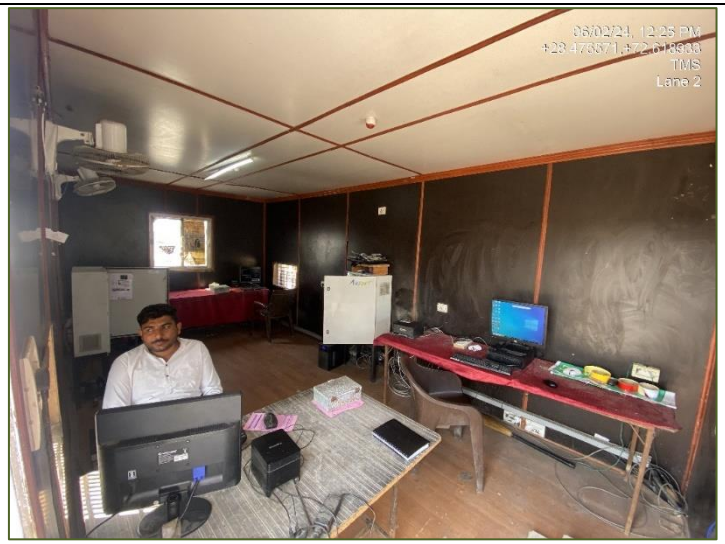


Figure 3-23: Booth Container

3.7.2.3 UPS

Following observations were made at toll plaza.

- KVA UPS is present in each lane at all 3 toll plazas.

Figure 3-24: UPS.

Chapter 4
REVIEW OF STRUCTURES

CHAPTER 4. REVIEW OF STRUCTURES

4.1 Structural investigations

Review of structures inventory and detailed condition survey of structures are the essential requirements for preparation of estimates for Capex and also for O & M cost for highway structures. Keeping in view of importance of this task, review of inventory and conducting visual condition survey were carried out as per procedure and guidelines prescribed in IRC: SP:35 bridge engineers. The details of condition survey of structures were furnished below.

4.1.1 Visual Condition Survey

Salient features for which data is collected as part of conditional survey are in accordance with IRC: SP: 35 Proforma. Main features recorded as part of detailed condition survey are listed below.

- Expansion joints filled with silt and debris in the expansion gap at a few structure locations.
- Visible honeycombs on the concrete surfaces at a few structure locations.
- Leaching observed on the soffit of deck slab at a few structure locations.
- Left out rebars in the construction joints and wall lifts at a few structure locations.
- Protection works missing in a few structures.
- Overall structures are in sound and satisfactory condition. However, some treatment has been suggested based on our observations and are being done under the routine maintenance works.

4.2 General

Details of various types of structures as per site inventory survey are furnished below,

Table 4-1: List of structures

S. no.	Type of Structure	As per Schedule-A	As per site inspection	Remarks
1	Minor Bridges	06	05	01 no descope
2	VUP	03	03	
3	Box Culverts	107	107	
4	Pipe Culverts	24	24	
5	Syphon Pipe Culverts	54	54	
Total		**194**	**193**	

The condition survey of all structures was conducted by a team of bridge experts through visual inspection from 6th February 2024 to 8th February 2024. The detailed condition of all structures with necessary repair and rehabilitation measures is provided in subsequent sections.

4.3 Minor Bridges:

There are five minor bridges on the project stretch. The cost for repair and rectification has been factored in the O&M estimation and the Concessionaire has taken up the rectification works. Structures are found in sound and satisfactory condition.

Detailed condition of bridges based on our condition survey and necessary repair and pending maintenance works are given below,

Table 4-2: Existing condition and required repairs /maintenance works for minor bridges

S. no.	Chainage, km	Span Arrangement, m	Total Length, m	Side	Condition of Structure	Proposed repair and pending maintenance works
1	16.167	1 x 10.00	10.00	Single Bridge (2 lane)	1. There is no expansion gap provided in between dirt wall and deck slab at A1 and A2 sides. 2. Elastomeric bearings were completely buried/covered with cement mortar packing. 3. Strip seal expansion joints are buried under bituminous layers. 4. Cracks are observed on the dirt wall at A1 and A2 sides.	1. Excess laid concrete to be chipped and required gap to be provided in between dirt wall and deck slab. 2. Cement mortar shall need to be removed around the bearings and make sure that bearings are in visible condition. 3. Existing expansion joint shall be dismantled and need to be refixed matching with existing BC levels and also strip seal elastomer shall be replaced with new one. 4. Cracks shall be sealed with epoxy pressure grouting.

S. no.	Chainage, km	Span Arrangement, m	Total Length, m	Side	Condition of Structure	Proposed repair and pending maintenance works
					5. End recess portion in the PSC girders were left out without filling concrete after post tensioning. 6. 7. During the inspection, it was noticed that repair work on the deck slab was recently completed.	5. End recess portion shall be filled with micro concrete to protect the PSC cables.
2	18.855	1 x 7.00	7.00	Single Bridge (2 lane)	1. Approach slab settlement was observed slightly A2 side. 2. Few cracks were observed on the crash barrier.	1. Approach slab settlement to be rectified by bituminous overlay. 2. Cracks shall be sealed with epoxy pressure grouting.
3	82.622	1 x 6.70	6.70	Single Bridge (2 lane)	1. Approach slab settlement was observed slightly at A1 side.	1. Approach slab settlement to be rectified with bituminous overlay.
4	121.244	1 x 11.00	11.00	Single Bridge (2 lane)	1. Elastomeric bearings were completely buried/covered with cement mortar packing. 2. Strip seal expansion joints were buried under bituminous layers.	1. Cement mortar shall need to be removed around the bearings and make sure that bearings are in visible condition. 2. Existing expansion joint shall be dismantled and need to be refixed matching with existing BC levels and also strip seal elastomer shall be replaced with new one.
5	138.810	3 x 3	9.00		Descope	
6	139.474	1 x 40	40.00	Single Bridge (2 lane)	1. Approach settlement was observed on both A1 and A2 sides. 2. Edge angles of the strip seal expansion joints were not in same level at both A1 and A2 sides. 3. Strip seal elastomers were missing in the expansion joints.	1. Settlements shall be rectified with bituminous overlay. 2. Strip seal expansion joints shall need to be refixed in such way that both edge angles of the joint are in line and level matching with the adjacent BC level for smooth riding quality. 3. Strip seal elastomer shall need to be provided in the expansion joints in order to avoid water leakage on to concrete members.

Figure 4-1: Condition of Minor Bridges

4.4 VUP

There are three VUPs in the project stretch. The cost for repair and rectification has been factored in the O&M estimation and the Concessionaire has taken up the rectification works. Structures are found in sound and satisfactory condition.

Detailed condition survey, necessary repair and pending maintenance works for all the VUP's along the project stretch are given below,

Table 4-3: Existing condition and required repairs /maintenance works for VUP

S. no.	Chainage, km	Span Arrangement, m	Total Length, m	Side	Condition of Structure	Proposed repair and pending maintenance works
1	90.910	1 x 16.78	16.78	LHS	1. Drainage holes were missing in the crash barrier bottom.	1. Drainage holes shall be provided, and PVC vertical down pipes shall be provided for safe discharge of water.
				RHS	1. Drainage holes were missing in the crash barrier bottom.	1. Drainage holes shall be provided, and PVC vertical down pipes shall be provided for safe discharge of water.

S. no.	Chainage, km	Span Arrangement, m	Total Length, m	Side	Condition of Structure	Proposed repair and pending maintenance works
2	92.805	1 x 25.25	15.25	LHS	1. Drainage holes were missing in the crash barrier bottom.	1. Drainage holes shall be provided, and PVC vertical down pipes shall be provided for safe discharge of water.
				RHS	1. Drainage holes were missing in the crash barrier bottom. 2. Honeycombing was observed at soffit.	1. Drainage holes shall be provided, and PVC vertical down pipes shall be provided for safe discharge of water. 2. Distressed location shall be rectified with epoxy grouting.
3	139.700	1 x 13.85	13.85	LHS	1. Leaching was observed on the deck slab soffit. 2. Drainage holes were missing in the crash barrier bottom.	1. Leaching surface shall be sealed with epoxy pressure grouting. 2. Drainage holes shall be provided, and PVC vertical down pipes shall be provided for safe discharge of water.
				RHS	1. Drainage holes were missing in the crash barrier bottom.	1. Drainage holes shall be provided, and PVC vertical down pipes shall be provided for safe discharge of water.

Figure 4-2: Condition of VUPs

4.5 Box Culverts

There are 185 Culverts on the project stretch out of which 107 nos. were box culverts, 24 nos. were pipe culverts and 54 nos. were syphon type pipe culverts. The cost for repair and rectification has been factored in the O&M estimation and the Concessionaire has taken up the rectification works. Structures are found in sound and satisfactory condition.

Common defects and / or pending maintenance works observed in condition survey, necessary repair and pending maintenance works for all the box culverts along the project stretch are given below,

Table 4-4: Existing condition and required repairs /maintenance works for culverts

S. no.	Type of Culvert	No. of Culverts	Condition of Structure	Proposed repair and pending maintenance works
1	Box Culverts	107	Quadrant pitching was not provided in some culverts.	Quadrant pitching shall be provided.

S. no.	Type of Culvert	No. of Culverts	Condition of Structure	Proposed repair and pending maintenance works
2	Pipe Culverts	24	Cracks are observed in head walls at some culverts.	Cracks shall be sealed with epoxy pressure grouting.
3	Syphon /Pipe Culverts	54	Water leakage was observed in syphon head walls in few of the culverts.	Leakage areas shall be sealed with epoxy pressure grouting.

Figure 4-3: Condition of Box Culverts

Chapter 5
CONDITION ASSESSEMENT OF EXISTING PAVEMENT

CHAPTER 5. CONDITION ASSESSMENT OF EXISTING PAVEMENT

To evaluate the existing pavement condition of a Project Stretch, investigations are to be carried out on the field to collect data from the field. The collected data is processed and analysed to obtain complete information on the pavement condition.

5.1 Pavement Condition Assessment for Technical Due Diligence

As a part of technical due diligence, the different investigations performed on the Project site are listed below.

- Assessment of Pavement Condition based on Visual Condition Survey

Based on the visual condition survey, the type of distress, its quantity, and severity for each Stretch are obtained. The same is used to evaluate the present condition of pavement, which classifies pavement conditions ranging from 'Distress' to 'Good'.

The pavement investigation studies carried out on the Project Stretch from 07th February to 09th February 2024 as a part of technical due diligence and their outcomes are detailed in the sections below

5.2 Review of Concession Agreement

As per Schedule K of the Concession Agreement, the Concessionaire shall repair and rectify the defects and deficiencies as specified below

Table 5-1: Major maintenance criteria as per CA

S. No	Nature of Defect or Deficiency	Time limit for Repair/Rectification
1	Roughness value exceeding 2750 mm in a stretch of 1km (as measured by a standardized rough meter/bump integrator)	180 Days
2	Cracking in more than 5% of road surface in a stretch of 1 km	30 Days
3	Rutting exceeding 10mm in more than 2% of road surface in a stretch of 1km (measured with 3m straight edge)	30 Days

5.3 Key Site Visit Observations

Few observations made during the site visit by the pavement investigation team are as follows,

- Majority of the Pavement condition was observed to be good on RHS of the project stretch.
- Majority of the Pavement condition was observed to be good on LHS of the project stretch.
- Patch work was observed at very few locations along the project stretch.
- Approach settlement was observed at a few locations.
- Due to high average annual pavement temperature during summer, bleeding with rutting was observed at a few locations.

Based on the observations made during the visual condition survey, the pavement condition is categorized into three categories 'Good', 'Fair', and 'Distress'. The visual survey data and summary of the pavement condition of Project Stretch is given below.

Table 5-2: Main Carriageway Pavement Visual Condition Survey Results

Condition	LHS		RHS	
	Length (m)	Length (%)	Length (m)	Length (%)
Good	206107	97%	207107	98%
Fair	3000	1%	3000	1%
Distress	3000	1%	2000	1%

As shown in table above all sections are found from good to fair condition. Observations made during the visual condition survey are presented in Annexure III

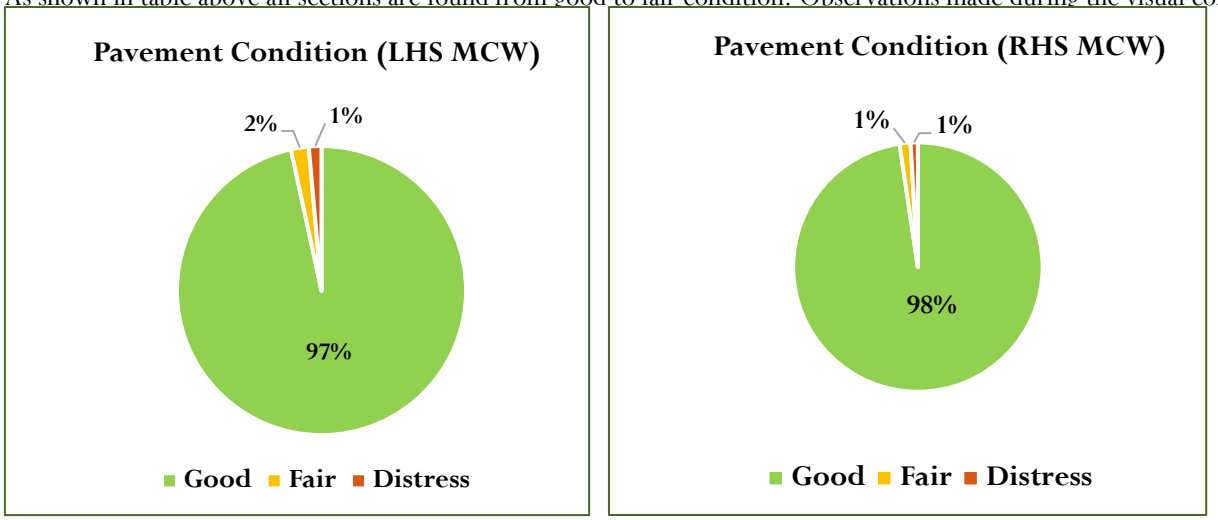


Figure 5-1: Pavement condition based on Visual condition survey

5.4 Pavement Roughness

Roughness is one of the important parameters for determining the functional characteristics of pavements. According to the American Society for Testing and Materials (ASTM), roughness is defined as "the deviations of a pavement surface from a true planar surface with characteristic dimensions that affect vehicle dynamics, ride quality, dynamic loads, and drainage, for example, longitudinal profile, transverse profile and cross-slope".

The roughness of road surfaces is measured using different equipment/techniques such as rod and level survey, dip stick profiler, profilographs, response type road roughness meters, and profiling devices.

In India, the roughness is measured using the fifth wheel bump integrator (developed by CRRI) and is reported as Unevenness Index (UI) in mm/km. In this report, Roughness is measured using an NSV profilometer on 13th October 2023, and a summary of the results are presented below:

Table 5-3: Summary of the Roughness values using NSV

Roughness Criteria		LHS		RHS	
		Length (m)	Length (%)	Length (m)	Length (%)
Good	<1800	203307	96%	203397	96%
Fair	1800-2400	8800	4%	8710	4%
Distress	>2400	0	0%	0	0%

Chapter 6
ROAD SAFETY ASSESSMENT ALONG THE PROJECT STRETCH

CHAPTER 6. ROAD SAFETY ASSESSMENT ALONG THE PROJECT STRETCH

6.1 General

This chapter presents general road safety concerns observed along the Project Road (Khajuwala to Poogal and Poogal to Baap) and improvements suggested to address the same.

6.2 Site visit

Road Safety along the highway depends upon the condition of various components of the highway, such as coordination between horizontal and vertical alignment, provision and placement of road furniture, intersection geometry, availability of adequate sight distance, night-time visibility along the highway, etc. It is essential to understand all these aspects of the highway from the point of view of the safety of each type of road user. The purpose of this assignment is to understand the road safety worthiness of Project Road and quantify road furniture items that are required as per the provisions of the Concession Agreement (CA). The report also summarizes high-risk safety concerns that persist for a reasonable length along the Project Road that helps improve the safety of road users upon implementation. It may be noted that, a few minor observations that are part of regular O&M activities have not been quantified in this report and geometrical improvements along with blackspots are not reviewed as part of this assignment. The scope has been constrained keeping in view the operational status of Project Road and the focus is largely on the major safety concerns and deviations from CA provisions in road furniture, if any.

The Safety Team of CUBE Highways Technologies Pvt Ltd. visited the Project Road from 30th to 31st Jan 2024.

It may be noted that the Findings and Recommendations in this chapter are based on an independent inspection during a site visit along the Project Road and a review of available information/documents. This chapter mainly focuses on high-risk safety concerns and work zone-related issues along the Project Road, and any major geometrical improvements, or location-specific improvements are not covered. However, based on visual observations and safety requirements identified by the safety team during the site visit, the requirement for additional safety furniture in line with CA provisions has been broadly identified and presented in the report.

Along with manual observations, the entire Project Road is video graphed using Vehicle Video Recorder Driver's Eye Level Video, a snapshot of output obtained from the app view is shown below:

Figure 6-1: Snapshot-displaying output format of driver's eye-level video

As can be seen in the above image, the Vehicle Video Recorder records the following details along with the video:

- Video recording (front view – Driver's Eye Level View)
- Location of Video on the Google Maps (along with coordinates of the location)
- Speed of the Recording Vehicle, in km/hour

6.3 Review of Project Documents and Communications related to Road Safety aspects

The following documents have been reviewed as a part of the Road Safety Assessment.

Table 6-1: Review of Project Documents and Communications related to road safety aspects

Document	Broad comments from Road Safety aspects
Concession Agreement (CA) - Signed on 28/09/2018 *(Concessionaire – M/s Gawar Khajuwala BAP Highway Pvt. Ltd)*	• Clauses and warrants of various facilities along the Project Road, applicable manual and specifications, deviations from specifications manual, etc., are reviewed. • The Project Road has been developed as per the applicable manual – IRC: SP:73-2015. • All furniture items are to be provided in accordance with the applicable manual.
Appointed date, and COD correspondences	**Appointed date:** As per e-file 3918, the appointed date of the Project is declared as 22-05-2019.

Document	Broad comments from Road Safety aspects
	COD: As per Letter No. TPFSITC/NHAI/RAJ/KPB/2021-22/2259; COD of Project Road as per Clause 14.2 has been received on 30/10/2021.
Plan & Profile, TCS, COS, and approved drawings	• TCS and Plan & Profile drawings have been received and reviewed with respect to CA provisions. However, as mentioned earlier, location-specific/Black Spots-related geometrical aspects are not studied as part of this assignment.
Accident Data	• Accident data for previous years (2019-2022) has been reported and the same has been summarized in further sections of the report

6.4 Accident data analysis

Accident data was received for the last four years from 2019 to 2022. Details like chainage, nature, cause etc of accidents are not provided in the report. A table summarizing year wise total accident have only been provided in the report and the same is presented below:

Table 6-2: Summary of Accident Data from 2019 to 2022

S. No.	Year of accidents	Total Accidents	Fatal Accidents	Percentage Fatality	Remarks
1	2019	5	5	100%	The provided accident data doesn't address the accident details as per NHAI format such as nature and cause of the accident, affected persons, road features, direction, and time of the accident etc. Furthermore, it does not include information on the types of accidents, except for fatal accidents.
2	2020	16	12	75%	
3	2021	19	12	63%	
4	2022	19	12	63%	
Total		**59**	**41**	**69%**	

From the above table it can be inferred that of total accidents occurring on the project stretch, about 70% of the accidents are fatal.

Chapter 7
OPERATION & MAINTAINEANCE COST

CHAPTER 7. OPERATION AND MINTENANCE COST

7.1 General

This Chapter presents details on the O&M expenditure to be incurred. The expenses are divided into four heads.

- Routine Maintenance Expenses to maintain the asset to the standards set forth in the Concession Agreement.
- Major/ Periodic Maintenance Expenses
- Operating Expenses

7.2 Estimation of Operation & Maintainance cost

The Routine Maintenance activities related to pavement include pothole repair, crack sealing, shoulder repair, drain maintenance, renewal of road markings, maintenance of cross drainage works etc. A before-hand estimate of repairs to be carried annually, must be determined to calculate the anticipated routine maintenance cost of the Project. Most of the annual routine maintenance activities are estimated based on experience and the past data of the Project as these activities varies Project to Project and there are no hard and fast rules to obtain exact quantity.

Routine maintenance cost for this Project is summarized in next section of Cost Estimates. The list of items considered in routine maintenance are summarized in the table below,

Table 7-1: List of Items Considered in Routine Maintenance Cost Estimate

S. No	Description of Item
1	**HIGHWAY**
	Flexible Pavement
	▪ Potholes ▪ Cracks ▪ Rutting/Depression/Settlement ▪ Ravelling/Stripping ▪ Re-surfacing
	Rigid Pavement

S. No	Description of Item
	▪ Slab Replacement ▪ Crack Sealing ▪ Ravelling/honeycombing, scaling, Polished Surface
	Hard/Earth shoulders, side slopes
	▪ Edge drop at shoulders ▪ Blading/reshaping to restore proper slopes and sides so as to maintain the standard formation width ▪ Rain cuts/gullies in slope ▪ Repairs of Stone Pitching/Turfing
2	**STRUCTURES**
	Superstructure of Bridges
	▪ Cracks ▪ Temporary Measures ▪ Permanent Measures ▪ Spalling / Scaling
	Foundation of Bridges
	▪ Scouring and /or Cavitation
	Piers, abutments, return walls and wing walls of bridges
	▪ Cracks and damages including settlement and tilting
	Joints in bridges
	▪ Loosening and malfunctioning of joints
	Other items relating to bridges

S. No	Description of Item
	▪ Gathering of dirt in bearings and joints or clogging of spouts, weep holes and vent-holes ▪ Damage or deterioration in parapets and handrails ▪ Rain-cuts or erosion of banks of the side slopes of approaches ▪ Damage to wearing coat ▪ Damage or deterioration in approach slabs, pitching, apron, toes, floor or guide bunds ▪ Growth of vegetation affecting the structure or obstructing the waterway
3	**ROAD FURNITURES, SIGNAGES AND PAVEMENT MARKING**
	▪ Repair to road signs -damage to shape or position; Poor visibility or loss of retro-reflectivity ▪ Replacing/installing delineators ▪ Replacing uninstalling delineators & all type of road sign ▪ Repairs MBCB ▪ Replacing of MBCB /New jersey crash barrier ▪ Repairs to Handrails /Pedestrian guard rails /flyover railings etc. ▪ Replace Handrails /Pedestrian guardrails/flyover railings etc. ▪ Fixing of distance measurement stone ▪ Hectometre stones ▪ Kilometre stones ▪ 5th Kilometre stones ▪ Boundary stones ▪ Painting ▪ Hectometre stones ▪ Pavement Marking ▪ Hot applied thermoplastic compound ▪ Painting kerb with synthetic enamel paint
4	**MISCELLANEOUS ITEMS**
	Street Lighting, Electrical systems repair and maintenance etc.

The routine maintenance expenses to maintain the asset to the standards set forth in the Concession Agreement are given in the table below.

Table 7-2: Routine maintenance cost of the Project

S. No.	Particulars	Frequency	Cost including GST (Cr.)	Remarks
1	**Routine Maintenance Cost**	**Annual**		
	Highway		1.98	
	Structures		0.43	
	Road Furniture, Signage & Pavement marking		1.08	
	Project Facilities		0.07	
	Total RM cost		**3.56**	

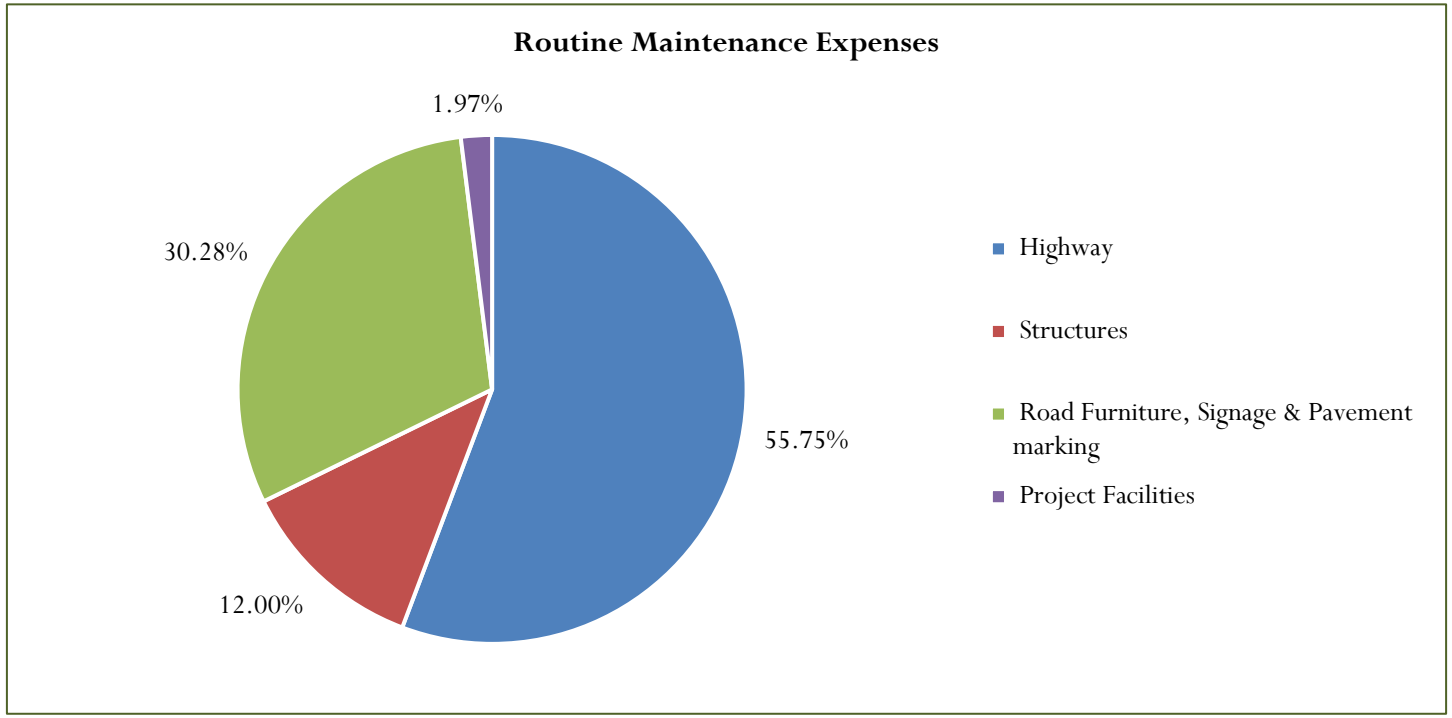


Figure 7-1: Breakup of Routine Maintenance

Table 7-3: Operational Expenditure of the Project for the Base Year FY 25

The calculation of operational expenditure for the base year FY 25 is given below:

S. no.	Description	Manpower	Annual Exp. (in Lakhs)
A.1	SPV staff and salaries	14.75	68.5
A.2	Tolling Operations Services_Outsourced	0	0.0
A.3	Security Services_Outsourced	10	39.8
A.4	Incident Management Services	71	303.8
A.5	RoW and Horticulture Works_ Manpower		88.9
A.6	Electricity and Diesel Charges		20.3
A.7	TMS/HTMS System Expenses		32.2
A.8	Office Operating Expenses		4.9
A.9	Vehicle Running Expenses		22.7
A.10	Professional Fee		73.1
A.11	Community Development		0.0
A.12	Communication Expenses		1.2
A.13	Conveyance Expenses		2.4
A.14	Insurance Expenses		80.2
A.15	IE Fees		60.0
A.16	Contingency	1%	8.0
	OPEX		**806.0**

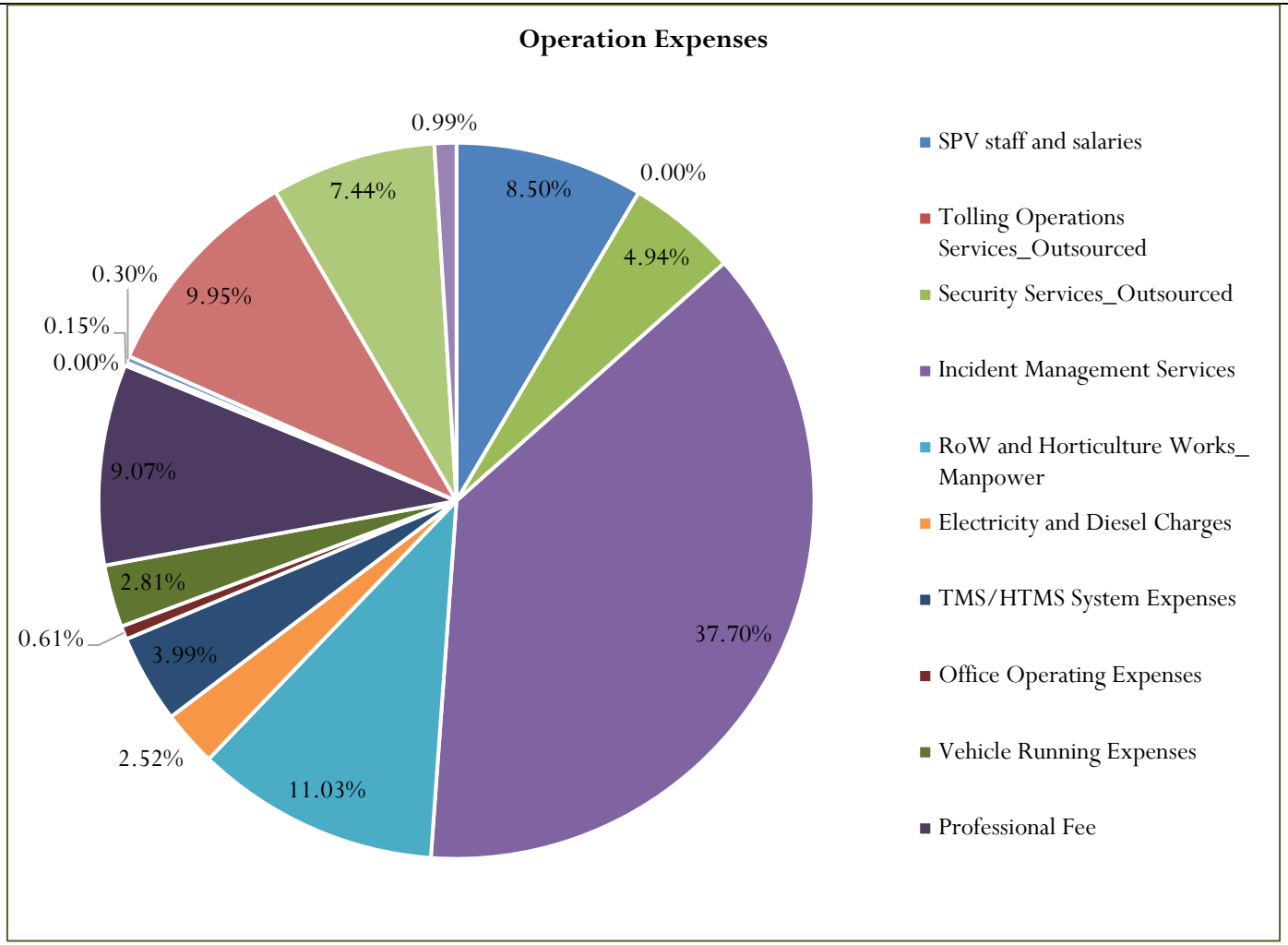


Figure 7-2: Breakup of Operation Cost

7.3 Major Maintenance Estimate

Cube Tech has considered 2 cycles for Major Maintenance. In cycle 1, for 40% of main carriageway BC overlay of 30 mm is considered and for 60% of main carriageway microsurfacing is considered and for service road microsurfacing is considered. In cycle 2, for main carriageway and service road BC overlay of 30 mm is considered.

The estimate for Major Maintenance activities of the Project Stretch is as detailed below:

Table 7-4: Major Maintenance Cost for MM Cycle 1

Major Maintenance - 1st Cycle					
S. No.	**Description**	**Unit**	**Qty**	**Rate**	**Amount**
1	Bituminous Concrete (VG - 40)	Cum	27,189.31	11,059	30,06,86,583
2	Tack Coat	Sqm	906310.34,4,0	14	1,26,88,345
3	Pavement Markings	Sqm	71,612.82	520	3,72,38,665
4	Kerb Painting	Sqm	6,315.00	90	5,68,350
5	Microsurfacing	Sqm	1394175.51,6,0	150	20,91,26,327
6	Earthen Shoulder	Cum	16,744.76	420	70,32,799
7	Miscellaneous and Contingencies (1%)				56,73,411
			Grand Total		**57,30,14,480**
			Grand Total Including GST (18%)		**67,61,57,086**
			Grand Total (In Cr)		**67.62**

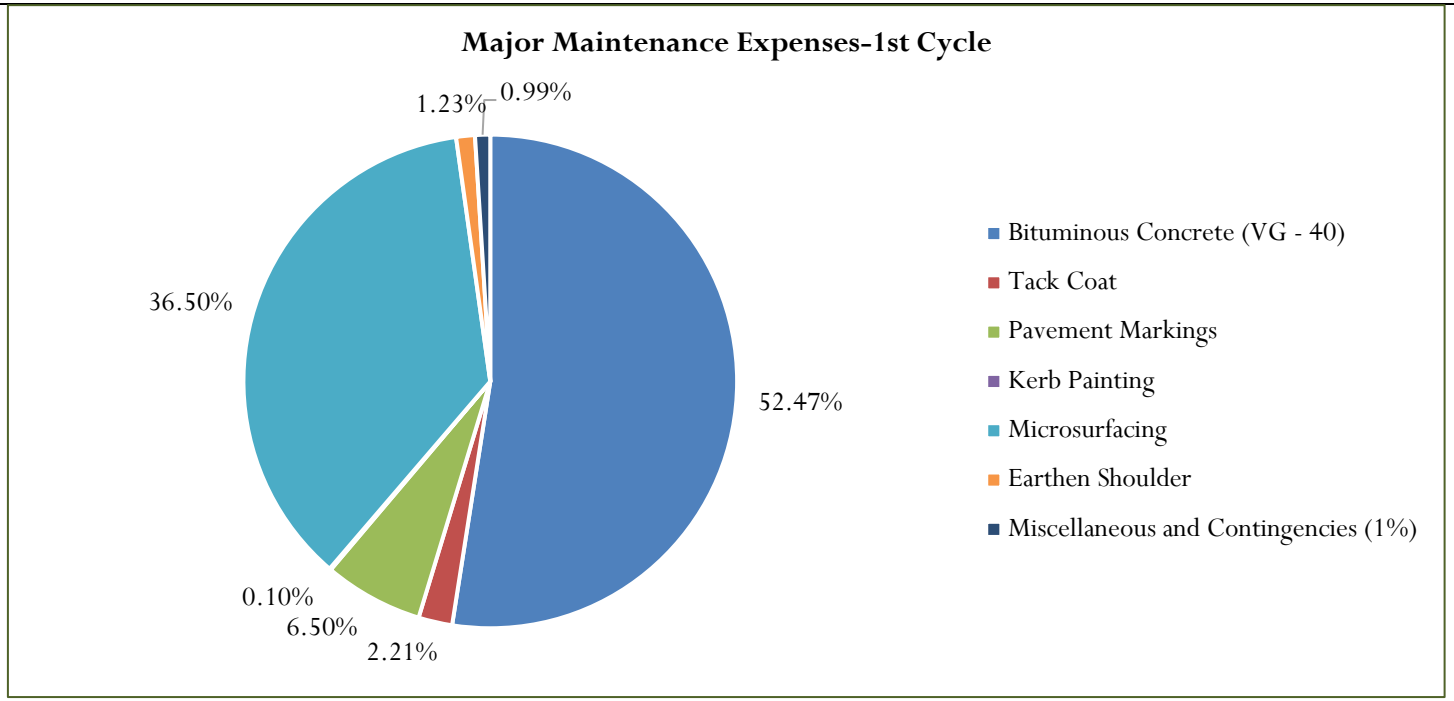


Figure 7-3: Breakup of Major Maintenance Expenses 1st Cycle

Table 7-5: Major Maintenance Cost for MM Cycle 2

Major Maintenance - 2nd Cycle					
S. No.	**Description**	**Unit**	**Qty**	**Rate**	**Amount**
1	Bituminous Concrete (VG - 40)	Cum	44,859.47	11,059	49,61,00,926
2	Tack Coat	Sqm	14,95,315.81	14	2,09,34,421
3	Pavement Markings	Sqm	71,612.82	520	3,72,38,665
4	Kerb Painting	Sqm	6,315.00	90	5,68,350
5	Earthen Shoulder	Cum	27,210.24	420	1,14,28,299
6	Miscellaneous and Contingencies (2%)	0	0.00	0	1,13,25,413
			Grand Total		**57,75,96,074**

Major Maintenance - 2nd Cycle					
S. No.	**Description**	**Unit**	**Qty**	**Rate**	**Amount**
			Grand Total Including GST (18%)		**68,15,63,367**
			Grand Total (In Cr)		**68.16**

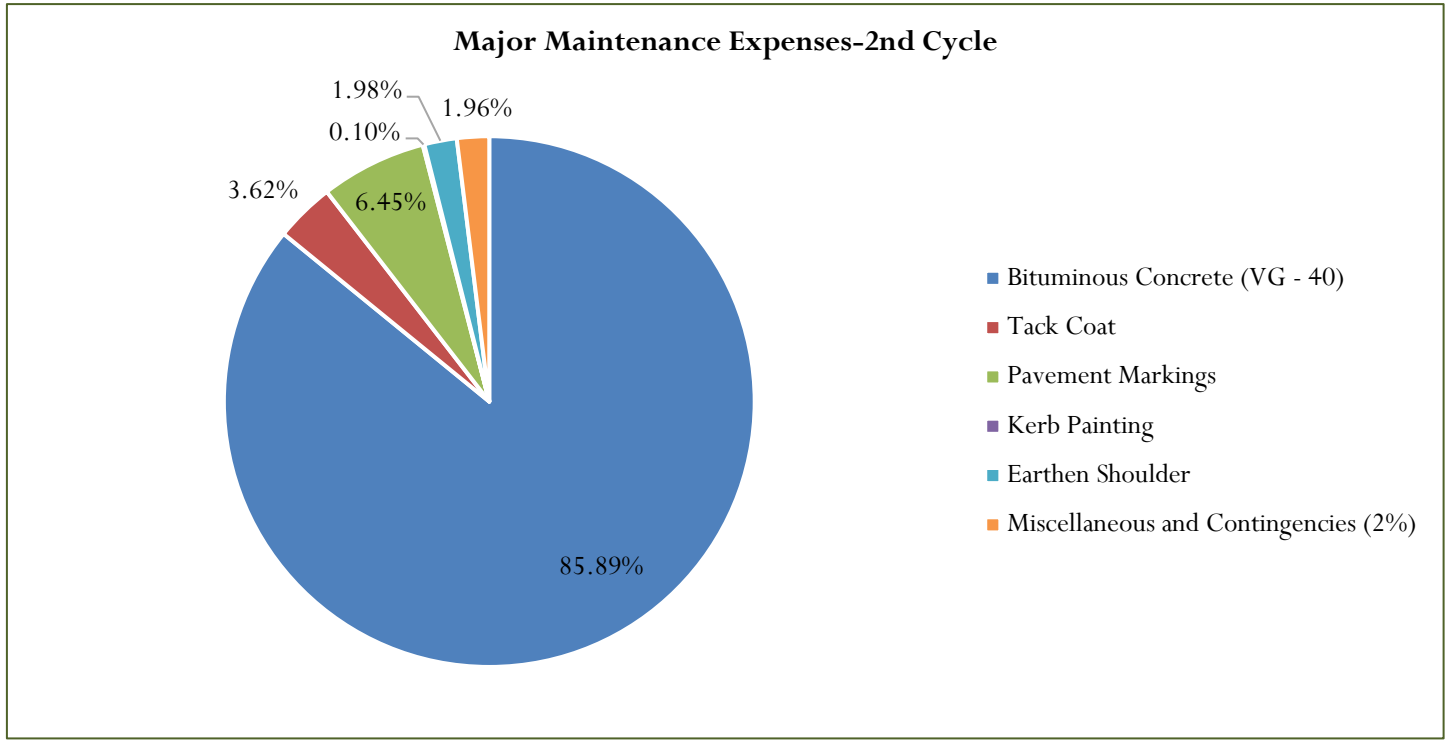


Figure 7-4: Major Maintenance Expenses 2nd Cycle

7.3.1 Major Maintenance expenses during O&M period

Based on the Cube Tech estimates, the total major maintenance expenses considering the escalation is 176.73 crores.

7.4 Projections of O&M Expenses

The O&M expenses for the entire Concession Period is presented in this section .

The following escalations are considered:

Table 7-6:Escalation Factors

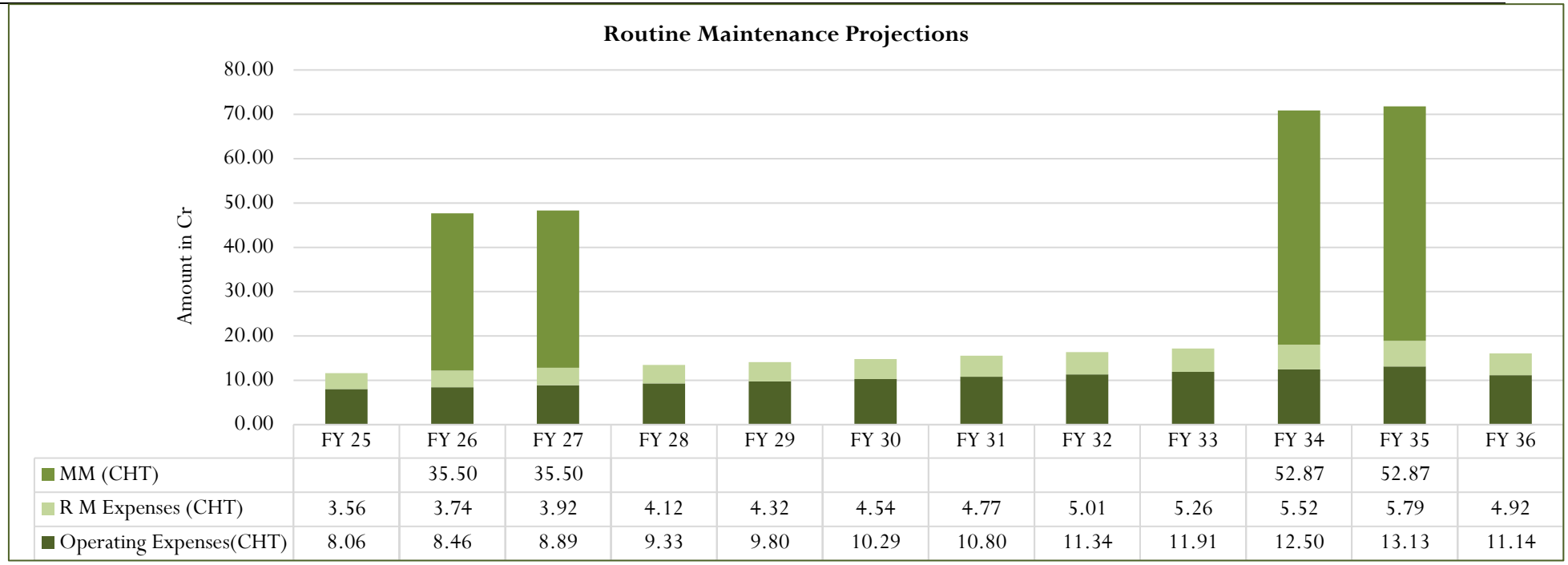
Items	Escalation
Operating Expenses	5.00%
Routine Maintenance	5.00%
Major Maintenance	5.00%

The Projections of total O& M expenses including Major Maintenance for 2 Cycles of the Project Company and CHT is given in the table below

Table 7-7: Projections of total O&M expenses of the Project during O&M period

Particulars	Total Expense (In Cr.)	Base-FY 25	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	FY 32	FY 33	FY 34	FY 35	FY 36
Operating Expenses (CHT)	**125.65**	8.06	8.06	8.46	8.89	9.33	9.80	10.29	10.80	11.34	11.91	12.50	13.13	11.14
R M Expenses (CHT)	**55.46**	3.56	3.56	3.74	3.92	4.12	4.32	4.54	4.77	5.01	5.26	5.52	5.79	4.92
MM (CHT)	**176.73**			35.50	35.50							52.87	52.87	
O&M and MM (CHT)	**357.84**		11.62	47.70	48.31	13.45	14.12	14.83	15.57	16.35	17.16	70.89	71.79	16.06

The graph for the total cost Projections of expenses during O&M period given by the Cube Highways Technologies is shown in the figure below.



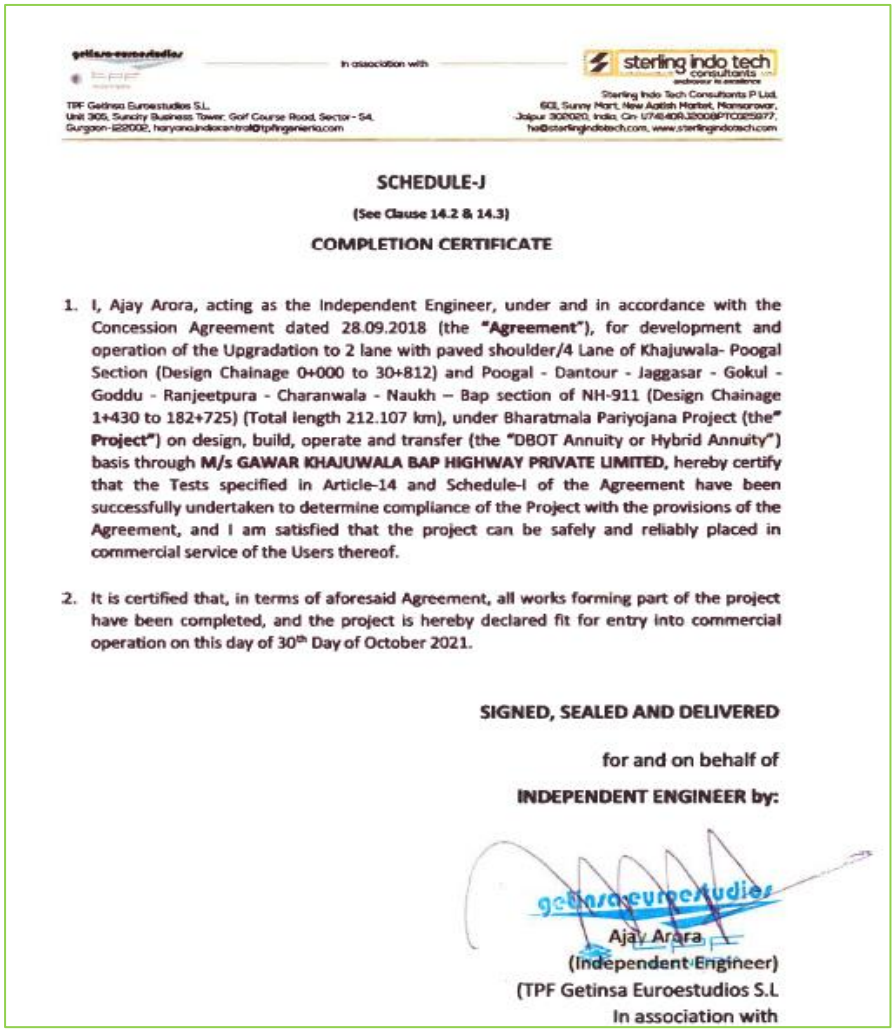
	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	FY 32	FY 33	FY 34	FY 35	FY 36
MM (CHT)		35.50	35.50							52.87	52.87	
R M Expenses (CHT)	3.56	3.74	3.92	4.12	4.32	4.54	4.77	5.01	5.26	5.52	5.79	4.92
Operating Expenses(CHT)	8.06	8.46	8.89	9.33	9.80	10.29	10.80	11.34	11.91	12.50	13.13	11.14

Table 7-8: O&M, RM and MM Expenses Projections

The total O&M cost including Major Maintenance estimated by the CHT is Rs.357.84 Cr.

ANNEXURES

Annexure I: Completion Certificate



In association with

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ho@sterlingindotech.com, www.sterlingindotech.com

SCHEDULE-J

(See Clause 14.2 & 14.3)

COMPLETION CERTIFICATE

1. I, Ajay Arora, acting as the Independent Engineer, under and in accordance with the Concession Agreement dated 28.09.2018 (the **"Agreement"**), for development and operation of the Upgradation to 2 lane with paved shoulder/4 Lane of Khajuwala- Poogal Section (Design Chainage 0+000 to 30+812) and Poogal - Dantour - Jaggasar - Gokul - Goddu - Ranjeetpura - Charanwala - Naukh – Bap section of NH-911 (Design Chainage 1+430 to 182+725) (Total length 212.107 km), under Bharatmala Pariyojana Project (the**" Project"**) on design, build, operate and transfer (the "DBOT Annuity or Hybrid Annuity") basis through **M/s GAWAR KHAJUWALA BAP HIGHWAY PRIVATE LIMITED**, hereby certify that the Tests specified in Article-14 and Schedule-I of the Agreement have been successfully undertaken to determine compliance of the Project with the provisions of the Agreement, and I am satisfied that the project can be safely and reliably placed in commercial service of the Users thereof.

2. It is certified that, in terms of aforesaid Agreement, all works forming part of the project have been completed, and the project is hereby declared fit for entry into commercial operation on this day of 30th Day of October 2021.

SIGNED, SEALED AND DELIVERED

for and on behalf of

INDEPENDENT ENGINEER by:

Ajay Arora
(Independent Engineer)
(TPF Getinsa Euroestudios S.L
In association with

Annexure II: List of service road along the Project Road

As per CA					As per site				
S. No.	Chainage From (Km)	Chainage To (Km)	Side	Length (km)	Chainage From (Km)	Chainage To (Km)	Side	Length (km)	Side
1	90+460	93+340	LHS	2900	90+450	92+560	BHS	2110	BHS
2	90+460	93+340	RHS	2900	92+560	93+000	BHS	440	BHS
3	117+460	118+260	BHS	800					
					139+650	140+000	BHS	350	BHS
		Total Length		**6600**		**Total Length**		**5800**	

List of drains along the Project Road

S. No.	Chainage From	Chainage To	Length m	Side
1	139+650	140+300	650	BHS
2	124+400	124+900	500	BHS
3	092+350	093+000	650	BHS
4	090+450	091+400	950	BHS
5	000+000	000+340	340	BHS
6	000+000	000+480	480	BHS
7	017+420	017+820	400	BHS
8	031+300	031+620	320	BHS

Annexure III: Pavement Distress Survey

A pavement condition survey gives an indication of the serviceability of the road pavement and is vital in deciding the maintenance activities. Some methods to conduct this survey are the Visual Condition Survey method (manual), Network Survey Vehicle (NSV) method, etc. However, Visual Condition Survey was conducted in this Project.

In a visual condition survey, the technical experienced staff makes a traverse along the project stretch, observing the different types of distresses on the pavement surface, and observations are made on each distress type.

Distresses on bituminous pavements include

- Cracks – Longitudinal, Transverse, and Alligator cracks
- Raveling
- Rutting
- Bleeding
- Potholes
- Patches

Repair and rectification cost of identified distresses have been considered in O&M estimations. These are routine maintenance work and cost of the same captured in Y-o-Y O&M and concessionaire is undertaking rectification of works. Observations made during the visual condition survey are detailed below.

Longitudinal Cracks

Structural cracks like longitudinal cracks develop parallel to the traffic direction and extend through the depth of the bituminous pavement layer, which can be bottom-up or top-down crack.

Longitudinal cracks were not observed at any location of the project Stretch.

Transverse Cracks

Structural cracks like transverse cracks develop perpendicular to the traffic direction and extend through the depth of the bituminous pavement layer.

Transverse cracks were observed near approach slabs at few locations of the project Stretch.

Figure: Transverse cracks

Alligator Cracks

Alligator cracking also referred to as fatigue cracking or crocodile cracking, refers to a pattern of asphalt damage that resembles the scales on an alligator's skin. The cracks form co-joined, irregular "blocks' that are often four-sided, such as rectangles, but they can also have more sides and, on occasion, as few as three sides.

Alligator cracks were observed at a few locations of the project Stretch.

Figure: Alligator Cracks

Raveling

Raveling is wearing away of the pavement surface due to loss of bitumen binder and dislodged aggregate particles. This distress indicates that either the bitumen binder has hardened appreciably, or a poor-quality mixture is present. In addition, ravelling may be caused by certain types of traffic, for example, tracked vehicles. Softening of the surface and dislodging of the aggregates due to oil spillage and weathering are also included under ravelling.

Raveling was mainly observed at bus bays of the project Stretch.

Figure: Ravelling

Rutting

A rut is a surface depression of pavement in the wheel paths, and pavement uplift may occur along the sides of the rut. Rutting stems from a permanent deformation in any pavement layers or subgrade usually caused by consolidated or lateral movement of the materials due to traffic load.

Rutting associated with bleeding was observed at a few locations of the project Stretch.

Figure: Rutting

Bleeding

A surface having a thin film of excess or free bituminous binder on it, which creates a shiny, glass like reflecting surface tending to become soft in hot weather and slippery in cold and wet weather, eventually developing low skid resistance is referred to as bleeding or fatty bituminous surface.

Bleeding was observed at very few locations of the project Stretch.

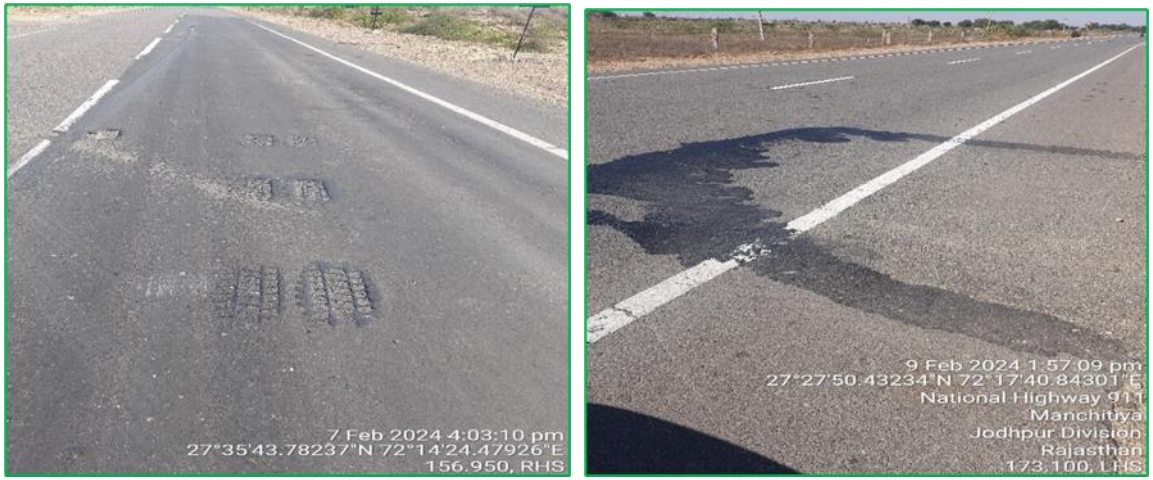


Figure: Bleeding

Potholes

Potholes are small (or big, based on severity) bowl-shaped depressions on the pavement surface. In general, potholes are formed in later stages of highly ravelled or cracked pavement surface resulting in bowl-shaped depressions.

Potholes were observed at only two locations of the project Stretch.

Patches

The patch is an area of the pavement which have been repaired or replaced by new material to remove a certain defect on the pavement. The patch is considered a defect no matter how well it is performing, and some roughness is associated with this type of distress.

Patches were observed at some locations of the project Stretch along MCW.

Figure: Patches

Annexure IV: List of junctions along the Project Road

Major Junctions As per CA				Major Junctions As per Site		
S. No.	Chainage (Km)	Type of intersection	Other features	Chainage (Km)	Side	Remarks
Urban Area or Poogal area to Dantour Rond						
1	0+000	T	Poogal	000+000	BHS	
Poogal to Bap				015+050	LHS	
2	31+600	Y	Dantour	031+750	BHS	
3	35+000	Y	Dantour	034+900	RHS	
4	50+040	T	Jaggasar	050+030	LHS	
5	90+910	Y	Corn	091+000	LHS	
6	92+800	Y	Gorti	092+850	LHS	
7	105+150	Y	Ranjeeipimi	105+400	RHS	
8	105+880	Y	Ranjeeipuru	105+800	RHS	
9	117+880	+		117+900	BHS	
10	121+335	T		121+300	BHS	
11	139+700	+	Bikampur	139+650	BHS	Under VUP
Khajuwala to Poogal						
12	000+000	+	Khajuwala	000+000	BHS	roundabout
13	028+000	Y	Bypass	028+750	BHS	

Minor Junctions As per CA				Minor Junctions as per site		
S. No.	Chainage (Km)	Side	Type of intersection	Chainage (Km)	Side	Remarks
	Urban Area of Poogal, Poogal to Dantour Road					
1	01+405	LHS	T	001+400	BHS	
Poogal to Bap						

Minor Junctions As per CA				Minor Junctions as per site		
S. No.	Chainage (Km)	Side	Type of intersection	Chainage (Km)	Side	Remarks
1	04+570	RHS	T	004+600	RHS	
2	05+230	LHS	Y	005+300	LHS	
3	09+110	LHS	T	009+100	LHS	
4	10+412	LHS	T	010+450	LHS	
5	10+495	LHS	T	010+550	LHS	
6	10+605	LHS	T	010+650	LHS	
7	11+166	RHS	T	011+200	RHS	
8	12+920	RHS	T	012+950	RHS	
9	13+050	RHS	T	013+080	RHS	
10	13+170	RHS	T	013+220	RHS	
11	14+653	LHS	T	014+700	LHS	
12	17+472	LHS	T			dirt road
13	17+715	RHS	T			canal adjacent
14	22+100	RHS	T	022+160	RHS	
15	22+625	RHS	T			dirt road
16	26+297	LHS	T	026+320	LHS	
17	26+460	BHS	+	029+500	BHS	
18	41+400	LHS	Y			not found
19	42+575	LHS	Y	042+670	BHS	
20	43+145	LHS	T			dirt road
21	47+240	RHS	Y	047+300	RHS	
22	47+275	LHS	Y	047+320	LHS	
23	53+000	RHS	T	053+050	RHS	
24	53+840	RHS	T	053+950	RHS	
25	56+055	BHS	+	056+020	BHS	
				056+400	LHS	

Minor Junctions As per CA				Minor Junctions as per site		
S. No.	Chainage (Km)	Side	Type of intersection	Chainage (Km)	Side	Remarks
26	50+100	RHS	Y			Major Jn
27	59+310	LHS	T	059+310	LHS	T Junction
28	61+020	RHS	T	061+020	RHS	
29	61+840	LHS	T	061+850	LHS	
30	63+150	BHS	+	063+200	LHS	
31	69+125	LHS	T	069+100	LHS	
32	71+610	LHS	T	071+650	LHS	
33	71850	RHS	T	071+900	RHS	Village Concrete Road
34	72610	RHS	T	072+600	RHS	
				073+900	BHS	
35	74330	RHS	Y	074+200	RHS	
36	75+365	RHS	Y	075+350	RHS	
37	82+690	BHS	+	082+650	BHS	
38	83+915	BHS	+	083+850	BHS	
39	88+545	LHS	T	088+500	LHS	
				092+000	LHS	
40	95+990	BHS	+	095+950	BHS	
41	97+225	LHS	T	097+250	BHS	
42	98+295	LHS	Y	098+300	LHS	T Junction
43	100+820	RHS	T	100+800	RHS	
44	119+965	LHS	Y	120+000	LHS	
45	123+035	LHS	T			No road
46	124+640	LHS	T	124+350	LHS	
47	125+130	LHS	T	125+550	RHS	
48	126+880	LHS	T	125+800	LHS	
49	127+440	RHS	Y	127+400	RHS	
50	133+165	LHS	T	133+100	LHS	

Minor Junctions As per CA				Minor Junctions as per site		
S. No.	Chainage (Km)	Side	Type of intersection	Chainage (Km)	Side	Remarks
51	135+845	LHS	T	135+750	LHS	
52	136+590	RHS	T	136+600	RHS	
53	137+425	RHS	T	137+350	RHS	
54	147+250	RHS	T	147+250	RHS	
				145+250	LHS	
55	148+700	LHS	Y	148+700	LHS	
56	155+755	RHS	T	156+600	BHS	
				157+000	RHS	
57	160+380	RHS	T	160+300	BHS	
				158+750	RHS	
58	160+370	LHS	T			
59	160+400	LHS	T	160+400	LHS	
60	160+840	BHS	+	160+750	BHS	
61	161+635	BHS	+	161+650	BHS	
62	163+240	LHS	Y	163+180	LHS	
63	16-1+070	LHS	+	164+020	LHS	
64	164+255	LHS	T	164+255	LHS	
				165+500	LHS	
65	167+180	LHS	Y	167+180	LHS	
66	167+230	RHS	T	167+280	LHS	
67	172+760	LHS	T	172+720	RHS	
68	173+000	RHS	T	172+950	RHS	
69	173+890	LHS	T	173+850	LHS	
Khajuwala to Bap						
1.	4+300	LHS	T	004+250	LHS	
2.	4+440	RHS	T	004+440	RHS	
3.	6+820	LHS	T	006+800	LHS	

Minor Junctions As per CA				Minor Junctions as per site		
S. No.	**Chainage (Km)**	**Side**	**Type of intersection**	**Chainage (Km)**	**Side**	**Remarks**
4.	9+090	LHS	T	09+050	LHS	
5.	13+160	LHS	T	013+120	LHS	
6.	15+098	LHS	T			Major Jn
7.	17+739	BHS	+	017+740	BHS	
8.	18+930	LHS	T			Canal road
9.	21+934	RHS	T	021+830	RHS	
Urban Area of Poogal, Khajuwala to Poogal						
1	30+506	LHS	Y	030+500	LHS	
2	31+300	LHS	T	031+300	LHS	Straight section Poogal

Annexure V: List of MBCB along the Project Road

S. No.	Chainage From (Km)	Chainage To (Km)	Length m	Total Length m	Side	Remarks
1	144+250	144+400	150	300	BHS	
2	143+650	144+030	380	380	RHS	
3	143+100	143+950	850	850	LHS	
4	143+100	143+350	250	250	RHS	
5	142+900	143+040	140	140	RHS	
6	141+800	141+900	100	100	RHS	
7	140+850	140+950	100	100	RHS	
8	139+500	139+600	100	200	BHS	
9	139+050	139+400	350	700	BHS	
10	137+450	137+650	200	200	RHS	50m gap
11	135+800	135+950	150	300	BHS	
12	134+500	134+700	200	400	BHS	
13	134+080	134+150	70	70	RHS	
14	133+840	133+950	110	110	LHS	
15	131+840	131+930	90	180	BHS	
16	126+800	126+900	100	100	LHS	
17	123+500	123+600	100	100	LHS	
18	121+920	122+100	180	180	RHS	
19	121+150	121+420	270	270	RHS	50m gap
20	121+150	121+470	320	320	LHS	50m gap
21	120+800	121+100	300	300	LHS	
22	119+060	119+170	110	110	LHS	
23	118+930	118+980	50	50	RHS	

S. No.	Chainage From (Km)	Chainage To (Km)	Length m	Total Length m	Side	Remarks
24	117+020	117+100	80	80	RHS	
25	116+460	116+600	140	140	LHS	
26	116+200	116+350	150	300	BHS	
27	115+750	115+900	150	150	RHS	
28	114+900	115+000	100	100	LHS	
29	113+250	113+450	200	400	BHS	
30	113+300	113+400	100	100	RHS	
31	112+750	112+950	200	400	BHS	
32	109+750	109+850	100	100	RHS	
33	108+150	108+700	550	1100	BHS	
34	107+500	107+550	50	50	LHS	
35	106+760	106+800	40	40	RHS	
36	106+100	106+300	200	200	RHS	
37	105+720	105+800	80	80	RHS	
38	105+400	105+420	20	20	RHS	
39	104+800	105+050	250	250	RHS	
40	102+800	103+050	250	250	RHS	
41	102+900	103+000	100	100	LHS	
42	102+250	102+350	100	100	LHS	
43	100+700	100+750	50	50	RHS	
44	095+200	095+350	150	150	RHS	
45	089+380	089+450	70	70	RHS	
46	088+200	088+300	100	200	BHS	
47	087+420	087+600	180	180	RHS	
48	087+450	087+550	100	100	LHS	

S. No.	Chainage From (Km)	Chainage To (Km)	Length m	Total Length m	Side	Remarks
49	086+550	086+900	350	350	RHS	
50	086+750	086+860	110	110	LHS	
51	086+250	086+300	50	50	RHS	
52	085+900	086+150	250	250	RHS	
53	085+900	086+100	200	200	LHS	
54	083+980	084+100	120	240	BHS	
55	084+420	084+500	80	80	LHS	
56	082+850	083+000	150	150	LHS	
57	082+400	082+500	100	200	BHS	
58	082+150	082+250	100	200	BHS	
59	082+150	082+300	150	300	BHS	
60	081+400	081+450	50	50	RHS	
61	080+940	081+200	260	260	RHS	
62	079+420	079+500	80	160	BHS	
63	079+200	079+300	100	100	RHS	
64	078+430	078+500	70	70	LHS	
65	077+500	077+650	150	300	BHS	
66	076+650	076+750	100	200	BHS	
67	076+420	076+500	80	80	RHS	
68	075+600	075+700	100	100	RHS	
69	074+950	075+100	150	150	LHS	
70	073+750	073+850	100	200	BHS	
71	073+550	073+650	100	200	BHS	
72	071+900	072+200	300	600	BHS	
73	071+950	072+050	100	200	BHS	

S. No.	Chainage From (Km)	Chainage To (Km)	Length m	Total Length m	Side	Remarks
74	068+800	069+150	350	350	LHS	
75	068+860	069+050	190	190	RHS	
76	066+250	066+300	50	50	LHS	
77	065+200	065+300	100	200	BHS	
78	064+250	064+600	350	700	BHS	
79	063+200	063+350	150	300	BHS	
80	062+200	062+300	100	100	RHS	
81	061+300	061+400	100	100	RHS	
82	059+550	059+650	100	200	BHS	
83	059+200	059+300	100	100	RHS	
84	059+500	059+600	100	200	BHS	
85	057+700	057+800	100	200	BHS	
86	055+100	055+650	550	550	RHS	80 m gap
87	055+050	055+150	100	100	LHS	
88	054+200	054+450	250	250	RHS	
89	053+870	053+950	80	80	LHS	
90	050+550	050+800	250	500	BHS	
91	049+250	049+500	250	250	RHS	
92	047+900	048+030	130	130	RHS	
93	047+900	048+000	100	100	LHS	
94	046+400	046+450	50	50	RHS	
95	045+150	045+300	150	300	BHS	
96	044+400	044+450	50	50	RHS	
97	044+250	044+350	100	200	BHS	
98	043+150	043+350	200	400	BHS	

S. No.	Chainage From (Km)	Chainage To (Km)	Length m	Total Length m	Side	Remarks
99	042+700	042+740	40	80	BHS	
100	041+580	041+650	70	140	BHS	
101	041+000	041+500	500	1000	BHS	
102	040+600	040+700	100	100	LHS	
103	040+300	040+400	100	100	RHS	
104	039+400	039+600	200	400	BHS	
105	036+400	036+650	250	500	BHS	
106	035+450	036+700	1250	1250	LHS	
107	035+600	036+700	1100	1100	RHS	
108	034+900	035+000	100	100	RHS	
109	012+980	013+180	200	200	RHS	
110	013+030	013+180	150	150	LHS	
111	017+940	018+000	60	120	BHS	
112	018+580	018+750	170	340	BHS	
113	018+860	018+900	40	40	RHS	
114	018+950	019+250	300	600	BHS	
115	020+900	020+950	50	50	RHS	
116	022+020	022+180	160	320	BHS	
117	022+550	022+720	170	340	BHS	
118	023+640	023+820	180	180	RHS	
119	023+900	023+980	80	80	LHS	
120	024+350	024+460	110	110	RHS	
121	024+620	024+700	80	80	RHS	
122	024+850	024+970	120	240	BHS	
123	025+100	025+210	110	220	BHS	

S. No.	Chainage From (Km)	Chainage To (Km)	Length m	Total Length m	Side	Remarks
124	025+650	025+850	200	200	LHS	
125	026+030	026+070	40	40	LHS	
126	026+800	026+840	40	80	BHS	
127	027+080	027+300	220	220	RHS	
128	027+180	027+300	120	120	LHS	
129	027+920	028+000	80	80	RHS	
130	028+220	028+400	180	360	BHS	
131	028+780	028+950	170	170	RHS	Straight section Poogal
132	029+600	029+700	100	100	LHS	Straight section Poogal
133	030+020	030+080	60	60	LHS	Straight section Poogal
134	030+150	030+250	100	100	LHS	Straight section Poogal
135			80	80	LHS	Urban Area Poogal
136	002+000	002+120	120	120	LHS	
137	002+350	002+450	100	200	BHS	
138	002+800	003+000	200	400	BHS	
139	003+600	003+750	150	150	RHS	
140	005+750	005+940	190	190	LHS	
141	008+550	008+640	90	90	LHS	
142	010+050	010+120	70	140	BHS	
143	010+650	010+800	150	300	BHS	
144	011+750	011+850	100	100	LHS	
145	011+800	011+850	50	50	RHS	
146	012+150	012+250	100	100	RHS	
147	012+600	012+700	100	200	BHS	
148	012+670	012+720	50	100	BHS	

S. No.	Chainage From (Km)	Chainage To (Km)	Length m	Total Length m	Side	Remarks
149	017+950	018+100	150	300	BHS	
150	020+450	020+840	390	780	BHS	
151	023+220	023+320	100	100	LHS	
152	023+450	023+750	300	300	RHS	
153	023+600	023+750	150	150	LHS	
154	024+420	024+630	210	420	BHS	
155	024+830	024+940	110	220	BHS	
156	025+560	025+950	390	390	LHS	
157	025+560	025+880	320	320	RHS	
158	026+800	026+880	80	80	RHS	
159	026+800	026+950	150	150	LHS	
160	027+200	027+300	100	200	BHS	
161	032+900	033+150	250	250	LHS	
162	032+950	033+000	50	50	RHS	
163	034+750	034+850	100	100	RHS	

Annexure VI: List of gantries and VMS along the Project Road

As per CA					As per Site		
S. No.	Chainage (Km)	Side	Remarks	Gantry Type	Chainage (Km)	Side	Remarks
1	140+300	RHS	Bikampur	Cantilever Gantry	140+500	RHS	
2	139+300	LHS	Bikampur	Cantilever Gantry	138+750	LHS	
3	106+000	RHS	Ranjeetpura	Cantilever Gantry	106+050	RHS	
4	93+900	RHS	VUP	Cantilever Gantry	93+520	RHS	
5	92+400	LHS	VUP	Cantilever Gantry	92+350	LHS	
6	91+ 100	RHS	VUP	Cantilever Gantry	91+450	RHS	
7	90+400	LHS	VUP	Cantilever Gantry	90+350	LHS	
8	29+000	RHS	Poogal Bypass Merging	Cantilever Gantry	28+950	RHS	Straight section Poogal
9	35+400	Dantour		Overhead Gantry	35+450	BHS	
10	0+000	Khajuwala		Overhead Gantry	000+400	BHS	
11	28+000	Poogal		Overhead Gantry	28+100	BHS	
12	2+000	Poogal		Overhead Gantry	2+050	BHS	Poogal to Dantour
13	31+100	Dantour		Overhead Gantry	31+000	BHS	
14	18+7(10	LHS	Tull	Cantilever Gantry			Not found
15	20+300	RHS	Toll Plaza-1	Cantilever Gantry			Not found
16	80+800	LHS	Toll Plaza-Il	Cantilever Gantry			Not found
17	82+500	RHS	Toll Plaza-II	Cantilever Gantry			Not found
18	105+000	LHS	Ranjeetpura	Cantilever Gantry			Not found
19	117+350	LHS	VUP	Cantilever Gantry			Not found
20	118+450	RHS	VUP	Cantilever Gantry			Not found
21	166+900	LHS	Toll Plaza-HI	Cantilever Gantry			Not found
22	168+500	RHS	Toll Plaza-III	Cantilever Gantry			Not found

Annexure VII: List of pedestrian guard rail along the Project Road

S. No.	From (Km)	To (Km)	Length m	Side	Remarks
1	140+000	140+300	300	BHS	
2	124+400	124+900	500	BHS	
3	121+100	121+150	50	BHS	
4	000+000	000+340	340	BHS	
5	016+100	016+180	80	BHS	
6	000+000	000+480	480	BHS	Urban Area Poogal
7	017+420	017+820	400	BHS	
8	031+300	031+620	320	BHS	Urban Area Poogal

Annexure VIII: List of retaining wall along the Project Road

S. No.	Chainage From	Chainage To	Length m	Total Length m	Side
1	003+020	003+150	130	130	LHS
2	012+320	012+400	80	80	LHS
3	013+620	013+680	60	60	LHS
4	019+930	020+020	90	90	RHS
5	022+220	022+320	100	200	BHS
6	022+350	022+430	80	160	BHS
7	022+750	022+850	100	100	LHS
8	022+800	022+850	50	50	RHS
9	023+880	024+070	190	190	LHS
10	029+520	029+650	130	260	BHS
11	030+350	030+720	370	740	BHS
12	032+100	032+400	300	600	BHS
13	036+020	036+750	730	730	RHS
14	036+150	036+780	630	630	LHS
15	037+700	037+850	150	150	LHS
16	037+800	037+900	100	100	RHS
17	041+700	041+900	200	200	LHS
18	050+220	050+400	180	360	BHS
19	050+850	051+280	430	860	BHS
20	054+550	054+820	270	270	LHS
21	054+700	054+820	120	120	RHS
22	056+550	056+750	200	200	RHS
23	057+200	057+400	200	200	RHS

S. No.	Chainage From	Chainage To	Length m	Total Length m	Side
24	062+300	062+520	220	220	RHS
25	062+400	062+620	220	220	LHS
26	063+380	063+600	220	440	BHS
27	064+650	065+120	470	470	RHS
28	064+700	065+080	380	380	LHS
29	084+150	084+550	400	400	RHS
30	084+150	084+220	70	70	LHS
31	149+950	150+010	60	60	LHS
32	154+240	154+320	80	80	LHS

Annexure IX: List of streetlights along the Project Road

S. No.	Chainage From	Chainage To	No	Side
1	140+300	139+550	5	BHS
2	140+000	139+650	20	BHS
3	124+900	124+400	20	BHS
4	093+250	092+350	11	BHS
5	000+000	000+340	13	Median
6	000+000	000+480	17	Median
7	017+420	017+820	12	BHS
8	139+650	139+300	9	BHS
9	093+250	092+350	24	BHS
10	033+750		6	BHS
11	031+300	031+620	10	Median
12	019+530		1	

Annexure X: List of Bus bays with shelter along the Project Road

S. No.	Item Description	Chainage (Km)	No	Side
1	Bus Shelter with bay	164+300	2	BHS
2	Bus Shelter with bay	137+350	1	LHS
3	Bus Shelter with bay	136+650	1	RHS
4	Bus Shelter with bay	125+550	1	RHS
5	Bus Shelter with bay	125+080	1	LHS
6	Bus Shelter with bay	121+800	1	LHS
7	Bus Shelter with bay	120+350	1	LHS
8	Bus Shelter with bay	117+850	2	BHS
9	Bus Shelter with bay	105+900	2	BHS
10	Bus Shelter with bay	097+300	2	BHS
11	Bus Shelter with bay	092+100	2	BHS
12	Bus Shelter with bay	084+800	1	RHS
13	Bus Shelter with bay	082+750	2	BHS
14	Bus Shelter with bay	076+550	1	RHS
15	Bus Shelter with bay	075+400	1	LHS
16	Bus Shelter with bay	073+500	1	LHS
17	Bus Shelter with bay	072+550	2	BHS
18	Bus Shelter with bay	072+100	1	RHS
19	Bus Shelter with bay	071+850	1	LHS
20	Bus Shelter with bay	069+200	1	LHS
21	Bus Shelter with bay	061+750	1	RHS
22	Bus Shelter with bay	061+100	1	RHS
23	Bus Shelter with bay	056+050	1	RHS
24	Bus Shelter with bay	055+950	1	LHS
25	Bus Shelter with bay	053+020	1	RHS
26	Bus Shelter with bay	053+900	1	LHS

S. No.	Item Description	Chainage (Km)	No	Side
27	Bus Shelter with bay	049+750	2	BHS
28	Bus Shelter with bay	047+350	1	RHS
29	Bus Shelter with bay	047+250	1	LHS
30	Bus Shelter with bay	045+500	2	BHS
31	Bus Shelter with bay	000+650	2	BHS
32	Bus Shelter with bay	004+670	2	BHS
33	Bus Shelter with bay	006+350	1	RHS
34	Bus Shelter with bay	006+750	1	RHS
35	Bus Shelter with bay	009+140	1	LHS
36	Bus Shelter with bay	009+220	1	RHS
37	Bus Shelter with bay	013+250	1	LHS
38	Bus Shelter with bay	013+300	1	RHS
39	Bus Shelter with bay	015+880	1	RHS
40	Bus Shelter with bay	016+300	1	LHS
41	Bus Shelter with bay	017+550	1	LHS
42	Bus Shelter with bay	017+850	1	RHS
43	Bus Shelter with bay	021+630	1	LHS
44	Bus Shelter with bay	021+730	1	RHS
45	Bus Shelter with bay	026+300	2	BHS
46	Bus Shelter with bay	031+600	2	BHS
47	Bus Shelter with bay	Urban Area Poogal	2	BHS
48	Bus Shelter with bay	004+350	1	LHS
49	Bus Shelter with bay	004+700	1	RHS
50	Bus Shelter with bay	009+050	1	RHS
51	Bus Shelter with bay	009+180	1	LHS
52	Bus Shelter with bay	013+160	1	LHS
53	Bus Shelter with bay	017+150	1	LHS
54	Bus Shelter with bay	017+380	1	RHS

S. No.	Item Description	Chainage (Km)	No	Side
55	Bus Shelter with bay	031+750	2	BHS
56	No Bay Bus Shelter	073+750	1	RHS
57	Truck Lay Bye	033+750	2	BHS

Annexure XI: Pavement Visual Condition Survey data

Remarks	Condition	From	To	Condition	Remarks
No Distress	Good	0+000	1+000	Good	No Distress
No Distress	Good	1+000	2+000	Good	No Distress
No Distress	Good	2+000	3+000	Good	No Distress
No Distress	Good	3+000	4+000	Good	No Distress
No Distress	Good	4+000	5+000	Good	No Distress
No Distress	Good	5+000	6+000	Good	No Distress
No Distress	Good	6+000	7+000	Good	No Distress
No Distress	Good	7+000	8+000	Good	No Distress
No Distress	Good	8+000	9+000	Good	No Distress
No Distress	Good	9+000	10+000	Good	No Distress
No Distress	Good	10+000	11+000	Good	No Distress
No Distress	Good	11+000	12+000	Good	No Distress
No Distress	Good	12+000	13+000	Good	No Distress
No Distress	Good	13+000	14+000	Good	No Distress
No Distress	Good	14+000	15+000	Good	No Distress
No Distress	Good	15+000	16+000	Good	No Distress
Pothole, 100m Cracks	Fair	16+000	17+000	Good	No Distress
No Distress	Good	17+000	18+000	Good	No Distress
No Distress	Good	18+000	19+000	Good	No Distress
20m Bleeding	Good	19+000	20+000	Fair	50m Bleeding
No Distress	Good	20+000	21+000	Good	No Distress
No Distress	Good	21+000	22+000	Good	No Distress
No Distress	Good	22+000	23+000	Good	No Distress
No Distress	Good	23+000	24+000	Good	No Distress

Remarks	Condition	From	To	Condition	Remarks
No Distress	Good	24+000	25+000	Good	No Distress
No Distress	Good	25+000	26+000	Good	No Distress
No Distress	Good	26+000	27+000	Good	No Distress
No Distress	Good	27+000	28+000	Good	No Distress
No Distress	Good	28+000	29+000	Good	No Distress
10m Patch	Good	29+000	30+000	Good	10m patch
No Distress	Good	30+000	30+812	Good	No Distress
No Distress	Good	1+430	2+000	Good	No Distress
No Distress	Good	2+000	3+000	Good	No Distress
No Distress	Good	3+000	4+000	Good	No Distress
No Distress	Good	4+000	5+000	Good	No Distress
No Distress	Good	5+000	6+000	Good	No Distress
10m patch	Good	6+000	7+000	Good	No Distress
No Distress	Good	7+000	8+000	Good	No Distress
No Distress	Good	8+000	9+000	Good	No Distress
No Distress	Good	9+000	10+000	Good	No Distress
No Distress	Good	10+000	11+000	Good	No Distress
No Distress	Good	11+000	12+000	Good	No Distress
No Distress	Good	12+000	13+000	Good	No Distress
No Distress	Good	13+000	14+000	Good	No Distress
No Distress	Good	14+000	15+000	Good	No Distress
No Distress	Good	15+000	16+000	Good	No Distress
No Distress	Good	16+000	17+000	Good	No Distress
No Distress	Good	17+000	18+000	Good	No Distress
No Distress	Good	18+000	19+000	Good	No Distress
No Distress	Good	19+000	20+000	Good	No Distress

Remarks	Condition	From	To	Condition	Remarks
No Distress	Good	20+000	21+000	Good	No Distress
No Distress	Good	21+000	22+000	Good	No Distress
No Distress	Good	22+000	23+000	Good	No Distress
No Distress	Good	23+000	24+000	Good	No Distress
No Distress	Good	24+000	25+000	Good	No Distress
No Distress	Good	25+000	26+000	Good	No Distress
No Distress	Good	26+000	27+000	Good	No Distress
No Distress	Good	27+000	28+000	Good	No Distress
No Distress	Good	28+000	29+000	Good	No Distress
No Distress	Good	29+000	30+000	Good	No Distress
No Distress	Good	30+000	31+000	Good	No Distress
No Distress	Good	31+000	32+000	Good	No Distress
No Distress	Good	32+000	33+000	Good	10m Cracks
No Distress	Good	33+000	34+000	Good	No Distress
No Distress	Good	34+000	35+000	Good	No Distress
No Distress	Good	35+000	36+000	Good	No Distress
No Distress	Good	36+000	37+000	Good	No Distress
No Distress	Good	37+000	38+000	Good	No Distress
No Distress	Good	38+000	39+000	Good	No Distress
No Distress	Good	39+000	40+000	Good	No Distress
No Distress	Good	40+000	41+000	Good	No Distress
No Distress	Good	41+000	42+000	Good	No Distress
No Distress	Good	42+000	43+000	Good	No Distress
No Distress	Good	43+000	44+000	Good	No Distress
No Distress	Good	44+000	45+000	Good	No Distress
No Distress	Good	45+000	46+000	Good	No Distress

Remarks	Condition	From	To	Condition	Remarks
10m patch	Good	46+000	47+000	Good	No Distress
No Distress	Good	47+000	48+000	Good	No Distress
No Distress	Good	48+000	49+000	Good	No Distress
No Distress	Good	49+000	50+000	Good	No Distress
No Distress	Good	50+000	51+000	Good	No Distress
No Distress	Good	51+000	52+000	Good	No Distress
No Distress	Good	52+000	53+000	Good	No Distress
No Distress	Good	53+000	54+000	Good	No Distress
No Distress	Good	54+000	55+000	Good	No Distress
No Distress	Good	55+000	56+000	Good	No Distress
No Distress	Good	56+000	57+000	Good	No Distress
No Distress	Good	57+000	58+000	Good	No Distress
No Distress	Good	58+000	59+000	Good	No Distress
No Distress	Good	59+000	60+000	Good	No Distress
No Distress	Good	60+000	61+000	Good	No Distress
No Distress	Good	61+000	62+000	Good	No Distress
No Distress	Good	62+000	63+000	Good	No Distress
No Distress	Good	63+000	64+000	Good	No Distress
No Distress	Good	64+000	65+000	Good	No Distress
No Distress	Good	65+000	66+000	Good	No Distress
No Distress	Good	66+000	67+000	Good	No Distress
No Distress	Good	67+000	68+000	Good	No Distress
No Distress	Good	68+000	69+000	Good	No Distress
No Distress	Good	69+000	70+000	Good	No Distress
No Distress	Good	70+000	71+000	Good	No Distress
No Distress	Good	71+000	72+000	Good	No Distress

Remarks	Condition	From	To	Condition	Remarks
No Distress	Good	72+000	73+000	Good	No Distress
500m Bleeding, 500m Rutting	Distress	73+000	74+000	Distress	450m Bleeding, 450m Rutting
No Distress	Good	74+000	75+000	Good	No Distress
No Distress	Good	75+000	76+000	Good	No Distress
No Distress	Good	76+000	77+000	Good	No Distress
No Distress	Good	77+000	78+000	Good	No Distress
No Distress	Good	78+000	79+000	Good	No Distress
No Distress	Good	79+000	80+000	Good	No Distress
No Distress	Good	80+000	81+000	Good	No Distress
No Distress	Good	81+000	82+000	Good	10m Patch
No Distress	Good	82+000	83+000	Good	No Distress
No Distress	Good	83+000	84+000	Good	No Distress
No Distress	Good	84+000	85+000	Good	No Distress
No Distress	Good	85+000	86+000	Good	No Distress
No Distress	Good	86+000	87+000	Good	No Distress
No Distress	Good	87+000	88+000	Good	No Distress
No Distress	Good	88+000	89+000	Good	No Distress
No Distress	Good	89+000	90+000	Good	10m Patch
No Distress	Good	90+000	91+000	Good	No Distress
No Distress	Good	91+000	92+000	Good	10m Patch
No Distress	Good	92+000	93+000	Good	No Distress
No Distress	Good	93+000	94+000	Good	No Distress
No Distress	Good	94+000	95+000	Good	No Distress
No Distress	Good	95+000	96+000	Good	No Distress
No Distress	Good	96+000	97+000	Good	No Distress
No Distress	Good	97+000	98+000	Good	No Distress

Remarks	Condition	From	To	Condition	Remarks
No Distress	Good	98+000	99+000	Good	10m Raveling
No Distress	Good	99+000	100+000	Good	No Distress
No Distress	Good	100+000	101+000	Good	No Distress
No Distress	Good	101+000	102+000	Good	No Distress
No Distress	Good	102+000	103+000	Good	No Distress
No Distress	Good	103+000	104+000	Good	No Distress
No Distress	Good	104+000	105+000	Good	No Distress
No Distress	Good	105+000	106+000	Good	No Distress
No Distress	Good	106+000	107+000	Good	No Distress
No Distress	Good	107+000	108+000	Good	No Distress
No Distress	Good	108+000	109+000	Good	No Distress
No Distress	Good	109+000	110+000	Good	No Distress
800m Bleeding, 800m Rutting	Distress	110+000	111+000	Good	No Distress
No Distress	Good	111+000	112+000	Good	No Distress
No Distress	Good	112+000	113+000	Good	No Distress
No Distress	Good	113+000	114+000	Good	No Distress
100m Patch and Potholes	Fair	114+000	115+000	Good	No Distress
No Distress	Good	115+000	116+000	Good	No Distress
30m Patch	Good	116+000	117+000	Good	30m Patch
No Distress	Good	117+000	118+000	Good	No Distress
No Distress	Good	118+000	119+000	Good	No Distress
No Distress	Good	119+000	120+000	Good	No Distress
No Distress	Good	120+000	121+000	Good	No Distress
1000m Oxidized Surface	Fair	121+000	122+000	Fair	1000m Oxidized Surface
No Distress	Good	122+000	123+000	Good	No Distress
No Distress	Good	123+000	124+000	Good	No Distress

Remarks	Condition	From	To	Condition	Remarks
No Distress	Good	124+000	125+000	Good	No Distress
No Distress	Good	125+000	126+000	Good	No Distress
No Distress	Good	126+000	127+000	Good	No Distress
No Distress	Good	127+000	128+000	Good	No Distress
No Distress	Good	128+000	129+000	Good	No Distress
No Distress	Good	129+000	130+000	Good	No Distress
No Distress	Good	130+000	131+000	Good	No Distress
No Distress	Good	131+000	132+000	Good	No Distress
No Distress	Good	132+000	133+000	Good	No Distress
No Distress	Good	133+000	134+000	Good	No Distress
No Distress	Good	134+000	135+000	Good	No Distress
No Distress	Good	135+000	136+000	Good	No Distress
10m Bleeding	Good	136+000	137+000	Good	No Distress
No Distress	Good	137+000	138+000	Good	No Distress
No Distress	Good	138+000	139+000	Good	No Distress
700m Major Cracks 500m Patch, 300m Rutting	Distress	139+000	140+000	Distress	200m Patch, 100m Cracks, 200m Raveling
No Distress	Good	140+000	141+000	Fair	50m Slippage, 100m Patch, 100m Cracks
10m Slippage, 20m Patch	Good	141+000	142+000	Good	No Distress
No Distress	Good	142+000	143+000	Good	No Distress
No Distress	Good	143+000	144+000	Good	No Distress
No Distress	Good	144+000	145+000	Good	No Distress
20m Minor Rutting, 50m Bleeding	Good	145+000	146+000	Good	No Distress
No Distress	Good	146+000	147+000	Good	No Distress
No Distress	Good	147+000	148+000	Good	No Distress

Remarks	Condition	From	To	Condition	Remarks
Pothole	Good	148+000	149+000	Good	No Distress
No Distress	Good	149+000	150+000	Good	No Distress
No Distress	Good	150+000	151+000	Good	No Distress
No Distress	Good	151+000	152+000	Good	No Distress
No Distress	Good	152+000	153+000	Good	No Distress
No Distress	Good	153+000	154+000	Good	No Distress
No Distress	Good	154+000	155+000	Good	No Distress
No Distress	Good	155+000	156+000	Good	No Distress
No Distress	Good	156+000	157+000	Good	No Distress
No Distress	Good	157+000	158+000	Good	50m Bleeding, 50m Rutting
No Distress	Good	158+000	159+000	Good	50m Bleeding, 50m Rutting
No Distress	Good	159+000	160+000	Good	No Distress
No Distress	Good	160+000	161+000	Good	No Distress
No Distress	Good	161+000	162+000	Good	No Distress
No Distress	Good	162+000	163+000	Good	No Distress
No Distress	Good	163+000	164+000	Good	No Distress
No Distress	Good	164+000	165+000	Good	No Distress
No Distress	Good	165+000	166+000	Good	No Distress
5m Bleeding	Good	166+000	167+000	Good	No Distress
No Distress	Good	167+000	168+000	Good	No Distress
No Distress	Good	168+000	169+000	Good	No Distress
No Distress	Good	169+000	170+000	Good	No Distress
No Distress	Good	170+000	171+000	Good	No Distress
No Distress	Good	171+000	172+000	Good	No Distress
No Distress	Good	172+000	173+000	Good	No Distress
5m Bleeding	Good	173+000	174+000	Good	No Distress

Remarks	Condition	From	To	Condition	Remarks
No Distress	Good	174+000	175+000	Good	No Distress
No Distress	Good	175+000	176+000	Good	No Distress
No Distress	Good	176+000	177+000	Good	No Distress
No Distress	Good	177+000	178+000	Good	No Distress
No Distress	Good	178+000	179+000	Good	No Distress
10m Patch	Good	179+000	180+000	Good	No Distress
No Distress	Good	180+000	181+000	Good	No Distress
No Distress	Good	181+000	182+000	Good	No Distress
No Distress	Good	182+000	182+725	Good	No Distress

Annexure XII: List of new installations of MBCB along the Project Road

S. No	Section	Location	Length (m)	Remarks
1	Khajuwala to Poogal	Shoulder	50	At the base of cantilever sign board
2	Poogal to Bap	Shoulder	50	At the base of the cantilever sign board
3	Poogal to Bap	Shoulder & Median	100	At the base of the Gantry sign board
4	Poogal to Bap	Shoulder	50	At the base of the cantilever sign board
5	Poogal to Bap	Shoulder	50	At the base of the cantilever sign board

Annexure XIII: List of MBCB installation issues along the Project Road

S. No	Section	Quantity (Nos.)	Remark	SI. No	Section	Quantity (Nos.)	Remark
1	Khajuwala to Poogal	1	Improper start treatment of MBCB	19	Poogal to Bap	1	Improper start treatment of MBCB
2	Khajuwala to Poogal	1	Improper start treatment of MBCB	20	Poogal to Bap	1	Improper start treatment of MBCB
3	Poogal to Bap	1	Improper start treatment of MBCB	21	Poogal to Bap	1	Improper start treatment of MBCB
4	Poogal to Bap	1	Improper start treatment of MBCB	22	Poogal to Bap	1	Improper end Treatment of MBCB
5	Poogal to Bap	1	Improper start treatment of MBCB	23	Poogal to Bap	2	Improper start treatment of MBCB
6	Poogal to Bap	2	Improper start treatment of MBCB	24	Poogal to Bap	2	Improper end Treatment of MBCB
7	Poogal to Bap	2	Improper end Treatment of MBCB	25	Poogal to Bap	1	Improper end Treatment of MBCB
8	Poogal to Bap	1	Improper start treatment of MBCB	26	Poogal to Bap	1	Improper end Treatment of MBCB
9	Poogal to Bap	1	Improper end Treatment of MBCB	27	Poogal to Bap	1	Improper end Treatment of MBCB
10	Poogal to Bap	1	Improper start treatment of MBCB	28	Poogal to Bap	1	Improper start treatment of MBCB
11	Poogal to Bap	1	Improper end Treatment of MBCB	29	Poogal to Bap	1	Improper start treatment of MBCB
12	Poogal to Bap	1	Improper start treatment of MBCB	30	Poogal to Bap	1	Improper end Treatment of MBCB
13	Poogal to Bap	1	Improper start treatment of MBCB	31	Poogal to Bap	1	Improper end Treatment of MBCB
14	Poogal to Bap	1	Improper end Treatment of MBCB	32	Poogal to Bap	1	Improper start treatment of MBCB
15	Poogal to Bap	1	Improper start treatment of MBCB	33	Poogal to Bap	1	Improper start treatment of MBCB
16	Poogal to Bap	1	Improper start treatment of MBCB	34	Poogal to Bap	1	Improper end Treatment of MBCB
17	Poogal to Bap	1	Improper end Treatment of MBCB	35	Poogal to Bap	1	Improper start treatment of MBCB
18	Poogal to Bap	1	Improper start treatment of MBCB	36	Poogal to Bap	1	Improper end Treatment of MBCB

Annexure XIV: List of Damaged Sign Board along the Project Road

S. No	Section	Type of Sign Board	Quantity (Nos)	S. No	Section	Type of Sign Board	Quantity (Nos)
1	Khajuwala to Poogal	Right Object Hazard Marker	1	62	Poogal to Bap	Left Object Hazard Marker	1
2	Khajuwala to Poogal	Two-way Object Hazard Marker	1	63	Poogal to Bap	Right Object Hazard Marker	1
3	Khajuwala to Poogal	Left Object Hazard Marker	1	64	Poogal to Bap	Right Object Hazard Marker	1
4	Khajuwala to Poogal	Right Object Hazard Marker	1	65	Poogal to Bap	Left Object Hazard Marker	1
5	Khajuwala to Poogal	Right Object Hazard Marker	1	66	Poogal to Bap	Left Object Hazard Marker	1
6	Khajuwala to Poogal	Right Object Hazard Marker	1	67	Poogal to Bap	Right Object Hazard Marker	1
7	Khajuwala to Poogal	Left Object Hazard Marker	1	68	Poogal to Bap	Left Object Hazard Marker	1
8	Khajuwala to Poogal	Right Object Hazard Marker	1	69	Poogal to Bap	Left Object Hazard Marker	1
9	Khajuwala to Poogal	Right Object Hazard Marker	1	70	Poogal to Bap	Right Object Hazard Marker	1
10	Khajuwala to Poogal	Right Object Hazard Marker	1	71	Poogal to Bap	Right Object Hazard Marker	1
11	Khajuwala to Poogal	Right Object Hazard Marker	1	72	Poogal to Bap	Left Object Hazard Marker	1
12	Khajuwala to Poogal	Left Object Hazard Marker	1	73	Poogal to Bap	Right Object Hazard Marker	1
13	Khajuwala to Poogal	Left Object Hazard Marker	1	74	Poogal to Bap	Left Object Hazard Marker	1
14	Poogal to Bap	Right Object Hazard Marker	1	75	Poogal to Bap	Left Object Hazard Marker	1
15	Poogal to Bap	Right Object Hazard Marker	1	76	Poogal to Bap	Right Object Hazard Marker	1
16	Poogal to Bap	Left Object Hazard Marker	1	77	Poogal to Bap	Right Object Hazard Marker	1
17	Poogal to Bap	Right Object Hazard Marker	1	78	Poogal to Bap	Left Object Hazard Marker	1
18	Poogal to Bap	Right Object Hazard Marker	1	79	Poogal to Bap	Right Object Hazard Marker	1
19	Poogal to Bap	Left Object Hazard Marker	2	80	Poogal to Bap	Right Object Hazard Marker	1
20	Poogal to Bap	Right Object Hazard Marker	2	81	Poogal to Bap	Right Object Hazard Marker	1
21	Poogal to Bap	Right Object Hazard Marker	1	82	Poogal to Bap	Left Object Hazard Marker	1
22	Poogal to Bap	Right Object Hazard Marker	1	83	Poogal to Bap	Left Object Hazard Marker	1
23	Poogal to Bap	Left Object Hazard Marker	1	84	Poogal to Bap	Right Object Hazard Marker	1
24	Poogal to Bap	Right Object Hazard Marker	1	85	Poogal to Bap	Left Object Hazard Marker	1

S. No	Section	Type of Sign Board	Quantity (Nos)	S. No	Section	Type of Sign Board	Quantity (Nos)
25	Poogal to Bap	Right Object Hazard Marker	1	86	Poogal to Bap	Right Object Hazard Marker	1
26	Poogal to Bap	Right Object Hazard Marker	1	87	Poogal to Bap	Left Object Hazard Marker	1
27	Poogal to Bap	Left Object Hazard Marker	1	88	Poogal to Bap	Right Object Hazard Marker	1
28	Poogal to Bap	Left Object Hazard Marker	2	89	Poogal to Bap	Right Object Hazard Marker	1
29	Poogal to Bap	Right Object Hazard Marker	1	90	Poogal to Bap	Left Object Hazard Marker	1
30	Poogal to Bap	Left Object Hazard Marker	1	91	Khajuwala to Poogal	Chevron	4
31	Poogal to Bap	Left Object Hazard Marker	1	92	Khajuwala to Poogal	Chevron	7
32	Poogal to Bap	Right Object Hazard Marker	1	93	Khajuwala to Poogal	Chevron	5
33	Poogal to Bap	Right Object Hazard Marker	1	94	Khajuwala to Poogal	Pedestrian crossing sign board	1
34	Poogal to Bap	Left Object Hazard Marker	1	95	Khajuwala to Poogal	Chevron	2
35	Poogal to Bap	Left Object Hazard Marker	1	96	Khajuwala to Poogal	Chevron	2
36	Poogal to Bap	Right Object Hazard Marker	1	97	Khajuwala to Poogal	Stack type information sign board	1
37	Poogal to Bap	Right Object Hazard Marker	1	98	Khajuwala to Poogal	Chevron	1
38	Poogal to Bap	Left Object Hazard Marker	1	99	Khajuwala to Poogal	Chevron	5
39	Poogal to Bap	Right Object Hazard Marker	1	100	Khajuwala to Poogal	Chevron	2
40	Poogal to Bap	Left Object Hazard Marker	1	101	Khajuwala to Poogal	Go slow Sign board	1
41	Poogal to Bap	Left Object Hazard Marker	1	102	Khajuwala to Poogal	Pass either side sign board	2

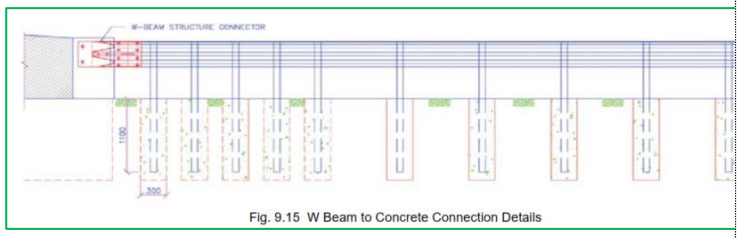
S. No	Section	Type of Sign Board	Quantity (Nos)	S. No	Section	Type of Sign Board	Quantity (Nos)
42	Poogal to Bap	Left Object Hazard Marker	1	103	Khajuwala to Poogal	Pass either side sign board	1
43	Poogal to Bap	Left Object Hazard Marker	1	104	Poogal to Bap	Pass either side sign board	1
44	Poogal to Bap	Left Object Hazard Marker	1	105	Poogal to Bap	Stack type Reassurance sign board	1
45	Poogal to Bap	Left Object Hazard Marker	1	106	Poogal to Bap	Cantilever	1
46	Poogal to Bap	Left Object Hazard Marker	1	107	Poogal to Bap	LH curve	1
47	Poogal to Bap	Left Object Hazard Marker	1	108	Poogal to Bap	Stack type information sign board	1
48	Poogal to Bap	Left Object Hazard Marker	1	109	Poogal to Bap	RH curve	1
49	Poogal to Bap	Right Object Hazard Marker	1	110	Poogal to Bap	Chevron	1
50	Poogal to Bap	Left Object Hazard Marker	1	111	Poogal to Bap	Flag type reassurance sign	1
51	Poogal to Bap	Right Object Hazard Marker	1	112	Poogal to Bap	Chevron	1
52	Poogal to Bap	Right Object Hazard Marker	1	113	Poogal to Bap	Go slow Sign board	1
53	Poogal to Bap	Left Object Hazard Marker	1	114	Poogal to Bap	Chevron	1
54	Poogal to Bap	Right Object Hazard Marker	1	115	Poogal to Bap	RH curve	1
55	Poogal to Bap	Left Object Hazard Marker	1	116	Poogal to Bap	Chevron	1
56	Poogal to Bap	Left Object Hazard Marker	1	117	Poogal to Bap	RH curve	1
57	Poogal to Bap	Left Object Hazard Marker	1	118	Poogal to Bap	Pass either side sign board	1
58	Poogal to Bap	Left Object Hazard Marker	1	119	Poogal to Bap	S curve sign board	1
59	Poogal to Bap	Left Object Hazard Marker	1	120	Poogal to Bap	Speed limit sign board	1
60	Poogal to Bap	Right Object Hazard Marker	1	121	Poogal to Bap	Built up area sign board	1
61	Poogal to Bap	Right Object Hazard Marker	1	**Total No. damaged sign boards**			**145**

Annexure XV: Identified Safety Concerns along the Project Road

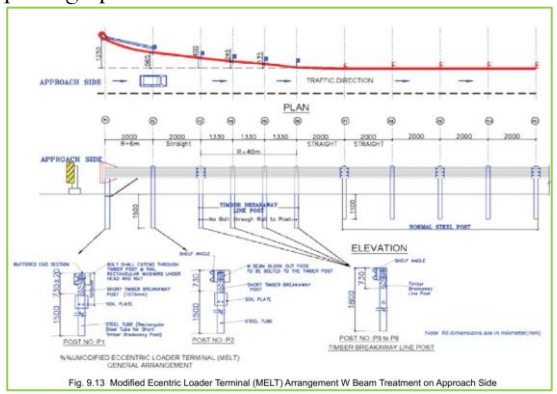
Keeping in view the scope of the assignment, safety concerns have been recorded on-site and reported in the table below. The remarks and recommendation column includes information on clauses of CA & applicable manual, any observations in the IE reports/project documents and our recommendations against the highlighted safety concern. The risk and priority of each safety concern are also included as per the following criteria given in line with IRC: SP:88-2019 (Manual on Road Safety Audit). Repair and rectification cost of identified issues have been considered in O&M estimations and the concessionaire has taken up the rectification works =.

- Risk categories for identified safety concerns: Very High, High, and Medium
- Priority level for recommendations: Essential, Highly Desirable and Desirable

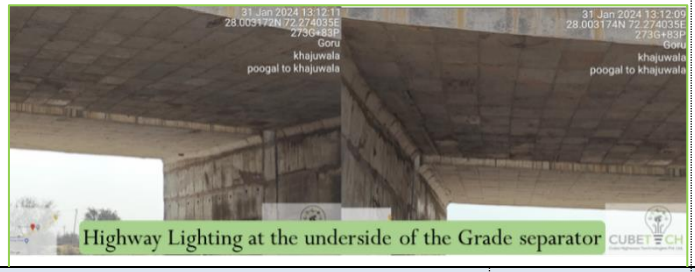
Safety concerns observed along the Project Road

S. No.	Safety concern		Recommendation		Type of concern
	Current Situation	Risk	Recommendation and Remarks	Priority	
1	**Safety Barrier**				
A	**Issue with the connection between MBCB and Rigid barrier**	**Very High**		**Essential**	**Installation issue**
	Inadequate transition arrangements between MBCB and the Rigid barrier: As shown in the image below, an overlap between MBCB and rigid barrier is inadequate or missing at few locations. This enhances the risk of vehicle pocketing when hit by errant vehicle. Also, MBCB post spacing in transition arrangement portion is not provided as suggested in the applicable manual. In the transition arrangement to the rigid barrier, number and spacing of post vary to provide greater rigidity to the semi-flexible barriers. (5 posts at intervals of 0.9m c/c, and next set of 5 posts at intervals of 0.6m c/c.) The image presents the current arrangement of the barriers in the transition section.		The following transition arrangement is prescribed in the applicable manual (IRC: SP:73-2015, Fig. 9.15).  Fig. 9.15 W Beam to Concrete Connection Details Locations and quantities where such arrangement shall be reviewed have been provided in this report.		

S. No.	Safety concern		Recommendation		Type of concern
	Current Situation	Risk	Recommendation and Remarks	Priority	
B	**Damaged Metal beam crash barrier**	**-**		**-**	**-**
	It appears that all the furniture has been installed recently. However, proactive rectification of damaged furniture is key for the safety of road users.		All such locations shall be rectified on priority.		
C	**Wrong overlapping of MBCB plates**	**High**		**Essential**	**Installation issue**
	At few locations where new MBCB must have been extended, such arrangement as shown is image below has been provided on the Project Road. This increases the chances of pocketing of errant vehicles. 		Overlapping of MBCB places shall be improved by removing the end treatments of older MBCB and proper plate connection with new MBCB shall be secured.		

S. No.	Safety concern		Recommendation		Type of concern
	Current Situation	Risk	Recommendation and Remarks	Priority	
D	**Improper start and end treatment of MBCB**	**High**		**Essential**	**Installation issue**
	As shown in the photograph, MBCB start and end treatments are improper at a few locations. MBCB is directly installed without any start and end treatment, which Improper start and end treatment of MBCB poses a risk to approaching vehicles. If a vehicle collides with the start of the W-Beam barrier, it could penetrate the vehicle, causing severe harm to the vehicle and passengers.		As per IRC: SP: 73-2015, Clause 9.7.2 – Roadside Steel Barrier, (b) – End Treatment: The end treatment on approach shall be Modified Eccentric Loader Terminal (MELT) arrangement and on the departure side it shall be Trailing Terminal (TT) arrangement. Recommended end treatment arrangement is shown in the photograph below:  Fig. 9.13 Modified Ecentric Loader Terminal (MELT) Arrangement W Beam Treatment on Approach Side The list of such locations has been attached in Annexure I.		
E	**MBCB Setback distance**	**-**		**-**	**No Issue**
	MBCB setback distance is adequate				
F	**Height of Crash barriers**	**-**		**-**	**No Issue**
	Based on visual inspection, height of crash barrier is adequate.				
G	**Welded connection of MBCB Plates**	**-**			**No Issue**
	No issue was observed				
H	**Wire Rope Barrier Setback distance**	**-**		**-**	**NA**
	NA		NA		

S. No.	Safety concern		Recommendation		Type of concern
	Current Situation	Risk	Recommendation and Remarks	Priority	
I	**Wire Rope Barriers Distance from face of the kerb**	**-**		**-**	**NA**
	NA		NA		
J	**Start of RCC crash barrier w.r.t. grade separator**	**-**		**-**	**No Issue**
	No issue was observed				
K	**RCC crash barrier at Bridges**	**-**		**-**	**No Issue**
	No issue was observed				
2	**Pedestrian Guard Rail**				
A	**New installation of PGR at built up section**	**-**		**-**	**No Issue**
	No issues observed				
B	**Damaged PGR**	**Moderate**		**Essential**	**New Installation**
	At most of the bus bay locations, PGR is damaged. 		Damaged road furniture shall be rectified on priority.		
3	**Pedestrian Facilities**	**-**		**-**	**No Issue**
	No issue was observed. Pedestrian facilities such as pedestrian cross marking and sign at every median opening has been provided.				
4	**Median walls in b/w structures**	**-**		**-**	**No Issue**
	No issue was observed.				
5	**Highway Lighting**				
A	**Highway Lighting at the underside of the Grade separator**	**High**		**Essential**	**New Installation**

S. No.	Safety concern		Recommendation		Type of concern
	Current Situation	**Risk**	**Recommendation and Remarks**	**Priority**	
	Lighting arrangements are missing below the underpasses (for all structures).  Highway Lighting at the underside of the Grade separator		As per the applicable manual of CA (*Clause 12.3.3 & 3.3.4 of IRC: SP:73-2015), lights shall be provided at top and underside of grade-separated structures.* Details & quantification of the lighting requirement as per the applicable manual are provided in Annexure I.		
B	**Highway Lighting at Grade separated structures**	**Very High**		**-**	**No Issue**
	Highway lighting is missing on a few grade-separated structures. Lighting at Grade separated structures		As per schedule C clause 1 (h) "*Lighting shall be provided in Built-up area, underpass locations, Bus bays locations and major Junctions. High mast lighting shall be provided at all major junctions and Toll Plaza. …"*		
6	**Night-time visibility**	**-**		**-**	**No Issue**
	Adequate delineation of the Project Road with retroreflective stickers on the road furniture are provided wherever required		No issue was observed		
7	**Sign Board**				
A	**Issue with an existing installation of sign boards (Damaged, faded, visibility, etc.,)**	**-**		**Higle desirable**	**New installation**

S. No.	Safety concern		Recommendation		Type of concern
	Current Situation	**Risk**	**Recommendation and Remarks**	**Priority**	
	Few sign boards are damaged and faded. Sign boards play a vital role in warning and informing road users about the situation of road ahead.		It is important to rectify all damaged road furniture on Priority.		
8	**Object and Kerb Painting**	**-**		**-**	**No Issue**
	Based on visual inspection, the object painting provided is observed to be adequate.				
9	**Safety Measures at critical locations, i.e., Transverse Bar Marking**	**-**		**-**	**No Issue**
	Not Available		No issue was observed		
10	**Road Studs**	**-**		**-**	**No Issue**
	Road studs have been provided for most of the locations all along the Project Road.		No issue was observed		
11	**Road Delineator**	**-**		**-**	**No Issue**
	No issue was observed				
12	**Road Geometry**				
A	**Improper connections of Minor Roads**	**-**		**-**	**No Issue**
	All minor road connection profile are adequate		No issue was observed		
B	**Absence of storage lane at median opening/U-turn locations**	**-**		**-**	**No Issue**
	NA				

S. No.	Safety concern		Recommendation		Type of concern
	Current Situation	**Risk**	**Recommendation and Remarks**	**Priority**	
C	**Un-Authorized Median Openings (UMO)**	**-**		**-**	**No Issue**
	NA				
13	**Landscaping and Tree Plantation**				
A	**Avenue plantation condition**	**-**			
	NA		NA		
B	**Median Plantation in No Plantation Zone**	**-**		**-**	**-**
	NA				
14	**Truck Lay Bays/Bus Bays/Wayside Amenities**				
A	**Truck Lay Bye Layout**	**-**		**-**	**NA**
	Truck lay bye with adequate geometry has been provided		No issue observed		
B	**Bus Bays and Bus Shelters**	**High**		**Essential**	**Other general safety concerns**
	Bus shelters are equipped with proper auxiliary lanes, markings, and studs. 		As per schedule C clause 1 (h) "*Lighting shall be provided in Built-up area, underpass locations, Bus bays locations and major Junctions. High mast lighting shall be provided at all major junctions and Toll Plaza. …"* Also, as per IRC: SP: 73-2015, Clause 12.6.8 "*The entire bus bay area shall be provided with lighting (minimum illumination of 40 Lux)"* Therefore, it is recommended to review the lighting arrangement on entire bus bays as per the applicable manual.		
C	**Rest Areas / Wayside Amenities**	**-**		**-**	**NA**

S. No.	Safety concern		Recommendation		Type of concern
	Current Situation	Risk	Recommendation and Remarks	Priority	
	NA				
15	**Other General Issues**				
A	**Water Stagnation**	**-**		**-**	**No Issue**
	No issue was observed				
B	**Un-authorized vehicle parking on shoulder**	**-**		**-**	**No Issue**
	No un-authorized parking is observed				
C	**Encroachment by temporary shops**	**-**		**-**	**No Issue**
	No issue was observed				
16	**High Transmission Line Vertical clearance**	**-**		**-**	**No Issue**
	No issue was observed				
17	**Ongoing Construction-Related Issues**	**-**		**-**	
	Not Applicable				

Summary of Recommendations

It may be noted that during the safety inspection, a few safety concerns which can be attributed to deviation from the applicable manual have been identified and presented in the Report. However, it is acknowledged that the site has been mostly constructed according to the approved drawings. It shall be noted that the identified safety concerns may deteriorate the safe operation of the project over the years. To rectify these issues intensive measures would be required. However, due to the limitation of the study, quantification of all the identified safety concerns could not be carried out that has been notified in this report.

The following points below provide a summary of recommendations based on the site visit and review of submitted documents that shall help in elevating the overall profile of Project Road.

- Provision of safety barrier at the base of overhead signs, and along high embankment sections.
- Improving the connection between MBCB and rigid crash barriers, overlapping of MBCB plates, and inadequate start/end treatments of MBCB.
- Inadequate highway lighting below underpasses, toll plazas, over-grade-separated structures, and bus bay locations.

- Rectification of damaged or faded road signs and repair of damaged road furniture on priority.

It may be noted that apart from the above-mentioned safety concerns, the overall road safety scenario along the Project Road is satisfactory.

Technical Due Diligence of 4/6 Laning of Narnaul Bypass Crossing to Paniyala Mor (NH-148B) (at NH-48 Junction)-31.24 km, Nizampur Link Road -2.76 km & Narnaul bypass crossing to Pacheri Kalan-11.30 (NH-11) in the State of Haryana under Bharatmala Pariyojana on Hybrid Annuity Mode.

Technical Due Diligence Report (Private and Confidential)

July 2024

Submitted to:

Gawar Narnaul Highway Private Limited

Cube Highways Technologies Private Limited

Technical Due Diligence of 4/6 Laning of Narnaul Bypass Crossing to Paniyala Mor (NH-148B) (at NH-48 Junction)-31.24 km, Nizampur Link Road -2.76 km & Narnaul bypass crossing to Pacheri Kalan-11.30 (NH-11) in the State of Haryana under Bharatmala Pariyojana on Hybrid Annuity Mode.

Documents Submittal and Contents Amendment Record

S. No.	Revision	Description	Date	Sign
1	R0	Technical Due Diligence Report	July 2024	

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ABBREVIATIONS

Abbreviation	Description
ASTM	American Society for testing and Materials
AVC	Automatic Vehicle Classifier
ABP	Allahabad bypass package
BBD	Benkelman Beam Deflection
BC	Bituminous Concrete
BOT	Built, Operate and Transfer
CA	Concession Agreement
CC Drain	Cement Concrete Drains
COD	Commercial Operation Date
CRRI	Central Road Research Institute
CBR	California Bearing Ratio test
DBFOT	Design, Build, Finance, Operate and Transfer
ETC	Electronic Toll Collection
FWD	Falling Weight Deflectometer
GOI	Government of India
GCL	Gawar Construction Limited
GNHPL	**Gawar Narnaul Highway Private Limited**
HPC	Hume Pipe Culvert
IE	Independent Engineer
IRC	Indian Roads Congress
LA	Land Acquisition
LHS	Left Hand Side
LOA	Letter of Acceptance
MBCB	Metal Beam Crash Barrier
MJB	Major Bridge

Abbreviation	Description
MNB	Minor Bridge
MOST	Ministry of Surface Transport
MPR	Monthly Progress Report
NH	National Highway
NHAI	National Highway Authority of India
NSV	Network Survey Vehicle
O&M	Operation and Maintenance
OHLS	Overhead Lane Signal
OHM	Object Hazard Marker
PCOD	Provisional Commercial Operation Date
POS	Point of Sale
POS	Point of sale
RCC	Reinforced Cement Concrete
RHS	Right Hand Side
ROB	Road/Rail Over Bridge
ROW	Right of Way
RPV	Route Petrol Vehicle
RUB	Road/Rail Under Bridge
SH	State Highway
SPV	Special Purpose Vehicle
SR	Service Road
SSWIM	Slow Speed Weigh in Motion
SWB	Static Weigh Bridge
TOT	Toll Operate Transfer
TC	Toll Collector
Team	Team of Cube Highways Technologies Pvt Ltd.
TMS	Toll Management System
WIM	Weigh in Motion

Abbreviation	Description
WMM	Wet Mix Macadam

Chapter 1
INTRODUCTION

CHAPTER 1. INTRODUCTION

1.1 Background

Infrastructure Sector is a key driver for the Indian economy. In 2014, the Government of India have introduced a new investment vehicle which allows investors to participate in the growth story of infrastructure sector, named Infrastructure Investment Trusts (hereinafter referred to as 'InvITs'). InvITs are instruments on pattern of mutual funds and are designed to pool in money from a number of investors to invest in assets that give cash flow over a period of time. The InvITs are regulated by the SEBI (Infrastructure Investment Trusts) Regulations Act, 2014.

In highway sector, InvIT as an instrument provide greater flexibility to investors and is expected to attract patient capitals (for say, 20-30 years) to the market, as these investors are averse to construction risks and are interested in investment in assets which provide long-term stable returns.

InvIT shall have a (i) Trustee, (ii) Sponsor(s) (iii) Investment Manager and (iv) Project Manager, Sponsor and the Project Manager are the same entity. During maintenance period of the project highway, Gawar Construction Limited. (In its capacity as the Project Manager of National Infrastructure Trust) has appointed M/s Cube Highways Technologies Private Limited as Technical Consultant for carrying out technical study and assessment of Opex and Major Maintenance requirement (MMR) for balance concession period. The scope includes review of operation and maintenance system and to prepare maintenance schedule for entire duration of concession period based on a technical analysis. In turn, Cube Highways Technologies undertook the site visits to carry out site inspection. The report is based on findings during this period.

National Infrastructure Trust ("Trust") was settled on September 25, 2023, in Gurugram pursuant to the Trust Deed as a contributory irrevocable trust in accordance with the Indian Trusts Act, 1882. The Trust is an Infrastructure Investment Trust (InvIT) established for making investments in special purpose vehicles as defined under Regulation 2(1) (zy) of the InvIT Regulations, or infrastructure projects or securities of Indian companies engaged in the infrastructure sector, as may be permitted in terms of Regulation 18(5) of the InvIT Regulations. Axis Trustee Services Limited (ATSL) is the Trustee to the Trust. Gawar Investment Manager Private Limited (GIMPL) was incorporated as a private limited company on August 26, 2023, under the Companies Act, 2013. GIMPL is a wholly owned subsidiary of Gawar Group. GIMPL has been appointed as the Investment Manager to the NIT InvIT by Axis Trustee Services Limited (ATSL); the trustee to NIT InvIT and is responsible for managing the operations of InvIT in accordance with InvIT regulations.

Table 1-1: Projects Comprising the Initial Portfolio Assets of National Infrastructure Trust

S. No.	Name of the Project	Length (km)
1.	Gawar Rohna Jhajjar Highway Private Limited	35.45
2.	Gawar Khajuwala BAP Highway Private Limited	212.107

S. No.	Name of the Project	Length (km)
3.	**Gawar Narnaul Highway Private Limited**	**45.30**
4.	Gawar Rohna Sonepat Highways Private Limited	40.50
5.	Hardiya Hasanpur Highway Private Limited	47.225
6.	Gawar Kiratpur Nerchowk Highway Private Limited	47.753
7.	Dewas Ujjain Highway Private Limited	41.42
8.	Gawar Bangalore Highways Private Limited	164.34
9.	Gawar Nainital Highways Private Limited	43.905

1.2 Asset Background

The National Highways Authority of India (NHAI) on behalf of Ministry of Road Transport and Highways (MORT&H), Government of India, have taken up the development of various National Highway corridors where the intensity of traffic has increased significantly and there is requirement of augmentation of capacity for safe and efficient movement of traffic. In this regard, NHAI has been entrusted to develop Projects for selected corridors through design, build, operate and transfer (the "DBOT Annuity" or "Hybrid Annuity") basis.

As part of this endeavour, the Government of India had entrusted to the Authority the development, maintenance, and management of National Highway (NH) 148B including the section from km 0.000 Paniyala Mor with junction at NH-48 to km 31.240 at Narnaul Bypass, Nizampur Link Road from km 0.000 to km 2.760 and the National Highway (NH) 11 including the section from km 0.000 Narnaul Bypass to km 11.300 at Pacheri Kalan. The Authority had resolved to augment the existing road of Narnaul Bypass crossing to Paniyala Mor, Nizampur Link Road and Narnaul Bypass crossing to Pacheri Kalan NH-148B & 11 in State of Haryana by Four/Six laning thereof (the "Project") on Hybrid Annuity basis, which shall be partly financed by the Concessionaire who shall recover its investment and costs through payments to be made by the Authority, in accordance with the terms and conditions as set forth in the Concession Agreement.

The Hybrid Annuity Model (HAM) is a mix of BOT Annuity and EPC models. As per the design, the Authority will contribute up-to 40% of the Project cost in five equal instalments of 8% each during the construction period of 910 days with the provisions of Clause 23.4 of CA. The remaining payment will be made based on the assets created and the performance of the developer. Here, hybrid annuity means the first 40% payment is made as fixed amount in five equal instalments whereas the remaining 60% is paid as variable annuity amount after the completion of the Project. As per the design, Authority will contribute 40% of the BPC and the balance cost is funded by Concessionaire through debt and equity.

The Authority had adopted a single stage two envelope bidding process and accordingly invited proposals by its Request for Proposals dated 8th October 2018 (the "Request for Proposals" or "RFP") for qualification and short listing of bidders for construction, operation and maintenance of the above referred Project on Hybrid Annuity basis. The

Authority had prescribed the technical and commercial terms and conditions in the RFP and invited bids comprising technical and financial bids from the bidders for undertaking the Project.

After evaluation of the bids received, the Authority had technically qualified certain bidders including, inter alia, the selected bidder and accepted the financial bid of the selected bidder i.e., M/s. Gawar Constructions Limited.

The Authority issued its Letter of Award No. NHAI/Tech/Del/PIU-Rewari/Pkg-I/2018/129081 dated 15th January 2019 (hereinafter called the "LOA") to the selected bidder requiring, inter alia, the execution of this Concession Agreement within 45 (forty-five) days. However, on 28th February 2019 it was executed on mutually agreed terms, of the date of issue thereof.

Accordingly, SPV M/s Gawar Narnaul Highway Private Limited (hereinafter referred to as "GNHPL") has been formed, for implementing the Project Stretch (the "Concessionaire"). As Concessionaire of this Project, GNHPL will develop the project, operate, and maintain the facilities after completion of construction. Under Hybrid Annuity Model (HAM), toll collection on the Project Stretch shall be responsibility of NHAI. The Concessionaire will be recovering its costs through annuity payments made during concession period of 17.5 years (annuity payments during construction as well as in operations period), including construction period of 910 days from the appointed date and Operation period of 15 years from COD.

1.3 Report Structure

The report contains eight chapters, including this Chapter on Introduction.

Chapter 2 Project Overview

Chapter 3 Asset Status

Chapter 4 Review of Structures

Chapter 5 Review of the pavement condition survey

Chapter 6 General Safety Concerns along the Project stretch and Improvements

Chapter 7 Operation and Maintenance

Chapter 2
PROJECT OVERVIEW

CHAPTER 2. PROJECT OVERVIEW

2.1 Location

The Project Highway starts from Paniyala Mor with junction at NH-48 having Design Ch 0+000 and ends at Narnaul Bypass at Design Ch. 31+240, Nizampur link road having Design Ch. 0+000 to Ch. 2+760 and NH-11 starting from Narnaul Bypass crossing having Design Ch 0+000 and ends at Pacheri Kalan at Design Ch 11+300 in the state of Haryana. The project corridor passes through the towns/villages Paniyala Mor, Nangal Chaudhary, Sirohi Bahali, Narnaul, Khatoti, and Pacheri Kalan.

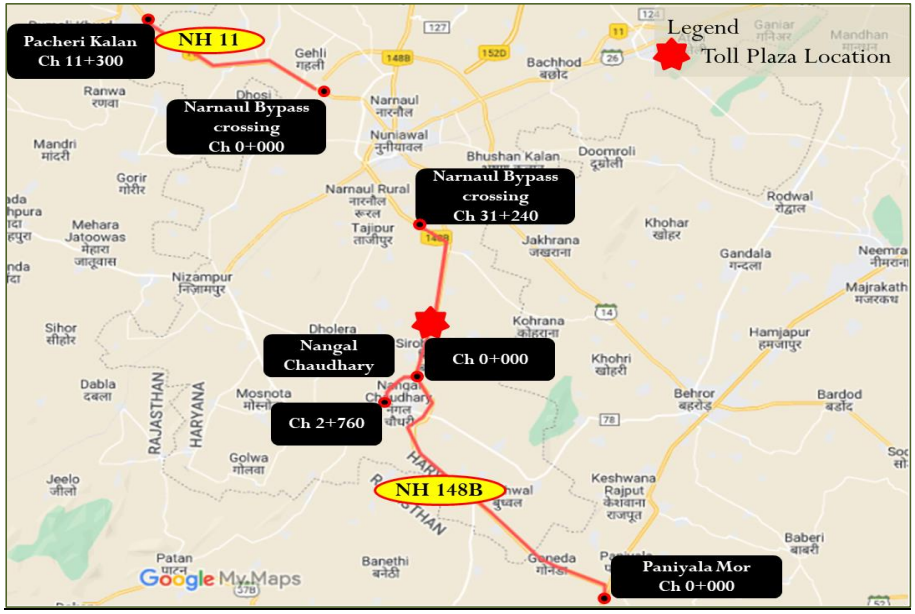

Figure 2-1: Project Alignment

2.2 Salient features

The salient features of the Project are summarised in the table below:

Table 2-1 Project Salient Features

S. No	Scope	Description
1	Name of the Project	4/6 Laning of Narnaul Bypass Crossing to Paniyala Mor (NH-148B) (at NH-48 junction) =31.24 km, Nizampur Link Road=2.76 km & Narnaul bypass crossing to Pacheri Kalan=11.30 (NH-11) in the state of Haryana under Bharatmala Pariyojana on Hybrid Annuity Mode
2	Name of Client	National Highways Authority of India
3	Name of Concessionaire	M/s Gawar Narnaul Highway Private Limited
4	Independent Engineer	M/s L N Malaviya Infraproject Pvt. Ltd
5	Length of the Project	45.300 km
6	Bid Project Cost	Rs. 1137 crores
7	Letter of award	NHAI/Tech/Del/PIU-Rewari/Pkg-I/2018/129081 dated 15th January 2019
8	Signing of Concession Agreement date	28th February 2019
9	Appointed Date	19th September 2019
10	Construction Period	910 days from Appointed Date
11	Operation Period	15 years from COD
12	Completion Certificate	9th January 2021

The Completion certificate was issued for the project on 09th January 2021

2.3 Scope of the Project

The scope of the Project (the "Scope of the Project") shall mean and include,

- Construction of the Project on the site set forth in Schedule-A and as specified in Schedule-B together with provision of Project Facilities as specified in Schedule- C, and in conformity with the Specifications and Standards set forth in Schedule- D of the Concession Agreement.
- Operation and Maintenance of the Project in accordance with the provisions of Concession Agreement; and

- Performance and fulfilment of all other obligations of the Concessionaire in accordance with the provisions of Concession Agreement and matters incidental there to or necessary for the performance of any or all the obligations of the Concessionaire under Concession Agreement.

2.4 Physical features of the Project

The Concessionaire shall operate, manage and maintain the project stretch for entire Concession Period, subject to and in accordance with the provisions of this Agreement. The Concessionaire shall visit the Site and assess the durability and strength of Project Assets and make his own assessment for operation, management. and maintenance as per Specifications and Standards and bear and pay all costs, expenses and charges in connection with or incidental to the performance of operation, management and maintenance.

The project includes the following physical features.

Table 2-2: Project Physical Features

S. No	Project Physical Features	UoM	As per CA	As per Site	Remarks
1	Total Length of project stretch	Km	45.300	45.300	
2	Total length of Service Road	Km	32.500	36.702	Including COS
3	Major Bridges	Nos.	02	02	
4	Minor Bridges	Nos.	07	07	
5	VUPs	Nos.	11	11	
6	Pedestrian/Cattle Underpass	Nos.	12	17	Including COS
7	Box/Slab Culverts	Nos.	51	52	Including COS
8	Junctions	Nos.	34	36	Including COS
9	Toll Plaza	Nos.	1	1	

All the above features as per site have been accounted for the estimation of routine maintenance, repair and rehabilitation, major maintenance and operation expenditure.

2.5 Review of Concession Agreement

The Authority had adopted a single stage two envelope bidding process and accordingly invited proposals by its Request for Proposals dated 08th October 2018 (the "Request for Proposals" or "RFP") for qualification and short listing of bidders for construction, operation and maintenance of the above referred Project on Hybrid Annuity basis.

The Authority had prescribed the technical and commercial terms and conditions in the RFP and invited bids comprising technical and financial bids from the bidders for undertaking the Project.

After evaluation of the bids received, the Authority had technically qualified certain bidders including, inter alia, the selected bidder and accepted the financial bid of the selected bidder i.e., M/s Gawar Constructions Ltd. and issued its Letter of Award No. NHAI/Tech/Del/PIU-Rewari/Pkg-I/2018/129081 dated 15th January 2019 (hereinafter called the "LOA") to the selected bidder requiring, inter alia, the execution of this Concession Agreement within 45 (forty-five) days of the date of issue thereof.

Table 2-3: Review of CA

Article /Clause of CA	Subject	Description in brief	*Remarks*
Article 3	**Concession period**	Concession period includes construction period of 910 days and operational period of 15 years from COD	
	Total Project Cost	Total project cost is 60 % of the Bid Project Cost If there is an increase in WPI, on an average, by more than 3% per annum for the period between the Bid Date and COD, the Total Project Cost shall be increased such that the effect of increase in WPI, more than such 3%, is reflected in the Total Project Cost	
Clause 23.2	**Adjusted bid project cost**	For every month occurring after the Appointed Date, the Authority shall compute the variation in Price Index occurring between the Reference Index Date preceding the Bid Date and the Reference Index Date preceding the date of Invoice and shall express the latter as a multiple of the former (the "Price Index Multiple").	
Article 14	**Provisional completion certificate**	If the Concessionaire has completed construction of 100% of the site made available to the Concessionaire up to 182 days from the appointed date, the Concessionaire is eligible for provisional completion certificate	*Positive for developer*

Article /Clause of CA	Subject	Description in brief	*Remarks*
Article 16	**Change in scope**	The Authority shall pay to Concessionaire any increase in scope of work approved by Independent Engineer. While in case of reduction of scope due to reasons attributed by the Authority, cost of such reduced cost is to be accessed by the Independent Engineer, as per the schedule of rates applicable on the Bid Due Date. The civil cost of the reduced Scope shall be multiplied by 1.06 to arrive at the estimated cost of reduced Scope. The estimated cost of reduced Scope shall then be multiplied by the ratio of Bid Project Cost to Estimated Project Cost to arrive at the Total Cost of Reduced Scope.	
Article 31	**Termination payment**		
	Termination payment in the event of default by Concessionaire during operation	Authority shall pay to the Concessionaire an amount equal to 65% (sixty-five per cent) of the sum of Annuity Payments remaining unpaid for and in respect of the Concession Period, including interest thereon up to the Transfer Date.	
	Termination payment in the event of default by Authority during operation Period	An amount equal to sum of Annuity Payments remaining unpaid for and in respect of the Concession Period, including interest thereon up to the Transfer Date.	
Article 35	**Change in law**		
	Increase in cost	If the Concessionaire suffers aggregate financial effect due to change in law, which exceeds by Rs 1.79 crores or 2% of the total annuity payments in any accounting year the Concessionaire may notify Authority and propose amendments to this agreement so as to place the Concessionaire in the same financial position w/o change in law	*Concessionaire is protected*

Article /Clause of CA	Subject	Description in brief	*Remarks*
	Reduction in cost	If the Concessionaire benefits from reduction in costs and the aggregate financial effect due to change in law, exceeds by Rs 1.79 crores or 2% of the total annuity payments in any accounting year the Authority may notify Concessionaire and propose amendments to this agreement so as to place the Concessionaire in the same financial position w/o change in law	
Clause 6.3	Obligations relating to refinancing	Authority shall permit and enable Concessionaire for refinancing as per prevailing guidelines upon written request. Authority shall respond within 30 days of the receipt of proposal.	*Positive for the developers and lenders*
Article 28	**Force majeure**		
	Time Extension		
	c) After COD	After COD, the Concessionaire shall be entitled to receive Annuity Payments plus interest due and payable under this Agreement. Provided any payment to be made under this clause shall be subject to deduction of outstanding dues of the Authority, if any	
	Cost arising out of force majeure event		
	b) After Appointed Date	Non-Political Event: Cost to be shared by respective parties Indirect Political event: To be shared Direct Political: Cost compensated by Authority to concessionaire	*Concessionaire is protected*

Article /Clause of CA	Subject	Description in brief	*Remarks*
Clause 17.8	Damages for breach of Maintenance Obligation	if the Concessionaire fails to repair or rectify any defect or deficiency set forth in the Maintenance Requirements within the period specified the Authority shall be entitled to recover damages, to be calculated and paid for each day of delay until the breach is cured, at the higher of (a) 2% of the Performance Security, and (b) 0.1% of the cost of such repair or rectification as estimated by the Independent Engineer	*Concessionaire is made more responsible*
Clause 17.16	Advertising on the site	The Concessionaire shall not undertake or permit any form of commercial advertising, display or hoarding at any place on the site	
Article 20	Traffic aid post, medical aid post etc	Concessionaire shall construct a traffic aid post of 25 sqm, medical aid post and two residential quarters at its own cost and hand them over to authority.	
		Concessionaire shall provide to the State Police Department or a substitute thereof one Jeep or similar vehicle in good working condition along with chauffeurs for round-the-clock patrolling. The operating costs of such vehicle including the salaries and allowances of the chauffeurs shall be borne by Concessionaire.	
		Concessionaire shall provide to the State Medical Department or a substitute thereof to be designated by the Authority one ambulance in good working condition along with chauffeurs for round-the-clock ambulance services. the operating costs of such ambulance including the salaries and allowances of the chauffeurs	

Article /Clause of CA	Subject	Description in brief	*Remarks*
		The Concessionaire shall also reimburse to the State Medical Department (or a substitute thereof to be designated by the Authority) the actual expenditure incurred by it in each Accounting Year on the medical equipment, and the pay and allowances of up to 2 medical personnel deployed exclusively for the Medical Aid Posts and ambulance and shall maintain the Medical Aid Post buildings.	
Clause 21.3	Payment to independent engineer	The remuneration, cost and expenses of the Independent Engineer shall be paid by Authority and subject to the limits set Schedule-M, one-half of such remuneration, cost and expense shall be reimbursed by the Concessionaire to the Authority within 15 days of receiving a statement of expenditure from the Authority	

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Chapter 3
ASSET STATUS

CHAPTER 3. ASSET STATUS

3.1 Review of Highway Current Status

As per letter the Project has achieved COD on 09th January 2021. **SPV is addressing the defects/deficiencies as and when arises and pointed out by the Independent Engineers regularly.**

As per our visual inspection, the pavement is in good condition, the observations made by our team are presented below.

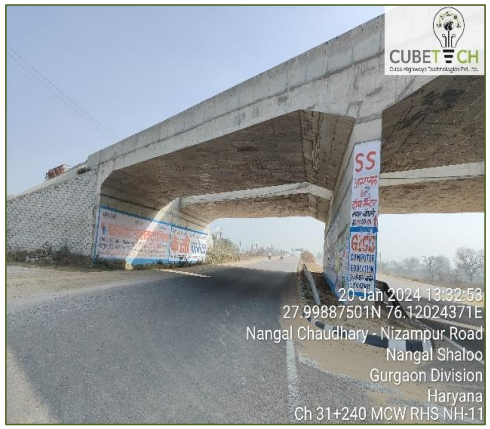


Figure 3-1: Project start and end location

The team had following general observations during the visit,

- The median plantation watering process was noted during the site visit, ensuring proper care for the greenery.
- In MCW (NH 148B) on LHS Starting Chainage is 0+000 and RHS Starting Chainage is 0+(-)737 m where it was observed 737m length in COS.
- In MCW (NH 148B) on RHS at km 28+400 there is a diversion for continuity in both sides of the project stretch from km 28+400 to 31+240.
- During the site inspection, the installation of road studs and painting of pavement markings was observed, indicating ongoing improvement and safety measures.
- The completion of the New Jersey crash barrier along the project stretch.
- Foot over bridge at km 29+600 at NH-11 in COS where construction is in progress.
- Instances of ROW fencing were evident throughout the project.

3.2 Drain

Based on the site inventory, side drain and median drain along the project stretches, which includes lined drain. Drain provided along the project stretch is found clean and it is in good condition.

Figure 3-2: Drains

3.3 Junctions

Based on the site observation, there are 36 Major/Minor Junctions were found along the project stretch. Junctions are made of flexible pavement and rigid pavement and are beneath MCW connecting the slip road with nearby villages.

Figure 3-3: Junctions

3.4 Road Furniture

Following are the details of road furniture provided along the project stretch as per site.

Table 3-1: List of project furniture's

Type furniture	Unit	Quantity
New Jersey Crash Barrier	km	56.520
Foot Over Bridge	Nos	01
Streetlights		
Single arm	Nos	384
Double arm	Nos	144
High mast	Nos	13

Crash Barrier

New Jersey crash barriers have been installed along the entire project stretch on shoulder side of the main carriageway and are being well-maintained.

Figure 3-4: Safety crash barrier (MBCB) along the project stretch

Overhead & Cantilever Gantry boards

Overhead Gantry and Cantilever Gantry boards are provided at the Project Stretch.

Figure 3-5: Overhead & Cantilever Gantry boards

Highway Lighting

Highway lighting such as single arm, double arm, and high mast lights have been provided along the project stretch, which includes main carriageway, service roads toll plazas etc. As per site observations, streetlights provided along the project stretch are in good condition.

Figure 3-6: Highway lighting

3.5 Project facilities

Following are the details of project facilities along the project stretch,

Table 3-2: List of project facilities

Type facility	Unit	Quantity
Bus shelters	nos.	12
Truck lay bye	nos.	02
Emergency call box (ECB)	nos.	21

3.6 Details of Toll plaza and Toll collection systems

One toll plaza is provided in the stretch. The Toll Collection System is installed at the toll plaza and is provided by Vaaan Infra Private Limited in the year 2021.

The toll plaza has 18 (16 physical +2 reversible) lanes. 16 lanes are installed with ETC equipment. View of the toll plazas is shown in figure below.

Figure 3-7: Toll Plaza.

3.6.1 Lane Equipment

Following lane hardware and equipment are installed at the toll plaza:

1. RFID ETC Transceiver
2. Lane Controller with Industrial PC
3. AVC Sensors
4. Automatic Lane Barrier (ALB)
5. Incident Capture Camera
6. Overhead Lane Signals
7. Traffic Lights
8. Toll Booth Equipment

3.6.1.1 RFID ETC Transceiver

- RFID ETC Transceiver reads tags installed on the windshield of vehicles and ETC RFID transceiver near Pay-axis-mounted over gantry. Handheld RFID readers are provided (1 no. in each direction)in case a tag is not detected by the fixed reader.
- ETC system lanes are present in 18 Lanes.
- Tag Master Brand RFID Readers are installed in all lanes.
- ETC System is Running on ICD 2.5.

Figure 3-8: RFID Reader.

3.6.1.2 Lane Controller with Industrial PC

- Toll Lane Controller is in the Electronic Enclosure placed inside tunnel connected to the common server and capable of independent data storage.
- TLCs are installed in 18 lanes. Each TLC has the specification of 4GB RAM and 1TB hard disk with windows 10 pro OS installed.

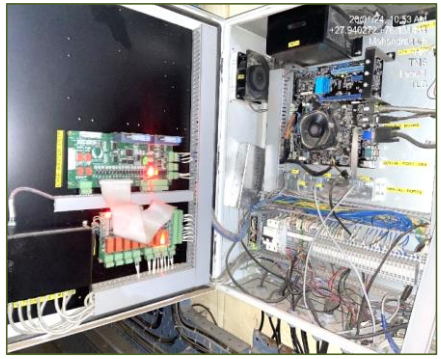


Figure 3-9: Toll Lane Controller inside Tunnel.

3.6.1.3 Automatic Vehicle Classification (AVC) Sensors

The AVC equipment is installed in 18 lanes. The AVC equipment comprises of a pair of height sensor poles and Axle sensors.

Figure 3-10: AVC Height Sensors

3.6.1.4 Automatic Lane Barrier

Boom barriers installed in 18 lanes but operational in 16 lanes and have a working time of 0.6 s.

Figure 3-11: Boom Barrier.

3.6.1.5 Lane Traffic Light (LTL) and User Fare Display (UFD)

Lane Traffic Light (LTL) is used to instruct vehicles to stop or pass through the lane. TheLTL is RED when the toll collector is expecting the vehicle at the booth. After the transaction is done, the LTL turns Green to instruct the vehicle to pass through the lane. The User Fare Display is part of electronic toll collection equipment at the toll booth. It is a mini variable message sign (VMS) made of Light Emitting Diodes (LED). The user fare display is used to display the toll fare that is due and that must be paid by the motorist and the classification of vehicle selected by the collector.

LTL and UFD are installed in 18 lanes.

Figure 3-12: Traffic Light (TL) and User Fare Display (UFD).

3.6.1.6 Incident Capture Camera (ICS Camera)

- The incident capture camera is installed on a pole near to the booth to capture the image of the vehicle from the back side. The AVC triggers the Image capture system.
- ICS cameras are installed in 18 lanes.

3.6.1.7 License Plate Image Capture Camera (LPIC)

- License Plate Image capture camera is installed on a pole facing incoming vehicle to capture the vehicle number plate.
- LPIC Cameras are installed in 18 lanes.

Figure 3-13: LPIC and ICS Cameras.

3.6.1.8 Over Head Lane Signal (OHLS)

The **Overhead Lane Signal (OHLS)** for lane "Open" and "Close" sign consists of a pair of"GREEN" (arrow) and "RED" (cross) lights. The OHLS is located at the vehicle approaching side of the canopy to show the drivers whether the lane is open or closed.

OHLS is installed in 18 lanes.

Figure 3-14: Over Head Lane Signal (OHLS).

3.6.1.9 Toll Booth Equipment

Toll Booth Hardware / Equipment provided are:

- Toll Collector Display (Operator Monitor)
- Normal Keyboard
- Receipt Printer
- Intercom slave unit
- Manual Booth Control (MBC)
- Booth Camera

The operator monitor called Toll Collector Display (TCD) is on the toll collector's desk. It is the system's interface to the toll collector, to display the status of transactions and status of the lane peripherals.

The keyboard on the toll terminal is a normal keyboard for registration of toll operations

Thermal Printers are installed at the toll booths to print tickets. Intercom slave unit facilitates communication with the master unit in the control room.

Booth Cameras are provided on the inside roof corner of the booth to provide surveillance through CCTV screen located in the control room. Manual Booth Controller is used to release exempt vehicles.

Toll booth equipment is installed in 18 lanes.

Figure 3-15: Booth Equipment's.

3.6.1.10 Medium Speed Weigh in Motion (MSWIM)

- Medium Speed Weigh in Motion (MSWIM) is installed on entry lanes. Bending plate strain gauge technology is used with hardware and software support to calculate weight of vehicles running through it up to a speed of 50 km/hr. MSWIM is installed in 18 lanes.
- SWB is installed at both sides of the toll plaza.

Figure 3-16: Static Weigh Bridge (SWB).

3.6.2 Plaza Equipment

3.6.2.1 TMS Server

- One Server is provided with a switch rack, and 24 channel switches. Firewall and broadband internet connectivity are available.
- The server is HP ProLiant DL380 Gen 10.

Figure 3-17: Server.

3.6.2.2 42" LED screen for CCTV monitoring

One number of 42" inch LED screens for CCTV monitoring installed at the toll plaza admin block provides a view of all the toll booths, important zones within the plaza where cash transactions take place (server room, control room, cash up).

The toll plaza manager can observe the activities at the toll lanes and toll booth. When the toll collector calls up on the intercom, the manager can comprehend the situation at the lane by a zoomed view of the lane.

3.6.2.3 Workstations in Control Room, PoS and Cash up room

Three Workstations are available in the control room for lane monitoring, administration, and audit with 4 GB RAM and 1 TB HDD.

Figure 3-18: Workstations at Control room.

3.6.2.4 UPS

Following observations were made at toll plaza.

- One 6 KVA UPS is present in the UPS Room.
- 2 KVA UPS is present in each lane.

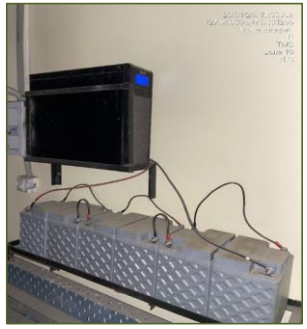


Figure 3-19: Lane UPS.

3.7 Advanced Traffic Management System (ATMS)

The Advanced Traffic Management System (ATMS) is installed by Vaaan Infra private limited in the year 2021 for the project road which is controlled by the ATMS Centre. ATMS is divided into two packages. Package-1(NH148-B) is of 31.24 km stretch. Package -2(NH-11) is of 11.30 km stretch. It comprises of the following:

- Emergency Call Back System (ECB)
- Variable Message Signboards (VMS)
- Automatic Traffic Counter cum Classifier (ATCC)
- Meteorological Data system (MDS)
- CCTV system
- Video Incident Detection System (VIDS)
- Mobile Radio Communication System (MRCS)
- Radio Frequency (RF) Tower.
- Vehicle Actuated Speed Display (VASD).

3.7.1 Emergency Call Back System (ECB)

16 pair of Emergency Call Booths are installed in the package-1 and 5 pair of Emergency Call Booths are installed in package-2 along the project road.

Figure 3-20: ECB.

3.7.2 Variable Message Signboards (VMS)

Variable message sign boards (VMS) are installed in 6 locations at Package-1 and in 2 locations at Package-2.

Figure 3-21: VMS.

3.7.3 Automatic Traffic Counter cum Classifier (ATCC)

Piezo based Automatic Traffic Counter cum Classifiers (ATCC) is installed in 1 location at package-1 and in 1 location at package-2.

Figure 3-22: PLP Based ATCC.

3.7.4 MET

MET is installed at the top of Toll Building and is operational at package 1. Meteorological sensors comprise of sensors to measure the atmospheric temperature, humidity, visibility, Road temperature, rain gauge and equipment for measuring wind speed and direction.

Figure 3-23: MDS.

3.7.5 CCTV and Surveillance Cameras

Surveillance cameras are installed at 5 locations in package-1 and 3 locations in package-2.

Figure 3-24: CCTV.

3.7.6 Video Incident Detection System (VIDS).

Video Incident Detection System is installed at 12 locations at package 1. VIDS are installed in 2 locations at package 2.

Figure 3-25: VIDS

3.7.7 Mobile Radio Communication System (MRCS).

- MRCS is installed in one location at package-1.
- MRCS is installed in one location at package-2.

3.7.8 Radio Frequency (RF) Tower.

RF tower is installed in one location at both package-1 and package-2 each.

3.7.9 Vehicle Actuate Speed Display (VASD).

VASD is installed in 1 location (km 25.500) at Package-1.

Figure 3-26: VASD.

3.7.10 ATMS Control Room.

Server:

- Three ATMS Servers are provided with a server rack, 24 port switch, NVR, media converter etc.
- ATMS servers are HP ProLiant DL380 Gen10 with 3.3TB HDD and 32GB RAM with windows server 2016 standard.
- Three VIDS servers are provided that are of Dell precision with 8TB HDD and 32GB RAM with UBUNTU OS installed.

Figure 3-27: ATMS Server.

3.7.10.1 Control room equipment.

- 2X3 Video wall.
- 8 Workstations with 1TB HDD ,8GB RAM and windows 10 pro OS is installed.
- One network printer.
- 32 channel NVR.
- Two numbers of 24 port switch.
- Two numbers of 24 port LIU.
- Media converters etc.

Figure 3-28: Video Wall..

Figure 3-29: Workstations in ATMS control room.

3.7.10.2 UPS

- Two Number of UPSs are present in the UPS Room.
- VIDS, ATCC and CCTV are powered with solar.

Chapter 4
REVIEW OF STRUCTURES

CHAPTER 4. REVIEW OF STRUCTURES

4.1 Structural investigations

Review of structures inventory and detailed condition survey of structures are the essential requirements for preparation of estimates for Capex and also for O & M cost for highway structures. Keeping in view of importance of this task, review of inventory and conducting visual condition survey were carried out as per procedure and guidelines prescribed in IRC: SP:35 bridge engineers. The details of condition survey of structures were furnished below.

Visual Condition Survey

Salient features for which data is collected as part of conditional survey are in accordance with IRC: SP: 35 Proforma. Main features recorded as part of detailed condition survey are listed below.

- Strip seals of expansion joint were filled with dirt & debris, also some strip seal elastomers were damaged/punctured.
- Drainage spouts assemblies were missing at few structure locations.
- Quadrant stone pitching was damaged at many structure locations.
- Wider gaps were observed on RE wall panels at few locations.
- Drainage spouts were clogged at a few structure locations.
- Vegetation shall need to be removed.
- Overall structures are in sound and satisfactory condition. However, some treatment has been suggested based on our observations and are being done under the routine maintenance works.

4.2 General

Details of various types of structures as per CA as well as site inventory survey are furnished below.

Table 4-1: Summary of structures

S. no.	Type of Structure	As per CA (nos.)	As per Site inventory (nos.)	As per CA (nos.)	As per Site inventory (nos.)	Total	Remarks
		Paniyala Mor Section		Pacheri Kalan Section			
1	Major Bridges	01	01	01	01	**02**	
2	Minor Bridges	05	05	02	02	**07**	
3	Vehicular Underpass	09	09	02	02	**11**	
4	Pedestrian / Cattle Underpass	08	13	04	04	**17**	05 nos. were additionally found.
5	Foot Over Bridge	00		00		**01**	01 no. was additionally found.
5	Box/Slab Culverts	39	40	12	12	**52**	01 no. was additionally found.
					Total	**90**	

The next section presents the observations on Structures. The visual inspection of all the major structures was conducted by team of Bridge experts to assess the present condition of structures. The detailed condition survey is furnished in subsequent sections of this report.

4.3 Major Bridges

There are 02 no. of Major Bridges on the Project Stretch. The cost for repair and rectification has been factored in the O&M estimation and the Concessionaire has taken up the rectification works. The Structures are found in sound and satisfactory condition.

Detailed condition survey, necessary repair and pending maintenance works for all the Major Bridges along the Project Stretch are given below,

Table 4-2: Existing condition and required repairs /maintenance works for Major Bridges

S. no.	Chainage, km	Span Arrangement, m	Total Length, m	Side	Condition of Structure	Proposed repair and pending maintenance works
1	1.500	4 x 21.00	21.00	LHS	Strip seals of expansion joint were filled with dirt & debris, also some strip seal elastomers were damaged/punctured.	New strip seal elastomer shall need to be fixed for all expansion joints as the existing strip seal is either missing or completely damaged.
				RHS	Strip seals of expansion joint were filled with dirt & debris, also some strip seal elastomers	New strip seal elastomer shall need to be fixed for all expansion joints as the existing

S. no.	Chainage, km	Span Arrangement, m	Total Length, m	Side	Condition of Structure	Proposed repair and pending maintenance works
					were damaged/punctured.	strip seal is either missing or completely damaged.
2	2.900	4 x 25.00	100.00	LHS	Strip seals of expansion joint were filled with dirt & debris, also some strip seal elastomers were damaged/punctured.	New strip seal elastomer shall need to be fixed for all expansion joints as the existing strip seal is either missing or completely damaged.
				RHS	1.Concrete surface in pier cap was damaged in corner in P3. 2. For span 2 and 3, repair and rehabilitation of soffit of deck slab carried out with epoxy grouting.	1.Damaged concrete surface shall need to be rectified.

Figure 4-1: Condition of Major Bridges

4.4 Minor Bridges

There are 07 no. of Minor Bridges on the Project Stretch. The cost for repair and rectification has been factored in the O&M estimation and the Concessionaire has taken up the rectification works. The Structures are found in sound and satisfactory condition.

Detailed condition survey, necessary repair and pending maintenance works for all the Minor Bridges along the Project Stretch are given below,

Table 4-3: Existing condition and required repairs /maintenance works for Minor Bridges

S. no.	Chainage, km	Span Arrangement, m	Total Length, m	Side	Condition of Structure	Proposed repair and pending maintenance works

S. no.	Chainage, km	Span Arrangement, m	Total Length, m	Side	Condition of Structure	Proposed repair and pending maintenance works
1	2.363	3 x 5.50	18.10	LSR	1.Return wall damaged adjacent to abutment wall on A1 side. 2. Approach slab settlement was observed on both A1 and A2 sides.	1.Return wall shall need to be rectified. 2. Approach slab settlement near the structure shall be rectified with bituminous layer.
				LHS	Drainage spouts assembly was missing only 100mm dia hole made inside face of crash barrier.	New drainage spouts assembly shall need to be provided with G.I gratings and extension of down take pipe need to be extended up to 500mm down from soffit of slab to prevent water spillage.
				RHS	Drainage spouts assembly was missing only 100mm dia hole made inside face of crash barrier.	New drainage spouts assembly shall need to be provided with G.I gratings and extension of down take pipe need to be extended up to 500mm down from soffit of slab to prevent water spillage.
				RSR	Approach slab settlement was observed on both A1 and A2 sides.	Approach slab settlement near the structure shall be rectified with bituminous layer.
2	2.602	5 x 5.29	28.77	LSR	1.Quadrant pitching was disturbed on both A1 and A2 sides. 2. Approach slab settlement was observed on both A1 and A2 sides.	1.Quadrant pitching shall need to be rectified. 2. Approach slab settlement near the structure shall be rectified with bituminous layer.
				LHS	Drainage spouts assembly was missing.	New drainage spouts assembly shall need to be provided with G.I gratings and extension of down take pipe need to be extended up to 500mm down from soffit of slab to prevent water spillage.

S. no.	Chainage, km	Span Arrangement, m	Total Length, m	Side	Condition of Structure	Proposed repair and pending maintenance works
				RHS	Drainage spouts assembly was missing.	New drainage spouts assembly shall need to be provided with G.I gratings and extension of down take pipe need to be extended up to 500mm down from soffit of slab to prevent water spillage.
				RSR	Approach slab settlement was observed on both A1 and A2 sides.	Approach slab settlement near the structure shall be rectified with bituminous layer.
3	16.917	2 x 6.00	13.30	LSR	Quadrant pitching was disturbed on both A1 and A2 sides.	Quadrant pitching shall need to be rectified.
				LHS	Drainage spouts assembly was missing.	New drainage spouts assembly shall need to be provided with G.I gratings and extension of down take pipe need to be extended up to 500mm down from soffit of slab to prevent water spillage
				RHS	Drainage spouts assembly was missing.	New drainage spouts assembly shall need to be provided with G.I gratings and extension of down take pipe need to be extended up to 500mm down from soffit of slab to prevent water spillage
				RSR	Quadrant pitching was disturbed on both A1 and A2 sides.	Quadrant pitching shall need to be rectified.

S. no.	Chainage, km	Span Arrangement, m	Total Length, m	Side	Condition of Structure	Proposed repair and pending maintenance works
4	17.010	2 x 6.00	13.30	LSR	1.Quadrant pitching was disturbed on both A1 and A2 sides. 2.Hazard board was missing.	1.Quadrant pitching shall need to be rectified. 2.Hazard board shall need to be reinstated.
				LHS	1. Drainage spouts assembly was missing.	1. New drainage spouts assembly shall need to be provided with G.I gratings and extension of down take pipe need to be extended up to 500mm down from soffit of slab to prevent water spillage
				RHS	Drainage spouts assembly was missing.	New drainage spouts assembly shall need to be provided with G.I gratings and extension of down take pipe need to be extended up to 500mm down from soffit of slab to prevent water spillage
				RSR	1.Quadrant pitching was disturbed on both A1 and A2 sides. 2.Hazard board was missing.	1.Quadrant pitching shall need to be rectified. 2.Hazard board shall need to be reinstated.
5	31.020	3 x 17.00	51.00	LHS	1. Strip seal expansion joints were completely filled with dirt & debris. Also, it is observed that part of the edge angles was damaged at A1 and strip seal elastomer was punctured at most of the locations.	1. New strip seal elastomer shall need to be fixed for all expansion joints as the existing strip seal is either missing or completely damaged and new strip seal expansion joint assembly (Edge angles, strip seal elastomer) to be fixed with edge angle top level flush with BC finished level at A1.

S. no.	Chainage, km	Span Arrangement, m	Total Length, m	Side	Condition of Structure	Proposed repair and pending maintenance works
				RHS	Strip seals of expansion joint were filled with dirt & debris, also some strip seal elastomers were damaged/punctured.	New strip seal elastomer shall need to be fixed for all expansion joints as the existing strip seal is either missing or completely damaged.
6	2.420	1 x 8.45	9.47	LSR	1.Quadrant pitching was disturbed on both A1 and A2 sides. 2. Approach slab settlement was observed on both A1 and A2 sides.3. 3.	1.Quadrant pitching shall need to be rectified. 2. Approach slab settlement near the structure shall be rectified with bituminous layer.
				LHS	1. Drainage spouts assembly was missing.	1. New drainage spouts assembly shall need to be provided with G.I gratings and extension of down take pipe need to be extended up to 500mm down from soffit of slab to prevent water spillage.
				RHS	Drainage spouts assembly was missing.	New drainage spouts assembly shall need to be provided with G.I gratings and extension of down take pipe need to be extended up to 500mm down from soffit of slab to prevent water spillage.
				RSR	1. Honeycombing was observed on the median wall crash barrier. 2. Approach slab settlement was observed on both A1 and A2 sides.	1. Remove the loose material around the affected area and honeycombing, voids shall need to be sealed with epoxy mortar. 2. Approach slab settlement near the structure shall be rectified with bituminous layer.
7	6.546	1 x 13.80	13.80	LSR		
				LHS		
				RHS		

Figure 4-2: Condition of Minor Bridges

4.5 Vehicle Underpasses

There are 11 nos. of Vehicular Underpasses on the Project Stretch. **The cost for repair and rectification has been factored in the O&M estimation and the Concessionaire has taken up the rectification works. The Structures are found in sound and satisfactory condition.**

Present condition and required repair/ maintenance works for the Vehicular Underpasses are given below.

Table 4-4: Existing condition and required repairs /maintenance works for Vehicular Underpasses

S. no.	Chainage, km	Span Arrangement, m	Total Length, m	Side	Condition of Structure	Proposed repair and pending maintenance works
1	0.000	4 x 30.00	120.00		1.Strip seals of expansion joint were filled with dirt & debris, also some strip seal elastomers were damaged/punctured. 2.Wider gaps were observed on RE wall panels.	1. New strip seal elastomer shall need to be fixed for all expansion joints as the existing strip seal is either missing or completely damaged. 2. Gaps and cracks shall need to be filled with epoxy mortar.

S. no.	Chainage, km	Span Arrangement, m	Total Length, m	Side	Condition of Structure	Proposed repair and pending maintenance works
2	0.080	1 x 30.00	30.00	LHS	Strip seals of expansion joint were filled with dirt & debris.	Strip seal elastomer shall need to be cleaned from dirt and debris and make it functional.
3	5.160	1 x 20	20.00	LHS	Wider gaps were observed on RE wall panels.	Gaps and cracks shall need to be filled with epoxy mortar.
				RHS	Wider gaps were observed on RE wall panels.	Gaps and cracks shall need to be filled with epoxy mortar.
4	10.620	1 x 20.00	20.00	LHS	Strip seals of expansion joint were buried under bituminous layer.	New strip seal expansion joint assembly (Edge angles, strip seal elastomer) to be fixed with edge angle top level flush with BC finished level.
				RHS	Strip seals of expansion joint were buried under bituminous layer.	1. New strip seal expansion joint assembly (Edge angles, strip seal elastomer) to be fixed with edge angle top level flush with BC finished level.
5	13.000	1 x 20.00	20.00	LHS	Horizontal/vertical down take pipes were missing, which resulted rainwater falling on road users.	Horizontal drainage pipe shall need to provide connecting all drainage spouts in each span and further run along the external wall down to ground level drains.
				RHS	Exposure of reinforcement was noticed on the soffit of girder.	Exposed reinforcement locations shall be treated and rectified with epoxy grouting.
6	16.140	1 x 30.00	30.00	LHS	Horizontal/vertical down take pipes were missing, which resulted rainwater falling on road users.	Horizontal drainage pipe shall need to provide connecting all drainage spouts in each span and further run along the external wall down to ground level drains.
				RHS	1. Horizontal/vertical down take pipes were missing,	1. Horizontal drainage pipe shall need to

S. no.	Chainage, km	Span Arrangement, m	Total Length, m	Side	Condition of Structure	Proposed repair and pending maintenance works
					which resulted rainwater falling on road users.	provide connecting all drainage spouts in each span and further run along the external wall down to ground level drains.
7	17.350	2 x 30.00	60.00	LHS	Strip seal of expansion joints were completely filled with dirt & debris.	Dirt and debris need to be removed from all the expansion joints.
				RHS	Strip seal of expansion joints were completely filled with dirt & debris.	Dirt and debris need to be removed from all the expansion joints.
8	20.150	1 x 30.00	30.00	LHS	1. Strip seal of expansion joints were completely filled with dirt & debris. 2. Wider gaps were observed on RE wall panels.	1. Dirt and debris need to be removed from all the expansion joints. 2. Gaps shall need to be sealed with epoxy mortar.
				RHS	1. Horizontal/vertical down take pipes were missing, which resulted rainwater falling on road users. 2. Exposure of reinforcement was noticed on the soffit of deck slab.	1. Horizontal drainage pipe shall need to provide connecting all drainage spouts in each span and further run along the external wall down to ground level drains. 2. Exposed reinforcement locations shall be treated and rectified with epoxy grouting.
9	24.470	1 x 20.00	20.00	LHS	1. Horizontal/vertical down take pipes were missing, which resulted rainwater falling on road users. 2. Wider gaps were observed on RE wall panels.	1. Horizontal drainage pipe shall need to provide connecting all drainage spouts in each span and further run along the external wall down to ground level drains. 2. Gaps shall need to be sealed with epoxy mortar.
				RHS	2Wider gaps were observed on RE wall panels.	Gaps shall need to be sealed with epoxy mortar.
10	5.200	1 x 30.00	30.00	LHS	1. Strip seal of expansion joints were completely filled with dirt & debris. 2. Wider gaps were observed on RE wall panels.	1. Dirt and debris need to be removed from all the expansion joints. 2. Gaps shall need to be sealed with epoxy mortar.

S. no.	Chainage, km	Span Arrangement, m	Total Length, m	Side	Condition of Structure	Proposed repair and pending maintenance works
				RHS	Strip seal of expansion joints were completely filled with dirt & debris. Also, it is observed that edge angles are damaged and strip seal elastomer is punctured at some locations.	New strip seal elastomer shall need to be fixed for all expansion joints as the existing strip seal is either missing or completely damaged and new strip seal expansion joint assembly (Edge angles, strip seal elastomer) to be fixed with edge angle top level flush with BC finished level at A1.
11	8.800	1 x 30.00	30.00	LHS	1.Leaching cracks observed on the soffit of top slab. 2. Horizontal/vertical down take pipes were missing, which resulted rainwater falling on road users.	1. Leaching shall need to be clean and apply sealing agent on that location. 2. Horizontal drainage pipe shall need to provide connecting all drainage spouts in each span and further run along the external wall down to ground level drains.
				RHS	1.Leaching cracks observed on the soffit of top slab. 2. Horizontal/vertical down take pipes were missing, which resulted rainwater falling on road users.	1. Leaching shall need to be clean and apply sealing agent on that location. 2. Horizontal drainage pipe shall need to provide connecting all drainage spouts in each span and further run along the external wall down to ground level drains.

Figure 4-3: Condition of Vehicular Underpasses

4.6 Pedestrian / Cattle Underpasses

There are 17 nos. of Pedestrian / Cattle Underpasses on the Project Stretch. **The cost for repair and rectification has been factored in the O&M estimation and the Concessionaire has taken up the rectification works. The Structures are found in sound and satisfactory condition.**

Present condition and required repair/ maintenance works for the Pedestrian / Cattle Underpasses are given below.

Table 4-5: Existing condition and required repairs /maintenance works for Pedestrian / Cattle Underpasses

S. no.	Chainage, km	Span Arrangement, m	Total Length, m	Side	Condition of Structure	Proposed repair and pending maintenance works
1	3.600	1 x 7.00	8.00	LHS	Scratches were observed on soffit of a deck slab due to oversized vehicle movement.	Height guard should be provided on both sides of underpass to avoid the entry of oversized vehicle movement.
				RHS	Scratches were observed on soffit of a deck slab due to oversized vehicle movement.	Height guard should be provided on both sides of underpass to avoid the entry of oversized vehicle movement.

S. no.	Chainage, km	Span Arrangement, m	Total Length, m	Side	Condition of Structure	Proposed repair and pending maintenance works
2	5.000	1 x 7.00	7.00	LHS	Structure was in good condition.	
				RHS	Structure was in good condition.	
3	5.200	1 x 7.00	7.00	LHS	Wider gaps were observed on RE wall panels.	Gaps shall need to be sealed with epoxy mortar.
				RHS	Wider gaps were observed on RE wall panels.	Gaps shall need to be sealed with epoxy mortar.
4	7.500	1 x 7.00	7.00	LHS	Water stagnated inside the vent.	Stagnated water shall need to drain off.
				RHS	Water stagnated inside the vent.	Stagnated water shall need to drain off.
5	9.950	1 x 7.00	7.00	LHS	Structure was in good condition.	
				RHS	Structure was in good condition.	
6	10.800	1 x 7.00	7.00	LHS	Structure was in good condition.	
				RHS	Structure was in good condition.	
7	19.100	1 x 7.00	7.00	LHS	Structure was in good condition.	
				RHS	Honeycombing was observed outer face of crash barrier.	Remove the loose material around the affected area and honeycombing, voids shall need to be sealed with epoxy mortar.
8	20.000	1 x 7.00	7.00	LHS	Wider gaps were observed on RE wall panels.	Gaps shall need to be sealed with epoxy mortar.
				RHS	Wider gaps were observed on RE wall panels.	Gaps shall need to be sealed with epoxy mortar.
9	20.300	1 x 7.00	7.00	LHS	Wider gaps were observed on RE wall panels.	Gaps shall need to be sealed with epoxy mortar.
				RHS	Wider gaps were observed on RE wall panels.	Gaps shall need to be sealed with epoxy mortar.
10	22.050	1 x 7.00	7.00	LHS	Structure was in good condition.	
				RHS	Exposure of reinforcement was noticed on the soffit of slab.	Exposed reinforcement locations shall be treated and rectified with epoxy grouting.
11	24.300	1 x 7.00	7.00	LHS	Structure was in good condition.	
				RHS	Structure was in good condition.	
12	24.600	1 x 7.00	7.00	LHS	Structure was in good condition.	
				RHS	Structure was in good condition.	
13	26.400	1 x 7.00	7.00	LHS	Structure was in good condition.	

S. no.	Chainage, km	Span Arrangement, m	Total Length, m	Side	Condition of Structure	Proposed repair and pending maintenance works
				RHS	Structure was in good condition.	
14	5.100	1 x 7.00	7.00	LHS	Wider gaps were observed on RE wall panels.	Gaps shall need to be sealed with epoxy mortar.
				RHS	Wider gaps were observed on RE wall panels.	Gaps shall need to be sealed with epoxy mortar.
15	5.300	1 x 7.00	7.00	LHS	Wider gaps were observed on RE wall panels.	Gaps shall need to be sealed with epoxy mortar.
				RHS	Wider gaps were observed on RE wall panels.	Gaps shall need to be sealed with epoxy mortar.
16	8.700	1 x 7.00	7.00	LHS	Structure was in good condition.	
				RHS	Honeycombing was observed on the soffit of top slab.	Remove the loose material around the affected area and honeycombing, voids shall need to be sealed with epoxy mortar.
17	8.900	1 x 7.00	7.00	LHS	Honeycombing was observed on the soffit of top slab.	Remove the loose material around the affected area and honeycombing, voids shall need to be sealed with epoxy mortar.
				RHS	Structure was in good condition.	

Figure 4-4: Condition of Pedestrian / Cattle Underpasses

4.7 Foot Over Bridge

There is 01 no. of Foot Over Bridge on the Project Stretch, which was additionally found at site. The condition of Foot Over Bridge was in good condition.

4.8 Culverts

There are 52 nos. of Box Culverts on the Project Stretch. The cost for repair and rectification has been factored in the O&M estimation and the Concessionaire has taken up the rectification works. The Structures are found in sound and satisfactory condition.

Common defects and / or pending maintenance works observed in condition survey, necessary repair and pending maintenance works for all the Box Culverts along the Project Stretch are given below,

Table 4-6: Existing condition and required repairs /maintenance works for Culverts

S. no.	Type of Culverts	No. of Culverts	Condition of Structure	Proposed repair and pending maintenance works
1	Box/Slab Culverts	52	1. Silt and debris accumulation was observed in the vent area and few culverts were fully / partially buried. 2. Quadrant pitching was disturbed at some culverts. 3. Honeycombing was observed on the return walls, side walls and the outer face of parapet walls in some locations.	1. Silt and debris accumulation shall be removed from the vent area. 2. Quadrant pitching shall need to be rectified. 3. Remove the loose material around the affected area and honeycombing, voids shall need to be sealed with epoxy mortar.

Figure 4-5: Condition of Culvert

Chapter 5
CONDITION ASSESSMENT OF EXISTING PAVEMENT CONDITION

CHAPTER 5. CONDITION ASSESSMENT OF EXISTING PAVEMENT CONDITION

To evaluate the existing pavement condition of a Project Highway, investigations are to be carried out on the field to collect data from the field. The collected data is processed and analysed to obtain complete information on the pavement condition.

5.1 Pavement Condition Assessment for Technical Due Diligence

As a part of technical due diligence, the different investigations performed on the Project site are listed below.

- Assessment of Pavement Condition based on Visual Condition Survey

Based on the visual condition survey, the type of distress, its quantity, and severity for each Stretch are obtained. The same is used to evaluate the present condition of pavement, which classifies pavement conditions ranging from 'Good' to 'Fair'.

The pavement investigation studies carried out on the Project Highway from 19th January 2024 to 20th January 2024 as a part of technical due diligence and their outcomes are detailed in the sections below.

5.2 Review of Concession Agreement

As per Schedule K of the Concession Agreement, the Concessionaire shall repair and rectify the defects and deficiencies as specified below

Table 5-1: Major maintenance criteria as per CA

S .No	Nature of Defect or Deficiency	Time limit for Repair/Rectification
1	Roughness value exceeding 2750 mm in a stretch of 1km (as measured by a standardized rough meter/bump integrator)	180 Days
2	Cracking in more than 5% of road surface in a stretch of 1 km	30 Days
3	Rutting exceeding 10mm in more than 2% of road surface in a stretch of 1km (measured with 3m straight edge)	30 Days

5.3 Review of Pavement Design Report

- The Schedule-B of concession agreement stipulates that design of Flexible pavement shall be carried out, but the Rigid pavement type is considered for main carriageway due to poor performance of existing flexible pavement.

- The design of Rigid pavement has been carried out in accordance with guidelines of IRC-58-2015.
- The thickness of Rigid-layers is designed for Main carriageway NH-148 B and Nizampur Link Road a period of 30 years and adopted Subgrade CBR is taken as 12%.
- The design of Rigid pavement Negative COS of 0.700 km was considered starting from Ch 0.000.
- The thickness of bituminous-layers is designed for a period of 15 years for Main Carriageway Approach Section of NH-148 B. Design traffic is 90 MSA and 120 MSA in LHS and RHS and Subgrade CBR is taken as 12%.
- The thickness of bituminous-layers is designed for a period of 15 years for Main Carriageway NH-11 and Widened Portion. Design traffic is 60 MSA and Subgrade CBR is taken as 12%.
- The pavement for the service/slip road has been designed as per IRC: 37-2018 as per Pavement Design Report 3 Option were considered for Construction of Service/Slip Road at different chainages as per requirement; Design traffic is 10 MSA and Subgrade CBR is taken as 12%.

Table 5-2: Pavement Design Thicknesses of Rigid Pavement for Main carriageway NH-148 B and Nizampur Link Road as per Pavement Design Report

Layer	Thickness(mm) LHS	Thickness(mm) RHS
Pavement Quality Concrete (PQC)	260	280
Dry Lean Concrete (DLC)	150	150
Granular Sub-base (GSB)	150	150

Table 5-3: Pavement Design Thicknesses for Flexible Pavement for Main carriageway Approach Section of NH-148 B as per Pavement Design Report

Layer	Thickness(mm) LHS	Thickness(mm) RHS
Bituminous Concrete (BC)	50	50
Dense Bituminous Macadam (DBM)	90	100
Wet Mix Macadam (WMM)	150	150
Cement Treated Sub-base (CTSB)	200	200

Table 5-4: Pavement Design Thicknesses for Flexible Pavement for Main carriageway of NH-11 as per Pavement Design Report

Layer	Thickness(mm)

Layer	Thickness(mm)
Bituminous Concrete (BC)	50
Dense Bituminous Macadam (DBM)	75
Wet Mix Macadam (WMM)	150
Cement Treated Sub-base (CTSB)	200

Table 5-5: Pavement Design Thicknesses for Flexible Pavement for Main carriageway of NH-11 Widened Portion as per Pavement Design Report

Layer	Thickness(mm)
Bituminous Concrete (BC)	50
Dense Bituminous Macadam (DBM)	100
Wet Mix Macadam (WMM)	250
Granular Sub-base (GSB)	200

Table 5-6: Pavement Design Thicknesses for Flexible Pavement of Service/Slip roads (Option 1) as per Pavement Design Report

Layer	Thickness(mm)
Bituminous Concrete (BC)	40
Dense Bituminous Macadam (DBM)	50
Wet Mix Macadam (WMM)	250
Granular Sub-base (GSB)	200

Table 5-7: Pavement Design Thicknesses for Flexible Pavement of Service/Slip roads (Option 2) as per Pavement Design Report

Layer	Thickness(mm)
Bituminous Concrete (BC)	40
Reclaimed Asphalt Pavement (RAP)	90
Cement Treated Sub-base (CTSB)	150

Table 5-8: Pavement Design Thicknesses for Flexible Pavement of Service/Slip roads (Option 3) as per Pavement Design Report

Layer	Thickness(mm)
Bituminous Concrete (BC)	40
Wet Mix Macadam (WMM)	150
Cement Treated Sub-base (CTSB)	150

5.4 Key Observations

Few observations made during the site visit by the pavement investigation team are as follows,

- Majority of the Pavement condition was observed to be good on both sides of the project stretch.
- Heavily loaded traffic was observed on both sides of the project stretch.
- Most of the heavily loaded trucks choose the inner lane as a travel path.
- Low severity cracks, Patchwork and Raveling were observed at some locations along the project stretch.
- Medium to high severity rutting has been observed at few isolated locations along the project stretch.

These are the routine maintenance work and cost of the same captured in Y-o-Y O&M and the concessionaire has taken up the rectification works

Based on the observations made during the visual condition survey, the pavement condition is categorized into three categories 'Good', 'Fair', and 'Distress'. The visual survey data and summary of the pavement condition of Project Stretch is given below.

Table 5-9: Pavement Visual Condition Survey Results

Condition	LHS		RHS	
	Length (km)	Length (%)	Length (km)	Length (%)
Good	40000	87%	38000	83%
Fair	5000	11%	7000	15%
Distress	1000	2%	1000	2%

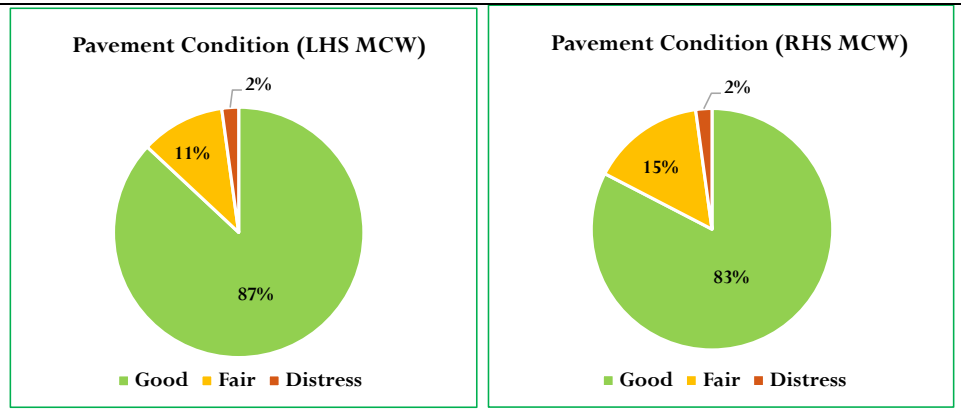


Figure 5-1: Pavement condition based on Visual condition survey

Commented [H1]: Remove distress as per our discussion

5.5 Pavement Roughness

Roughness is one of the important parameters for determining the functional characteristics of pavements. According to the American Society for Testing and Materials (ASTM), roughness is defined as "the deviations of a pavement surface from a true planar surface with characteristic dimensions that affect vehicle dynamics, ride quality, dynamic loads, and drainage, for example, longitudinal profile, transverse profile and cross-slope".

The roughness of road surfaces is measured using different equipment/techniques such as rod and level survey, dip stick profiler, profilographs, response type road roughness meters, and profiling devices.

In India, the roughness is measured using the fifth wheel bump integrator (developed by CRRI) and is reported as Unevenness Index (UI) in mm/km. In this report, Roughness is measured using an NSV profilometer on 1st February 2024, and a summary of the results are presented below:

Table 5-10: Summary of the Roughness values using NSV NH-148 B(km 0.000 to km 31.24)

Roughness Criteria		LHS						RHS					
		L1(km)	L1(%)	L2(km)	L2(%)	L3(km)	L3(%)	L1(km)	L1(%)	L2(km)	L2(%)	L3(km)	L3(%)
Good	<1800	12.64	40%	12.54	40%	11.26	40%	14.14	45%	14.34	46%	11.76	42%
Fair	1800-2400	18.60	60%	18.70	60%	16.70	60%	17.10	55%	16.90	54%	16.20	58%

Roughness Criteria		LHS						RHS					
		L1(km)	L1(%)	L2(km)	L2(%)	L3(km)	L3(%)	L1(km)	L1(%)	L2(km)	L2(%)	L3(km)	L3(%)
Distress	>2400	0.00	0%	0.00	0%	0.00	0%	0.00	0%	0.00	0%	0.00	0%

Table 5-11: Summary of the Roughness values using NSV NH-11 (km 0.00 to km 11.30)

Roughness Criteria		LHS						RHS					
		L1(km)	L1(%)	L2(km)	L2(%)	L3(km)	L3(%)	L1(km)	L1(%)	L2(km)	L2(%)	L3(km)	L3(%)
Good	<1800	4.80	42%	3.40	30%	1.40	50%	4.50	40%	4.50	40%	1.20	43%
Fair	1800-2400	6.50	58%	7.40	65%	1.40	50%	6.40	57%	6.70	59%	1.60	57%
Distress	>2400	0.00	0%	0.50	4%	0.00	0%	0.40	4%	0.10	1%	0.00	0%

Table 5-12: Summary of the Roughness values using NSV Nizampur Link Road (km 0.00 to km 2.76)

Roughness Criteria		LHS						RHS					
		L1(km)	L1(%)	L2(km)	L2(%)	L3(km)	L3(%)	L1(km)	L1(%)	L2(km)	L2(%)	L3(km)	L3(%)
Good	<1800	1.30	47%	1.20	43%	-	-	1.16	42%	1.26	46%	-	-
Fair	1800-2400	1.46	53%	1.56	57%	-	-	1.60	58%	1.50	54%	-	-
Distress	>2400	0.00	0%	0.00	0%	-	-	0.00	0%	0.00	0%	-	-

Chapter 6
ROAD SAFETY ASSESSMENT ALONG THE PROJECT STRETCH

CHAPTER 6. ROAD SAFETY ASSESSMENT ALONG THE PROJECT STRETCH

6.1 General

This chapter presents general road safety concerns observed along the Project Road and improvements suggested to address the same.

6.2 Site visit

Road Safety along the highway depends upon the condition of various components of the highway, such as coordination between horizontal and vertical alignment, provision and placement of road furniture, intersection geometry, availability of adequate sight distance, night-time visibility along the highway, etc. It is essential to understand all these aspects of the highway from a point of view of safety of each type of road user. The purpose of this assignment is to understand the road safety worthiness of Project Road and quantify road furniture items that are required as per the provisions of the Concession Agreement (CA). The report also summarizes high-risk safety concerns that persist for a reasonable length along the Project Road that helps improve the safety of road user upon implemented. It may be noted that, few minor observations that are part of regular O&M activities have not been quantified in this report and also geometrical improvements along with blackspots are not reviewed as part of this assignment. The scope has been constrained keeping in view the operational status of the Project Road and the focus is largely on the major safety concerns and deviations from CA provisions in road furniture, if any.

The Safety Team of CUBE Highways Technologies Pvt Ltd. visited the Project Road from 19th to 20th Jan 2024.

It may be noted that the Findings and Recommendations in this chapter are based on an independent inspection during a site visit along the Project Road and review of available information / documents. This chapter mainly focuses on high-risk safety concern and work zones related issues along the Project Road, and any major geometrical improvements, or location-specific improvements are not covered. However, based on visual observations and safety requirements identified by the safety team during the site visit, the requirement for additional safety furniture in line with CA provisions has been broadly identified and presented in the report. The chainages mentioned in the report may vary from the ground by approximately 50 to 100 meters within acceptable tolerances.

Along with manual observations, the entire Project Road is video graphed using Vehicle Video Recorder Driver's Eye Level Video, a snapshot of output obtained from the app view is shown below:

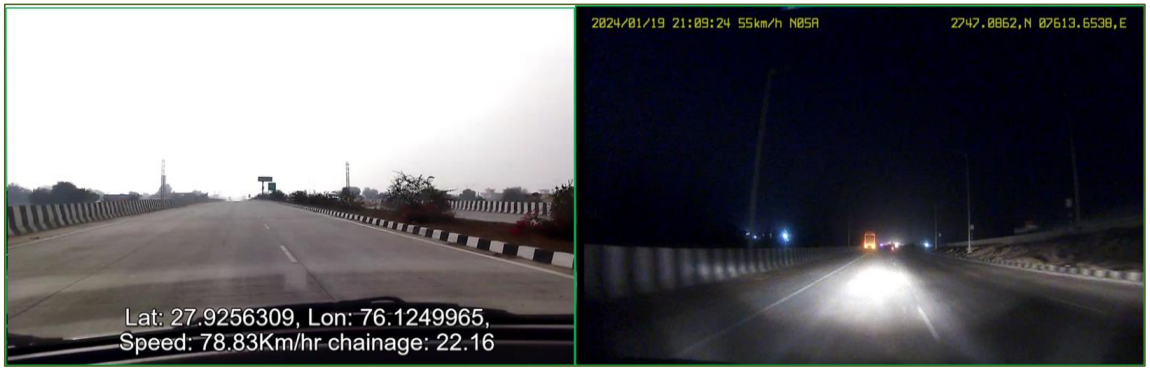


Figure 6-1: Snapshot-displaying output format of driver's eye level video

As can be seen in above image, the Vehicle Video Recorder records following details along with video:

- Video recording (front view – Driver's Eye Level View)
- Location of Video on the Google Map (along with coordinates of the location)
- Speed of the Recording Vehicle, in km/hour

6.3 Review of Project Documents and Communications related to Road Safety aspects

The following documents have been reviewed as a part of the Road Safety Assessment.

Table 6-1: Review of Project Documents and Communications related to road safety aspects

Document	Broad comments from Road Safety aspects
Concession Agreement (CA) -Signed on 28/02/2019 *(Concessionaire – M/s Gawar Narnaul Highway Pvt. Ltd)*	• Clauses and warrants of various facilities along the Project Road, applicable manual and specifications, deviations from specifications manual, etc., are reviewed. • The Project Road has been developed as per the applicable manual – IRC: SP:87-2013 (Narnaul Bypass crossing to Paniyala - NH-148B) and IRC: SP:84-2014 (Narnaul Bypass crossing to Pacheri Kalan - NH 11 and Nizampur Link Road). • *As per Sch-C, Clause 2.b (i and ii); Shoulder/median mounted and Overhead traffic signages shall be provided along the Project Road.*

Document	Broad comments from Road Safety aspects
	• *As per Sch-C, Clause 2.b (iv, vi and vii), LED traffic blinkers, road studs and road delineators shall be provided along the Project Road.* • *As per Sch-C, Clause 2.b (v), RCC crash barriers shall be provided along the Project Road.* • *As per Sch-C, Clause 2.c (i and ii), Highway lighting shall be provided along the Project Road.* All furniture items are to be provided in accordance with the applicable manual.
Monthly progress report (MPR) by IE *(IE -M/s L. N. Malviya Infra Projects Pvt. Ltd.)*	• About 7 IE MPRs (from June 2023 to December 2023) have been received from the Project Company for review. • This report provides a project overview, executive summary on project aspects, physical progress of site activities, financial progress, strip chart, and details of NCR etc. • About 7 months of historical accident data (June 2023 to December 2023) has been reported in the IE MPRs.
Appointed date, and COD correspondences	• Appointed date: As per, e-Stamp the appointed date of the Project is declared as 28-02-2019. • COD: As per Letter No. Completion Certificate i.e. 09-01-2021; COD of Project Road as per Clause 14.2 and 14.3 has been received on 09/01/2021.
Plan & Profile, TCS, COS, and approved drawings	• TCS and Plan & Profile drawings have been received and reviewed with respect to CA provisions. However, as mentioned earlier, location-specific/Black Spots-related geometrical aspects are not studied as part of this assignment. • TCS: Provision of a median safety barrier along the Project Road is missing.
Compliance of Safety Audit Report (GAWAR/NAR-PANI/NH-148B/O&M/2023/610)	Compliance of safety audit report of PKG-1 NH-14B and NH-11 (Oct 2023) is reviewed. The report summarizes the road safety issues and their compliances. Highlighted safety concerns in the report are related to the placement of missing sign boards, faded road markings, unprotected overhead sign boards, cleaning of paved shoulders, unauthorized parking of vehicles on the paved shoulder, non-functional highway lighting, damaged pedestrian guard rails, etc.
Accident Data	Accident data for about 7 months (From June 2023 to December 2023) has been reported in the IE MPRs and the same has been summarized in further sections of the report.

6.4 Accident data analysis

Accident data for about 7 months (from June 2023 to December 2023) has been reported in the IE MPRs, specifically for one section (NH-148B). A preliminary analysis of the provided data has been conducted to comprehend the severity of the Project Road**.**

Table 6-2: Summary of Accident data

Month of	No. of Accidents	Total	No. of Persons	Severity Index	Number of

accidents	Fatal	Grievous Injury	Minor	Accidents	% Fatal Accidents	Killed	Injured	(Number of persons killed per 100 accidents)	Persons Injured per 100 Accidents
Jun - 23	0	0	2	2	0%	0	2	0	100
Jul - 23	0	0	1	1	0%	0	1	0	100
Aug - 23	0	0	5	5	0%	0	9	0	180
Sep - 23	0	0	1	1	0%	0	1	0	100
Oct - 23	1	0	1	2	50%	1	1	50	50
Nov - 23	0	0	2	2	0%	0	1	0	50
Dec - 23	0	1	1	2	0%	0	2	0	100
Total Accidents	**1**	**1**	**13**	**15**	**7%**	**1**	**17**	**7**	113

From the above table, it can be understood that.

- On an average, about 2 accidents have been observed over the 7 months, indicating a positive sign that accident severity is very low along the Project Road, or there may be a possibility of missing data.
- In Aug 2023, 5 out of 5 accidents reported as minor accidents.
- Minor injuries predominantly reported as the trend of accidents throughout all months.
- The following pictures indicate that, 10 out of 15 accidents were reported as collisions (Type of collision has not been defined such as rear-end, head-on, or side impact collision etc.) i.e. as nature of accidents.
- Wrong-side driving, bike slip, and vehicle breakdown were reported as the major causes of the accidents.

Month of accidents	Nature of Accident			Total	Cause of Accident						Total
	Collision	Minor	No Data		Wrong Side	Bike Slip	Break down	Heart Attack	Collision	No Data	
Jun - 23	1	1	0	2	1	1	0	0	0	0	2
Jul - 23	1	0	0	1	1	0	0	0	0	0	1
Aug - 23	5	0	0	5	0	0	0	0	0	5	5
Sep - 23	1	0	0	1	1	0	0	0	0	0	1
Oct - 23	1	0	1	2	0	0	1	1	0	0	2
Nov - 23	1	0	1	2	0	0	1	0	0	1	2
Dec - 23	0	0	2	2	0	1	0	0	1	0	2
Total Accidents	10	1	4	15	3	2	2	1	1	6	15

Chapter 7
OPERATION & MAINTENANCE COST

CHAPTER 7. OPERATION AND MAINTENANCE COST

7.1 General

This Chapter presents details on the O&M expenditure to be incurred. The expenses are divided into four heads.

- Routine Maintenance Expenses to maintain the asset to the standards set forth in the Concession Agreement.
- Major/ Periodic Maintenance Expenses
- Operating Expenses

7.2 Estimation of Operation & Maintainance cost

The Routine Maintenance activities related to pavement include pothole repair, crack sealing, shoulder repair, drain maintenance, renewal of road markings, maintenance of cross drainage works etc. A before-hand estimate of repairs to be carried annually, must be determined to calculate the anticipated routine maintenance cost of the Project. Most of the annual routine maintenance activities are estimated based on experience and the past data of the Project as these activities varies Project to Project and there are no hard and fast rules to obtain exact quantity.

Routine maintenance cost for this Project is summarized in next section of Cost Estimates. The list of items considered in routine maintenance are summarized in the table below,

Table 7-1: List of Items Considered in Routine Maintenance Cost Estimate

S. No	Description of Item
1	**HIGHWAY**
	Flexible Pavement
	▪ Potholes ▪ Cracks ▪ Rutting/Depression/Settlement ▪ Ravelling/Stripping ▪ Re-surfacing
	Rigid Pavement

S. No	Description of Item
	▪ Slab Replacement ▪ Crack Sealing ▪ Ravelling/honeycombing, scaling, Polished Surface
	Hard/Earth shoulders, side slopes
	▪ Edge drop at shoulders ▪ Blading/reshaping to restore proper slopes and sides so as to maintain the standard formation width ▪ Rain cuts/gullies in slope ▪ Repairs of Stone Pitching/Turfing
2	**STRUCTURES**
	Superstructure of Bridges
	▪ Cracks ▪ Temporary Measures ▪ Permanent Measures ▪ Spalling / Scaling
	Foundation of Bridges
	▪ Scouring and /or Cavitation
	Piers, abutments, return walls and wing walls of bridges
	▪ Cracks and damages including settlement and tilting
	Joints in bridges
	▪ Loosening and malfunctioning of joints
	Other items relating to bridges
	▪ Gathering of dirt in bearings and joints or clogging of spouts, weep holes and vent-holes ▪ Damage or deterioration in parapets and handrails ▪ Rain-cuts or erosion of banks of the side slopes of approaches ▪ Damage to wearing coat ▪ Damage or deterioration in approach slabs, pitching, apron, toes, floor or guide bunds ▪ Growth of vegetation affecting the structure or obstructing the waterway

S. No	Description of Item
3	**ROAD FURNITURES, SIGNAGES AND PAVEMENT MARKING**
	▪ Repair to road signs -damage to shape or position; Poor visibility or loss of retro-reflectivity ▪ Replacing/installing delineators ▪ Replacing uninstalling delineators & all type of road sign ▪ Repairs MBCB ▪ Replacing of MBCB /New jersey crash barrier ▪ Repairs to Handrails /Pedestrian guard rails /flyover railings etc. ▪ Replace Handrails /Pedestrian guardrails/flyover railings etc. ▪ Fixing of distance measurement stone ▪ Hectometre stones ▪ Kilometre stones ▪ 5th Kilometre stones ▪ Boundary stones ▪ Painting ▪ Hectometre stones ▪ Pavement Marking ▪ Hot applied thermoplastic compound ▪ Painting kerb with synthetic enamel paint
4	**MISCELLANEOUS ITEMS**
	Street Lighting, Electrical systems repair and maintenance etc

The routine maintenance expenses to maintain the asset to the standards set forth in the Concession Agreement are given in the table below.

Table 7-2: Routine maintenance cost of the Project for the Base Year FY 25

S. No.	Particulars	Frequency	Cost including GST (Cr.)	Remarks
1	**Routine Maintenance Cost**	**Annual**		
	Highway		1.05	
	Structures		0.99	
	Road Furniture, Signage & Pavement marking		0.74	
	Project Facilities		0.27	
	Total RM cost		**3.05**	

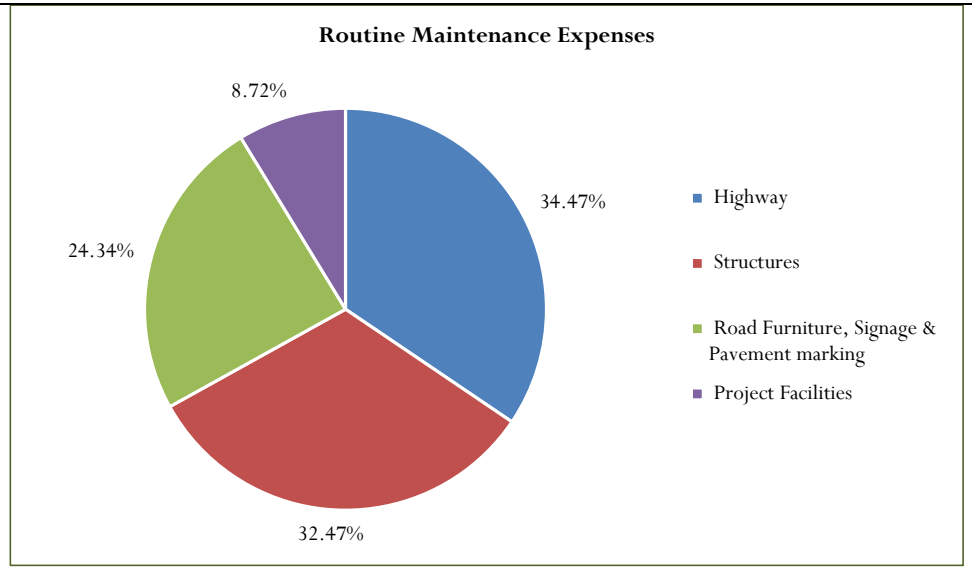


Figure 7-1: Breakup of Routine Maintenance

Table 7-3: Operational Expenditure of the Project for the Base Year FY 25

The calculation of operational expenditure for the base year FY 25 is given below:

S. no.	Description	Manpower	Annual Exp. (in Lakhs)
A.1	SPV staff and salaries	10.75	55.7
A.2	Tolling Operations Services_Outsourced	0	0.0
A.3	Security Services_Outsourced	4	15.9
A.4	Incident Management Services	50	194.2
A.5	RoW and Horticulture Works_ Manpower		72.1
A.6	Electricity and Diesel Charges		95.4
A.7	TMS/HTMS System Expenses		33.9
A.8	Office Operating Expenses		4.9
A.9	Vehicle Running Expenses		17.6
A.10	Professional Fee		27.8
A.11	Community Development		0.0
A.12	Communication Expenses		1.2
A.13	Conveyance Expenses		2.4
A.14	Insurance Expenses		79.6
A.15	IE Fees		60.0
A.16	Contingency	1%	6.6
	OPEX		667.5

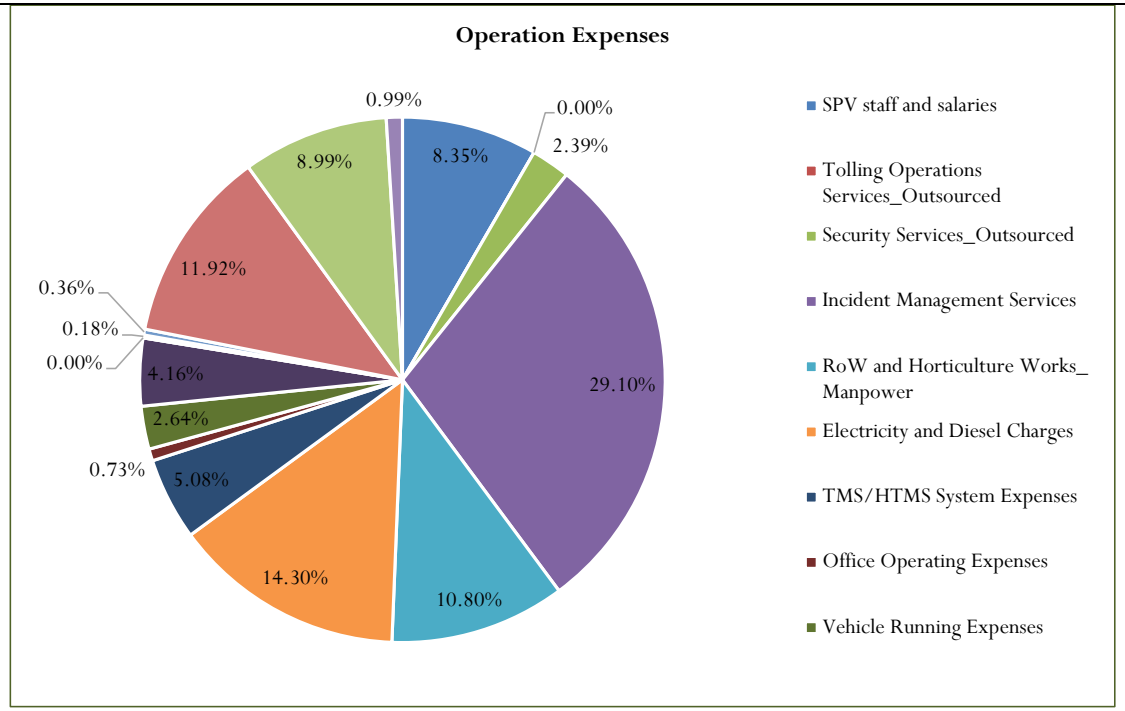


Figure 7-2: Breakup of Operation Cost

7.3 Major Maintenance Estimate

Cube Tech has considered 2 cycles for Major Maintenance. In cycle 1, for main carriageway BC overlay of 30 mm is considered and for service road microsurfacing is considered. In cycle 2, for main carriageway and service road BC overlay of 30 mm is considered.

The estimate for Major Maintenance activities of the Project Stretch is as detailed below:

Table 7-4: Major Maintenance Cost for MM Cycle 1

Major Maintenance - 1st Cycle					
S. No.	**Description**	**Unit**	**Qty**	**Rate**	**Amount**
1	Bituminous Concrete (VG - 40)	Cum	16,501.31	9,700.00	16,00,62,693
2	Tack Coat	Sqm	5,50,043.62	14.00	77,00,611
3	Pavement Markings	Sqm	61,240.94	450.00	2,75,58,422
4	Kerb Painting	Sqm	57,547.50	90.00	51,79,275
5	Slab replacement cost (PQC)	Cum	2,378.27	6,892.00	1,63,91,058
6	Joint seal defects, spalling and faulting of joints	Rm	20,464.00	120.00	24,55,680
7	PQC Taxing	Sqm	2,43,925.44	100.00	2,43,92,544
8	Microsurfacing	Sqm	6,12,427.50	180.00	11,02,36,950
9	Earthen Shoulder	Cum	11,640.70	350.00	40,74,245
10	ATMS Replacement	Ls	1.00	90,00,000.00	90,00,000
11	Miscellaneous and Contingencies (1%)				35,80,515
			Grand Total		**37,06,31,992.16**
			Grand Total including GST (18%)		**43,73,45,750.74**
			Grand Total (In Cr)		**43.73**

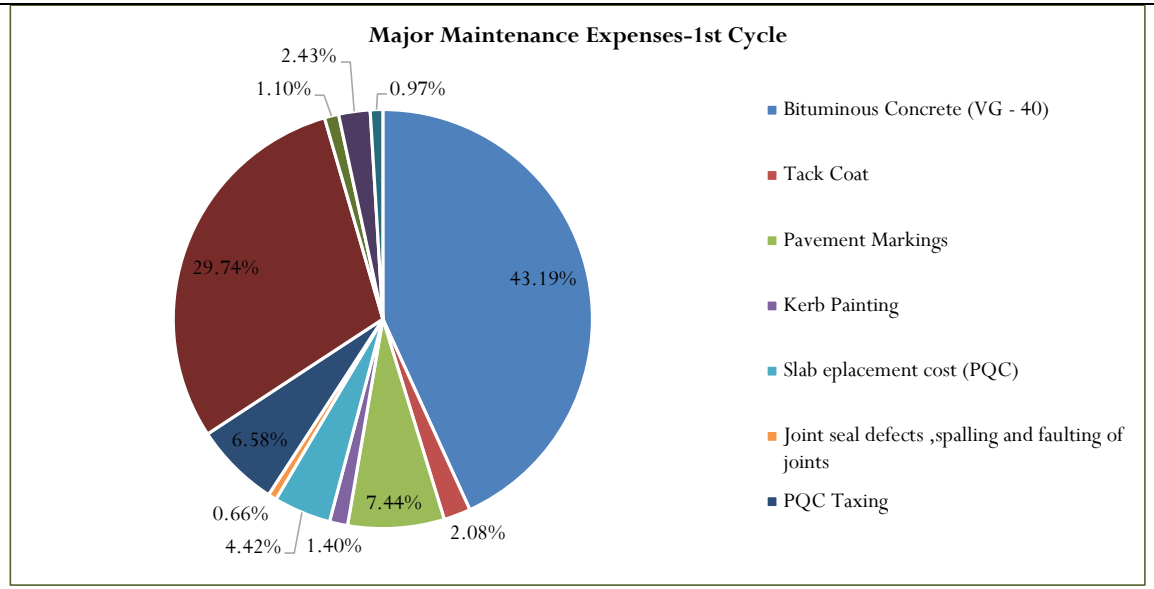


Figure 7-3: Breakup of Major Maintenance Expenses 1st Cycle

Table 7-5: Major Maintenance Cost for MM Cycle 2

Major Maintenance - 2nd Cycle					
S. No.	**Description**	**Unit**	**Qty**	**Rate**	**Amount**
1	Bituminous Concrete (VG - 40)	Cum	33,794.13	9,700	32,78,03,095
2	Tack Coat	Sqm	11,26,471.12	14	1,57,70,596
3	Pavement Markings	Sqm	61,240.94	450	2,75,58,422
4	Kerb Painting	Sqm	57,547.50	90	51,79,275
5	Slab replacement cost (PQC)	Cum	2,378.27	6,892	1,63,91,058
6	Joint seal defects, spalling and faulting of joints	Rm	25,580.00	120	30,69,600
7	PQC Taxing	Sqm	3,04,906.80	100	3,04,90,680

Major Maintenance - 2nd Cycle					
S. No.	**Description**	**Unit**	**Qty**	**Rate**	**Amount**
8	Earthen Shoulder	Cum	11,640.70	350	40,74,245
9	ATMS Replacement	Ls	1.00	90,00,000	90,00,000
10	Miscellaneous and Contingencies (1%)	0	0.00	0	43,03,370
			Grand Total		**44,36,40,340.59**
			Grand Total including GST (18%)		**52,34,95,601.90**
			Grand Total (In Cr)		**52.35**

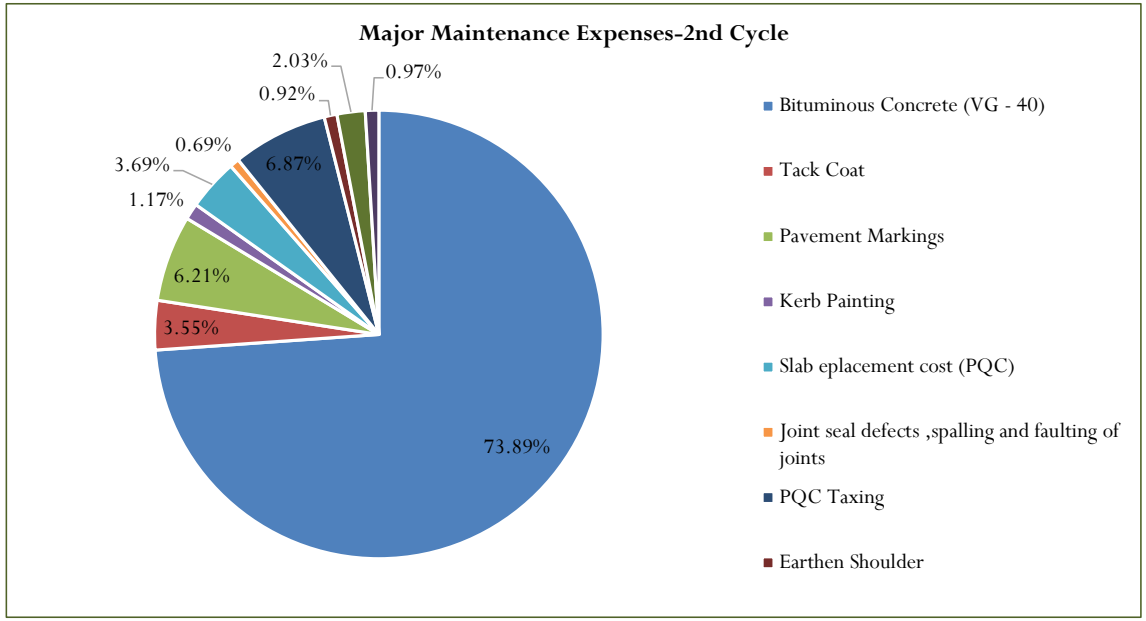


Figure 7-4: Major Maintenance Expenses 2nd Cycle

7.3.1 Major Maintenance expenses during O&M period

As per the Cube Tech estimate, the total Major Maintenance expense including the escalation is Rs.131.84 cr.

7.4 Projections of O&M Expenses

The O&M expenses for the entire Concession Period is presented in this section .

The following escalations are considered:

Table 7-6:Escalation Factors

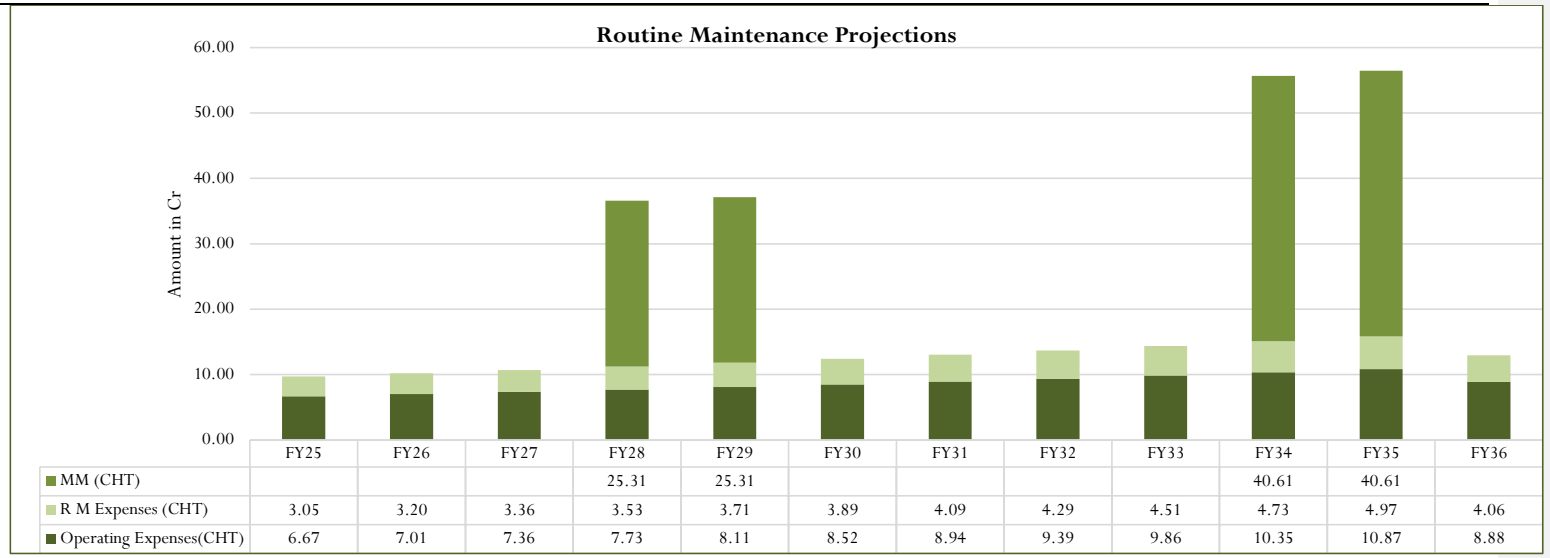
Items	Escalation
Operating Expenses	5.00%
Routine Maintenance	5.00%
Major Maintenance	5.00%

The Projections of total O& M expenses including Major Maintenance for 2 Cycles of the Project Company and CHT is given in the table below

Table 7-7: Projections of total O&M expenses of the Project during O&M period

Particulars	Total Expense (In Cr.)	Base-FY 25	FY25	FY26	FY27	FY28	FY29	FY30	FY31	FY32	FY33	FY34	FY35	FY36
Operating Expenses (CHT)	**103.71**	6.67	6.67	7.01	7.36	7.73	8.11	8.52	8.94	9.39	9.86	10.35	10.87	8.88
R M Expenses (CHT)	**47.38**	3.05	3.05	3.20	3.36	3.53	3.71	3.89	4.09	4.29	4.51	4.73	4.97	4.06
MM (CHT)	**131.84**					25.31	25.31					40.61	40.61	
O&M and MM (CHT)	**282.93**		9.72	10.21	10.72	36.57	37.13	12.41	13.03	13.68	14.37	55.69	56.45	12.94

The graph for the total cost Projections of expenses during O&M period given by the Cube Highways Technologies is shown in the figure below.

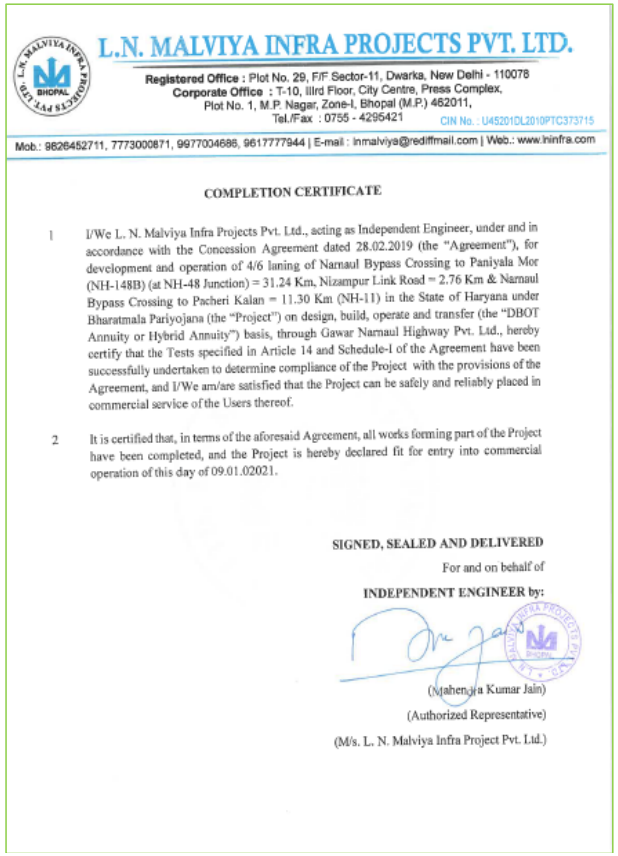


	FY25	FY26	FY27	FY28	FY29	FY30	FY31	FY32	FY33	FY34	FY35	FY36
MM (CHT)				25.31	25.31					40.61	40.61	
R M Expenses (CHT)	3.05	3.20	3.36	3.53	3.71	3.89	4.09	4.29	4.51	4.73	4.97	4.06
Operating Expenses(CHT)	6.67	7.01	7.36	7.73	8.11	8.52	8.94	9.39	9.86	10.35	10.87	8.88

Figure 7-5: O&M, RM and MM Expenses Projections

The total O&M cost including Major Maintenance estimated by the CHT is Rs.282.93 Cr.

Annexure I: Completion Certificate



L.N. MALVIYA INFRA PROJECTS PVT. LTD.

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Plot No. 1, M.P. Nagar, Zone-I, Bhopal (M.P.) 462011,
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Mob.: 9826452711, 7773000871, 9977004686, 9617777944 | E-mail : lnmalviya@rediffmail.com | Web.: www.lninfra.com

COMPLETION CERTIFICATE

1 I/We L. N. Malviya Infra Projects Pvt. Ltd., acting as Independent Engineer, under and in accordance with the Concession Agreement dated 28.02.2019 (the "Agreement"), for development and operation of 4/6 laning of Narnaul Bypass Crossing to Paniyala Mor (NH-148B) (at NH-48 Junction) = 31.24 Km, Nizampur Link Road = 2.76 Km & Narnaul Bypass Crossing to Pacheri Kalan = 11.30 Km (NH-11) in the State of Haryana under Bharatmala Pariyojana (the "Project") on design, build, operate and transfer (the "DBOT Annuity or Hybrid Annuity") basis, through Gawar Narnaul Highway Pvt. Ltd., hereby certify that the Tests specified in Article 14 and Schedule-I of the Agreement have been successfully undertaken to determine compliance of the Project with the provisions of the Agreement, and I/We am/are satisfied that the Project can be safely and reliably placed in commercial service of the Users thereof.

2 It is certified that, in terms of the aforesaid Agreement, all works forming part of the Project have been completed, and the Project is hereby declared fit for entry into commercial operation of this day of 09.01.02021.

SIGNED, SEALED AND DELIVERED
For and on behalf of
INDEPENDENT ENGINEER by:

(Mahendra Kumar Jain)
(Authorized Representative)
(M/s. L. N. Malviya Infra Project Pvt. Ltd.)

Annexure II: Pavement Visual Condition Survey data for MCW

Remarks	Condition	From	To	Condition	Remarks
No distress	Good	-0+700	0+000	Good	No distress
20m Crack	Good	0+000	1+000	Fair	200m Rutting
20m Patch	Good	1+000	2+000	Good	No distress
50m Patch+20m Crack	Good	2+000	3+000	Good	50m Rutting+100m Patch
200m Rutting	Fair	3+000	4+000	Fair	400m Patch
No distress	Good	4+000	5+000	Fair	300m Patch
50m Cracks	Good	5+000	6+000	Distress	500m Patch+Rutting
No distress	Good	6+000	7+000	Good	No distress
20m Patch	Good	7+000	8+000	Good	No distress
No distress	Good	8+000	9+000	Good	No distress
100m Rutting	Good	9+000	10+000	Good	No distress
400m Minor Rutting	Fair	10+000	11+000	Fair	500m Patch
100m Rutting	Good	11+000	12+000	Good	No distress
No distress	Good	12+000	13+000	Fair	400m Patch
100m Patch	Good	13+000	14+000	Fair	600m Patch
No distress	Good	14+000	15+000	Good	No distress
No distress	Good	15+000	16+000	Good	No distress
No distress	Good	16+000	17+000	Good	No distress
50mm Minor Rutting	Fair	17+000	18+000	Fair	500m Patch
No distress	Good	18+000	19+000	Good	No distress
100m Rutting	Good	19+000	20+000	Good	No distress
200mm Minor Rutting	Fair	20+000	21+000	Good	No distress
No distress	Good	21+000	22+000	Good	No distress
20m Patch	Good	22+000	23+000	Good	No distress

Remarks	Condition	From	To	Condition	Remarks
No distress and T.P @ Ch 33	Good	23+000	24+000	Good	No distress
500m Rutting	Distress	24+000	25+000	Good	No distress
No distress	Good	25+000	26+000	Good	No distress
No distress	Good	26+000	27+000	Good	No distress
No distress	Good	27+000	28+000	Good	No distress
No distress	Good	28+000	29+000	Good	No distress
50m Patch	Good	29+000	30+000	Good	No distress
No distress	Good	30+000	31+000	Good	No distress
No distress	Good	31+000	31+240	Good	No distress
No distress	Good	0+000	1+000	Good	No distress
No distress	Good	1+000	2+000	Good	50m Patch
100m Patch	Good	2+000	3+000	Good	50m Crack+100m Patch
No distress	Good	3+000	4+000	Good	No distress
100m Patch	Good	4+000	5+000	Good	No distress
20m Patch+300m minor Rutting	Fair	5+000	6+000	Good	200m Minor Rutting
50m Patch	Good	6+000	7+000	Good	200m Patch
No distress	Good	7+000	8+000	Good	No distress
200m Patch	Good	8+000	9+000	Good	200m Minor Rutting
No distress	Good	9+000	10+000	Good	No distress
No distress	Good	10+000	11+000	Good	No distress
No distress	Good	11+000	11+300	Good	No distress
No distress	Good	0+000	1+000	Good	No distress
No distress	Good	1+000	2+000	Good	No distress
No distress	Good	2+000	2+760	Good	No distress

Annexure VII: Pavement Distress Survey

A pavement condition survey gives an indication of the serviceability of the road pavement and is vital in deciding the maintenance activities. Some methods to conduct this survey are the Visual Condition Survey method (manual), Network Survey Vehicle (NSV) method, etc. However, Visual Condition Survey was conducted in this Project.

In a visual condition survey, the technical experienced staff makes a traverse along the project stretch, observing the different types of distresses on the pavement surface, and observations are made on each distress type.

Distresses on bituminous pavements include

- Cracks – Longitudinal, Transverse, and Alligator cracks
- Corner breaks
- Spalling of Joints
- Raveling
- Rutting
- Bleeding
- Potholes
- Patches

These are routine maintenance work and cost of the same captured in Y-o-Y O&M and concessionaire has taken up the rectification works. Observations made during the visual condition survey are detailed below.

Longitudinal Cracks

Structural cracks like longitudinal cracks develop parallel to the traffic direction and extend through the depth of the bituminous pavement layer, which can be bottom-up or top-down crack.

These cracks are proposed for route and seal, partial depth repair, full depth repair based on their severity.

Longitudinal cracks were observed at isolated locations of the project Stretch. These are routine maintenance work and cost of the same captured in Y-o-Y O&M and concessionaire has taken up the rectification works.

Figure: Longitudinal Cracks

Transverse Cracks

Structural cracks like transverse cracks develop perpendicular to the traffic direction and extend through the depth of the bituminous pavement layer.

Transverse cracks were observed at isolated locations of the project Stretch. These are routine maintenance work and cost of the same captured in Y-o-Y O&M and the Concessionaire has taken up the rectification works.

Figure: Tranverse Cracks

Alligator Cracks

Alligator cracking also referred to as fatigue cracking or crocodile cracking, refers to a pattern of asphalt damage that resembles the scales on an alligator's skin. The cracks form co-joined, irregular "blocks' that are often four-sided, such as rectangles, but they can also have more sides and, on occasion, as few as three sides.

Alligator cracks were observed at few isolated locations of the project Stretch. These are routine maintenance work and cost of the same captured in Y-o-Y O&M and the Concessionaire has taken up the rectification works

Corner Break

A portion of the slab is separated by a crack, which intersects the adjacent transverse and longitudinal joints, describing approximately a 45-degree angle with the direction of traffic. The length of the sides is from 0.3 m to half the width of the slab on each side of the corner.

Corner breaks were observed at few isolated locations along the Project. These are routine maintenance work and cost of the same captured in Y-o-Y O&M and the Concessionaire has taken up the rectification works

Spalling of Joint

Cracking, breaking, chipping, or fraying of slab edges within 0.3 m from the face of the joint.

Spalling of joint was observed at few isolated locations of the Project Stretch. These are routine maintenance work and cost of the same captured in Y-o-Y O&M and the Concessionaire has taken up the rectification works

Raveling

Ravelling is wearing away of the pavement surface due to loss of bitumen binder and dislodged aggregate particles. This distress indicates that either the bitumen binder has hardened appreciably, or a poor-quality mixture is present. In addition, ravelling may be caused by certain types of traffic, for example, tracked vehicles. Softening of the surface and dislodging of the aggregates due to oil spillage and weathering are also included under ravelling.

Low severity Ravelling was observed at few locations of the project Stretch. These are routine maintenance work and cost of the same captured in Y-o-Y O&M and the Concessionaire has taken up the rectification works

Figure: Raveling

Rutting

A rut is a surface depression of pavement in the wheel paths, and pavement uplift may occur along the sides of the rut. Rutting stems from a permanent deformation in any pavement layers or subgrade usually caused by consolidated or lateral movement of the materials due to traffic load.

Rutting associated with bleeding was observed at few locations of the project Stretch. These are routine maintenance work and cost of the same captured in Y-o-Y O&M and the Concessionaire has taken up the rectification works

Figure: Rutting

Bleeding

A surface having a thin film of excess or free bituminous binder on it, which creates a shiny, glass like reflecting surface tending to become soft in hot weather and slippery in cold and wet weather, eventually developing low skid resistance is referred to as bleeding or fatty bituminous surface.

Bleeding was observed at few isolated locations of the project Stretch. These are routine maintenance work and cost of the same captured in Y-o-Y O&M and the Concessionaire has taken up the rectification works

Potholes

Potholes are small (or big, based on severity) bowl-shaped depressions on the pavement surface. In general, potholes are formed in later stages of highly ravelled or cracked pavement surface resulting in bowl-shaped depressions.

Potholes were not observed at project Stretch.

Patches

The patch is an area of the pavement which have been repaired or replaced by new material to remove a certain defect on the pavement. The patch is considered a defect no matter how well it is performing, and some roughness is associated with this type of distress.

Patches were observed at few isolated locations of the project Stretch.

Figure: Patchwork

Annexure VIII: Identified Safety Concerns along the Project Road

Keeping in view the scope of assignment, safety concerns have been recorded on site and reported in the table below. Remarks and recommendation column includes information on clauses of CA & applicable manual, any observations in the IE reports/project documents and our recommendations against the highlighted safety concern. Risk and priority of each safety concern are also included as per the following criteria given in line with IRC: SP:88-2019 (Manual on Road Safety Audit).

- Risk categories for identified safety concern: Very High, High, and Medium
- Priority level for recommendations: Essential, Highly Desirable and Desirable

Table: Safety Concerns observed along the Project Road

S. No.	Safety concern		Recommendation		Type of concern
	Current Situation	Risk	Recommendation and Remarks	Priority	
1	**Safety Barrier**				
A	**Issue with connection between MBCB and Rigid barrier**	-		-	**NA**
	NA		NA		
B	**Improper start and end treatment of MBCB**	-		-	**NA**
	NA		NA		
C	**Damaged Metal beam crash barrier**	-		-	**NA**
	NA		NA		
D	**Wrong overlapping of MBCB plates**	-		-	**NA**
	NA		NA		
E	**Improper Arrangement of MBCB and Kerb**	-		-	**NA**
	NA		NA		
F	**MBCB Setback distance**	-		-	**NA**

S. No.	Safety concern		Recommendation		Type of concern
	Current Situation	**Risk**	**Recommendation and Remarks**	**Priority**	
	NA.		NA		
G	**Height of Crash barriers**	**-**		**-**	**NA**
	NA		NA		
H	**New installation of MBCB at hazardous locations**	**Very high**		**Highly Essential**	**New Installation**
	During the site visit, it was observed that MBCB is missing at multiple hazardous locations. These locations include: • At the high embankment sections • At the split-level sections • At the base of overhead signboards • Unprotected rigid barriers *(on median and shoulder sides)* • At the base of ATMS components The following photographs represent site scenario.		As per applicable manual of CA, i, e.- IRC: SP: 84-2014 and *IRC: SP: 87-2013, Clause 9.7.1 – Roadside Safety Barriers: "Barriers shall be provided at bridge piers, abutments and railing end, roadside rock mass, culverts, pipes and headwalls, cut slopes, retaining walls, lighting supports, traffic signs and signal supports, trees and utility poles".* For the sake of road user safety, it is recommended to assess such locations in accordance with the above-mentioned clauses. The details of hazardous locations requiring MBCB are outlined in Annexure I.		
I	**Welded connection of MBCB Plates**	**-**			**NA**

S. No.	Safety concern		Recommendation		Type of concern
	Current Situation	Risk	Recommendation and Remarks	Priority	
	NA		**NA**		
J	**Wire Rope Barrier Setback distance**	**-**		**-**	**NA**
	NA		NA		
K	**Wire Rope Barriers Distance from face of the kerb**	**-**		**-**	**NA**
	NA		NA		
L	**Start of RCC crash barrier w.r.t. grade separator**	**-**		**-**	**No Issue**
	No issue was observed.				
M	**RCC crash barrier at Bridges**	**-**		**-**	**No Issue**
	No issue was observed.				
2	**Pedestrian Guard Rail**				
A	**New installation of PGR at built-up section**	**-**		**-**	**No Issue**
	No issue was observed.				
B	**PGR and rigid barrier connection**	**-**		**-**	**No Issue**
	No issue was observed.				
3	**Median walls in b/w structures**	**-**		**-**	**No Issue**
	No issue was observed.				
4	**Status of Highway Lighting along the Project Road**				
A	**Status of Highway Lighting at Grade separated Structures**	**High**		**Essential**	**New Installation**
	Upon visual inspection, it has been noted that highway lighting *(a few of them were non-functional)* is only installed on the deck of the grade-separated structures, where it shall also be provided on the approaches to these structures. Additionally, it was observed that floodlights are installed below underpasses *(a few of them being non-functional)* at certain locations along the Project Road. However, at a few other locations, floodlights are missing below underpasses.		As per clause 12.3.3, IRC: SP:84-2014, Highway lighting shall be provided at *Grade separated Structures, Interchanges, Flyovers, Underpasses (vehicular/ pedestrian), and Overpasses: Lighting shall be provided as per Para 3.3.4 of the Manual.* As per Clause 3.3.4 of IRC: SP:84-2014, *"The top*		

S. No.	Safety concern		Recommendation		Type of concern
	Current Situation	Risk	Recommendation and Remarks	Priority	
			and underside of the grade-separated structures and interchange area at the ground ***level up to 50 m beyond the point*** *from where flaring of the main carriageway takes place shall be provided with lighting".*		
5	**Solar Blinker**				
A	**Non-Functional solar blinkers and missing blinker lights**	**-**		**-**	**No Issue**
	Adequate solar blinkers have been observed along the Project Road and all of them are functional.		No issue was observed		
B	**Height of solar blinkers**	**-**		**-**	**No Issue**
	Based on visual inspection, it was observed that the height of the solar blinker was adequate.		No issue was observed		
C	**LED Traffic Beacons/Solar Blinkers arrangement**	**-**			**No Issue**
	No issue was observed		No issue was observed		
D	**New Installation of Solar Blinkers**	**-**		**-**	**No Issue**
	There is no requirement of additional solar blinkers as per the site condition.		No issue was observed.		
6	**Night-time visibility**	**-**		**-**	**New Installation**

S. No.	Safety concern		Recommendation		Type of concern
	Current Situation	**Risk**	**Recommendation and Remarks**	**Priority**	
	Retroreflective stickers on the road furniture are adequately provided wherever required. Additionally, provided highway lighting is functional and effective.		No issue was observed.		
7	**Object and Kerb Painting**	**Medium**		**Essential**	**New Installation**
	Upon site inspection, the provided kerb painting and object painting (on the rigid crash barrier) of structures were observed to be adequate along the Project Road. However, object painting was missing for a few of the soffits of the superstructures where hazard marking patterns on soffits of superstructure shall indicate structure height to road users, especially during nighttime. The current scenario of these concerns is depicted below.		**Object Hazard Marking on Fixed Objects:** *All the entry and exit of the VUP/PUPs, the face of the wall of VUP/PUP shall be marked with OHM to enhance safety during nighttime.* These are routine maintenance work and cost of the same captured in Y-o-Y O&M and the Concessionaire has taken up the rectification works		
8	**Safety Measures at critical locations, i.e., Transverse Bar Marking**	**-**		**-**	**No Issue**
	Transverse Bar Marking has been provided at median openings and hazardous approaches.		No issue was observed		
9	**Chevron Marking**	**High**		**Essential**	**Deviation**
	Upon visual inspection, it was observed that chevron road marking is missing at few locations of service road entry/exits along the Project Road. 		As per IRC: SP:87-2013, Clause 9.3.3 "*Chevron marking shall be provided for all entry/exit and shall be in continuation of shoulder edge line".*		

S. No.	Safety concern		Recommendation		Type of concern
	Current Situation	Risk	Recommendation and Remarks	Priority	
10	**Road Studs**	**-**		**-**	**No Issue**
	Road studs have been provided for most locations along the Project Road.		No issue was observed		
11	**Road Delineator**	**Medium**		**Desirable**	**No Issue**
	During the site visit, it was observed that there are inadequate delineators along a few curves and variable high embankment locations of the Project Road.		As per CA, Clause C, 2(b) vii. "*Delineators/road studs shall be provided for the entire project highway as per IRC:79-1981 and sire requirement and specification as per schedule D*". Delineators shall provide visual assistance to drivers, especially at night, to convey information about the alignment of the road ahead. Hence, it is suggested to review the provision of the same along the Project Road.		
12	**Road Geometry**				
A	**Improper connections of Minor Roads**	**-**		**-**	**No Issue**
	All major and minor road existing connections are properly maintained.		No issue was observed		
B	**Absence of storage lane at median opening/U-turn locations**	**-**		**-**	**No Issue**
	All existing median openings are equipped with storage lanes on BHS.		No issue was observed		
C	**Un-Authorized Median Openings (UMO)**	**-**		**-**	**No Issue**
	No issues are currently observed. If any UMO is encountered in the future, it will be addressed with priority and closed promptly.				
13	**Landscaping and Tree Plantation**				
A	**Avenue plantation condition**	**-**		**-**	**No Issue**
	During the site visit it was observed that adequate plantation is provided all along the project road.		No issue was observed		
B	**Median Plantation in No Plantation Zone**	**-**		**-**	**No Issue**

S. No.	Safety concern		Recommendation		Type of concern
	Current Situation	Risk	Recommendation and Remarks	Priority	
	No issue was observed				
14	**Truck Lay Bays/Bus Bays/Wayside Amenities**				
A	**Truck Lay Bye Layout**	**-**		**-**	**No Issue**
	No issue was observed				
B	**Bus Bays and Bus Shelters**	**-**		**-**	**Operational Issue**
	Bus-shelters are under construction along the Project Road.				
C	**Rest Areas / Wayside Amenities**	**-**		**-**	**No Issue**
	No issue was observed.				
15	**Other General Issues**				
A	**Water Stagnation**	**-**		**-**	**No Issue**
	No issue was observed				
B	**Encroachment by temporary shops**	**-**		**-**	**No Issue**
	No issue was observed				
16	**High Transmission Line Vertical clearance**	**-**		**-**	**No Issue**
	No issue was observed				
17	**Ongoing Construction-Related Issues**	**-**		**-**	**No Issue**
	No ongoing construction activities were observed during the site visit.		No issue was observed		

Summary of Recommendations

It may be noted that during the safety inspection, a few safety concerns that can be attributed to deviation from the applicable manual have been identified and presented in the Report. However, it is acknowledged that the site has been mostly constructed in accordance with the approved drawings. It shall be noted that the identified safety concerns may deteriorate the safe operation of the project over the years. To rectify these issues cost intensive measures would be required. However, due to the limitation of the study, quantification of all the identified safety concerns could not be carried out that has been notified in this report.

The following points below provide a summary of recommendations based on the site visit and review of submitted documents that shall help in elevating the overall profile of the Project Road.

- Provision of safety barriers on either side of rigid crash barriers, at the base of overhead signs, along high embankment sections, and along split-level sections.
- Provision of Safety Barriers on approaches to FOB piers based on available working width and required containment levels.
- Review the provision of highway lighting on approaches of grade-separated structures.
- Install the missing OHM to highlight hazards close to the travel path.
- Rectify the damaged and non-standard sign boards along the Project Road
- Review the provision of delineators along variable high embankments, curve sections critical junctions, etc.
- Enhance the visibility of superstructures and the safety of road users by providing object painting and hazard markers.

It may be noted that apart from the above-mentioned safety concerns, the overall road safety scenario along the Project Road is satisfactory. Repair and rectification cost has been factored in O&M estimation and the concessionaire has taken the rectification works.

Technical Due Diligence for Redesigning, Rehabilitation and Upgradation to Four Lane configuration and Strengthening of UP/Haryana border to Rohna section from km 0.000 to km 44.800 (Design Chainage) (Length 40.500km) of NH-334B in the state of Haryana on HAM Mode (Package-1)

Technical Due Diligence Report (Private and Confidential)

July 2024

Submitted to:

Gawar Rohna Sonepat Highways Private Limited

Cube Highways Technologies Private Limited

CUBETECH
Cube Highways Technologies Pvt. Ltd.

Technical Due Diligence for Redesigning, Rehabilitation and Upgradation to Four Lane configuration and Strengthening of UP/Haryana border to Rohna section from km 0.000 to km 44.800 (Design Chainage) (Length 40.500km) of NH-334B in the state of Haryana on HAM Mode (Package-1)

Documents Submittal and Contents Amendment Record

S. No.	Revision	Description	Date	Sign
1	R0	Technical Due Diligence Report	July 2024	

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ABBREVIATIONS

Abbreviation	Description
ASTM	American Society for testing and Materials
AVC	Automatic Vehicle Classifier
ABP	Allahabad bypass package
BBD	Benkelman Beam Deflection
BC	Bituminous Concrete
BOT	Built, Operate and Transfer
CA	Concession Agreement
CC Drain	Cement Concrete Drains
COD	Commercial Operation Date
CRRI	Central Road Research Institute
CBR	California Bearing Ratio test
DBFOT	Design, Build, Finance, Operate and Transfer
ETC	Electronic Toll Collection
FWD	Falling Weight Deflectometer
GOI	Government of India
GCL	Gawar Construction Limited
HPC	Hume Pipe Culvert
IE	Independent Engineer
IRC	Indian Roads Congress
LA	Land Acquisition
LHS	Left Hand Side
LOA	Letter of Acceptance
MBCB	Metal Beam Crash Barrier
MJB	Major Bridge
MNB	Minor Bridge

Abbreviation	Description
MOST	Ministry of Surface Transport
MPR	Monthly Progress Report
NH	National Highway
NHAI	National Highway Authority of India
NSV	Network Survey Vehicle
O&M	Operation and Maintenance
OHLS	Overhead Lane Signal
OHM	Object Hazard Marker
PCOD	Provisional Commercial Operation Date
POS	Point of Sale
POS	Point of sale
RCC	Reinforced Cement Concrete
RHS	Right Hand Side
ROB	Road/Rail Over Bridge
ROW	Right of Way
RPV	Route Petrol Vehicle
RUB	Road/Rail Under Bridge
SH	State Highway
SPV	Special Purpose Vehicle
SR	Service Road
SSWIM	Slow Speed Weigh in Motion
SWB	Static Weigh Bridge
TOT	Toll Operate Transfer
TC	Toll Collector
Team	Team of Cube Highways Technologies Pvt Ltd.
TMS	Toll Management System
WIM	Weigh in Motion
WMM	Wet Mix Macadam

Chapter 1
INTRODUCTION

CHAPTER 1. INTRODUCTION

1.1 Background

Infrastructure Sector is a key driver for the Indian economy. In 2014, the Government of India have introduced a new investment vehicle which allows investors to participate in the growth story of infrastructure sector, named Infrastructure Investment Trusts (hereinafter referred to as 'InvITs'). InvITs are instruments on pattern of mutual funds and are designed to pool in money from a number of investors to invest in assets that give cash flow over a period of time. The InvITs are regulated by the SEBI (Infrastructure Investment Trusts) Regulations Act, 2014.

In highway sector, InvIT as an instrument provide greater flexibility to investors and is expected to attract patient capitals (for say, 20-30 years) to the market, as these investors are averse to construction risks and are interested in investment in assets which provide long-term stable returns.

InvIT shall have a (i) Trustee, (ii) Sponsor(s) (iii) Investment Manager and (iv) Project Manager, Sponsor and the Project Manager are the same entity. During maintenance period of the project highway, Gawar Construction Limited. (In its capacity as the Project Manager of National Infrastructure Trust) has appointed M/s Cube Highways Technologies Private Limited as Technical Consultant for carrying out technical study and assessment of Opex and Major Maintenance requirement (MMR) for balance concession period. The scope includes review of operation and maintenance system and to prepare maintenance schedule for entire duration of concession period based on a technical analysis. In turn, Cube Highways Technologies undertook the site visits to carry out site inspection. The report is based on findings during this period.

National Infrastructure Trust ("Trust") was settled on September 25, 2023, in Gurugram pursuant to the Trust Deed as a contributory irrevocable trust in accordance with the Indian Trusts Act, 1882. The Trust is an Infrastructure Investment Trust (InvIT) established for making investments in special purpose vehicles as defined under Regulation 2(1) (zy) of the InvIT Regulations, or infrastructure projects or securities of Indian companies engaged in the infrastructure sector, as may be permitted in terms of Regulation 18(5) of the InvIT Regulations. Axis Trustee Services Limited (ATSL) is the Trustee to the Trust. Gawar Investment Manager Private Limited (GIMPL) was incorporated as a private limited company on August 26, 2023, under the Companies Act, 2013. GIMPL is a wholly owned subsidiary of Gawar Construction Limited (GCL). GIMPL has been appointed as the Investment Manager to the NIT InvIT by Axis Trustee Services Limited (ATSL); the trustee to NIT InvIT and is responsible for managing the operations of InvIT in accordance with InvIT regulations.

Table 1-1: Projects comprising the Initial Portfolio Assets of National Infrastructure Trust

S. No.	Name of the Project	Length (km)
1.	Gawar Rohna Jhajjar Highway Private Limited	35.45
2.	Gawar Khajuwala BAP Highway Private Limited	212.107

S. No.	Name of the Project	Length (km)
3.	Gawar Narnaul Highway Private Limited	45.3
4.	**Gawar Rohna Sonepat Highways Private Limited**	**40.50**
5.	Hardiya Hasanpur Highway Private Limited	47.225
6.	Gawar Kiratpur Nerchowk Highway Private Limited	47.753
7.	Dewas Ujjain Highway Private Limited	41.42
8.	Gawar Bangalore Highways Private Limited	164.34
9.	Gawar Nainital Highways Private Limited	43.905

1.2 Asset Background

The National Highway Authority of India (NHAI) on behalf of Ministry of Road Transport and Highways (MoRT&H), Government of India, have taken up the development of various National Highway corridors where the intensity of traffic has increased significantly and there is requirement of augmentation of capacity for safe and efficient movement of traffic. In this regard, NHAI has been entrusted to develop projects for selected corridors through Public Private Partnership (PPP) basis on Design, Build, Operate and Transfer (DBOT) pattern.

As part of this endeavour, the Government of India (GOI) had entrusted to the Authority the development, maintenance, and management of National Highway (NH) 334 B including the section from km 0+000 to km 44+800. The Authority had resolved to augment the existing road from km 0.000 to km 44.800 on the UP/Haryana Border to Rohna section of National Highway 334 B (hereinafter called the "NH 334 B") in the State of Haryana. By Four-Laning thereof (the "Project") on design, build, operate and transfer (the "DBOT Annuity" or "Hybrid Annuity") basis, which shall be partly financed by the Concessionaire who shall recover its investment and costs through payments to be made by the Authority, in accordance with the terms and conditions as set forth in the Concession Agreement (CA).

The Hybrid Annuity Model (HAM) is a mix of Built, Operate and Transfer (BOT) Annuity and Engineering, Procurement and Construction (EPC) models. As per the design, the Authority will contribute up-to 40% of the Project Cost in five equal instalments of 8% each during the Construction Period of 730 days with the provisions of Clause 23.4 of CA. The remaining payment will be made based on the assets created and the performance of the developer. Here, hybrid annuity means the first 40% payment is made as fixed amount in five equal instalments whereas the remaining 60% is paid as variable annuity amount after the completion of the Project. As per the design, the Authority will contribute 40% of the Bid Project Cost (BPC) and the balance cost is funded by the Concessionaire through debt and equity.

The Authority had adopted a single stage two envelope bidding process and accordingly invited proposals by its Request for Proposals dated 28th December 2017 (the "Request for Proposals" or "RFP") for qualification and short listing of bidders for construction, operation, and maintenance of the above referred Project on Hybrid Annuity basis. The Authority had prescribed the technical and commercial terms and conditions in the RFP and invited bids comprising technical and financial bids from the bidders for undertaking the Project.

After evaluation of the bids received, the Authority had technically qualified certain bidders including, inter alia, the selected bidder and accepted the financial bid of the selected bidder i.e., Gawar Construction Limited (GCL).

The Authority issued its Letter of Award No. NHAI/11012/NH-334- B/UPHBSJ/PKG-1/2017/HR/131467 dated 28th February 2019 (hereinafter called the "LOA") to the selected bidder requiring, inter alia, the execution of this Concession Agreement within 45 (forty-five) days, accordingly, it was executed on 33rd day as per terms of Concession Agreement (CA), of the date of issue thereof.

Accordingly, Special Purpose Vehicle (SPV) Gawar Rohna Sonepat Highway Private Limited ("GRSHPL") has been formed, for implementing the Project the "Concessionaire"). As the Concessionaire of this Project, they will be developing the Project, operate and maintain the facilities after completion of construction.

Under Hybrid Annuity Model (HAM), toll collection on the Project shall be responsibility of NHAI. The Concessionaire will be recovering its costs through annuity payments made during Concession Period of 17 years (annuity payments during Construction as well as in Operations Period), including Construction Period of 730 days from the Appointed Date and Operation Period of 15 years from Commercial Operation Date (COD).

1.3 Report Structure

The report contains six chapters, including this Chapter on Introduction.

Chapter 2 Project Overview

Chapter 3 Asset Status

Chapter 4 Review of Structures

Chapter 5 Review of the pavement condition survey

Chapter 6 General Safety Concerns along the Project stretch and Improvements

Chapter 2
PROJECT OVERVIEW

CHAPTER 2. PROJECT OVERVIEW

2.1 Location

The Project includes UP/ Haryana border to Rohna section starts from km 0.000 and ends at km 44.800. The Start co-ordinate of the Project is Latitude 28°59'11.136156" N and Longitude 77°11'49.689996" E. The end co-ordinate of the Project is Latitude 28°50'44.67444" N and Longitude 76°51'47.667924" E. The Project corridor also includes 4 bypasses around Khewra, Bahalgarh, Sonepat and Rohna along with new alignment at one location.

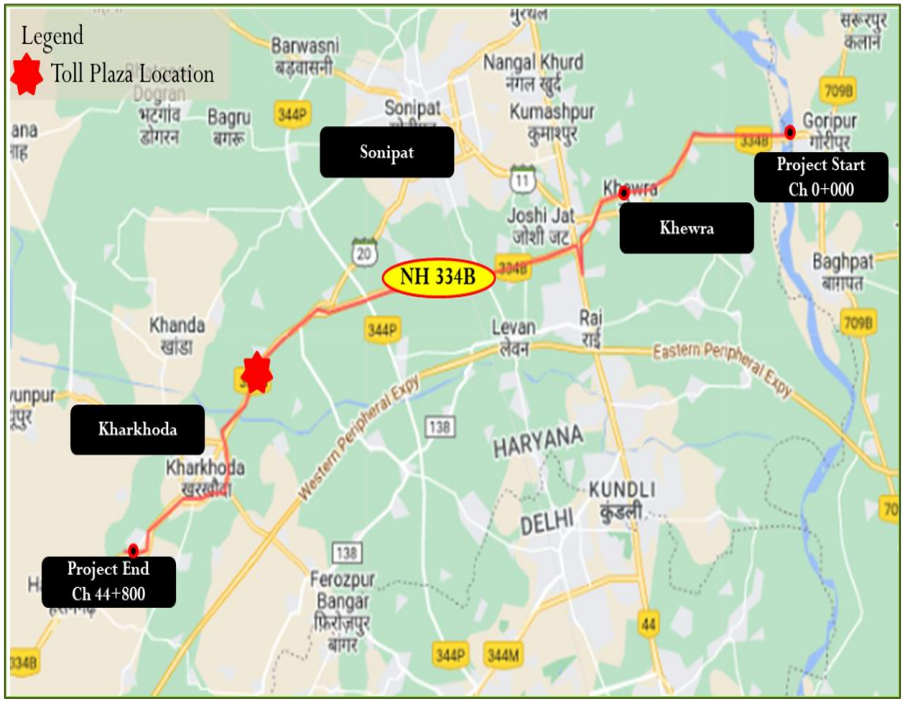


Figure 2-1: Project Alignment

2.2 Salient features

The salient features of the Project are summarised in the table below:

Table 2-1 Project Salient Features

S. No	Scope	Description
1	Name of the Project	Redesigning, Rehabilitation and Upgradation to Four Lane configuration & strengthening of UP/Haryana Border to Rohna section from km 0+000 to km 44+800 of NH 334B in the State of Haryana HAM mode.
2	Name of Client	National Highways Authority of India
3	Name of Concessionaire	M/s Gawar Rohna Sonepat Highway Pvt. Ltd.
4	Independent Engineer	M/s SA Infrastructure Consultants Pvt. Ltd
5	Length of the Project	40.50 km
6	Bid Project Cost	Rs. 835 crores
7	Letter of award	NHAI/11012/NH-334- B/UPHBSJ/PKG-1/2017/HR/131467 dated 28th February 2019
8	Signing of Concession Agreement date	27th May 2019
9	Appointed Date	22nd January 2020
10	Construction Period	730 days from Appointed Date
11	Operation Period	15 years from COD
12	Provisional Commercial Operation Date	29th January 2022 for a length of 40.220 km
13	Commercial Operation Date	5th April 2022 for a length of 40.500 km

2.3 Scope of the Project

The scope of the Project (the "Scope of the Project") shall mean and include,

- Construction of the Project on the site set forth in Schedule-A and as specified in Schedule-B together with provision of Project Facilities as specified in Schedule- C, and in conformity with the Specifications and Standards set forth in Schedule- D of the Concession Agreement.
- Operation and Maintenance of the Project in accordance with the provisions of Concession Agreement; and

- Performance and fulfilment of all other obligations of the Concessionaire in accordance with the provisions of Concession Agreement and matters incidental there to or necessary for the performance of any or all the obligations of the Concessionaire under Concession Agreement.

2.4 Physical features of the Project

The Concessionaire shall operate, manage and maintain the project stretch for entire Concession Period, subject to and in accordance with the provisions of this Agreement. The Concessionaire shall visit the Site and assess the durability and strength of Project Assets and make his own assessment for operation, management. and maintenance as per Specifications and Standards and bear and pay all costs, expenses and charges in connection with or incidental to the performance of operation, management and maintenance.

The project includes the following physical features.

Table 2-2: Project Physical Features

S. No	Project Physical Features	UoM	As per CA	As per Site	Remarks
1	Total Length of project stretch	Km	40.500	40.500	
2	Total length of Service Road/Slip Road	Km	38.830	39.240	Including COS
3	Minor Bridges	Nos	07	09	Including COS
4	ROBs	Nos	01	01	
5	Grade Separator Intersections	Nos	11	11	
6	Grade Separator Flyovers	Nos	10	11	Including COS
7	VUPs	Nos	05	06	Including COS
8	LVUPs	Nos	Nil	2	Including COS
9	PUP	Nos	Nil	3	Including COS
10	Box Culverts	Nos	24	24	
11	Slab Culvert	Nos	02	02	
12	Pipe Culvert	Nos	04	04	
13	Junctions	Nos	38	38	
14	Toll Plaza	Nos	01	01	

All the above features as per site have been accounted for the estimation of routine maintenance, repair and rehabilitation, major maintenance and operation expenditure.

2.5 Review of Concession Agreement

The Authority had adopted a single stage two envelope bidding process and accordingly invited proposals by its Request for Proposals dated 28th December 2017 (the "Request for Proposals" or "RFP") for qualification and short listing of bidders for construction, operation and maintenance of the above referred Project on Hybrid Annuity basis.

The Authority had prescribed the technical and commercial terms and conditions in the RFP and invited bids comprising technical and financial bids from the bidders for undertaking the Project.

After evaluation of the bids received, the Authority had technically qualified certain bidders including, inter alia, the selected bidder and accepted the financial bid of the selected bidder i.e., M/s Gawar Constructions Ltd. and issued its Letter of Award No. NHAI/11012/NH-334-B/UPHBSJ/PKG-1/2017/HR/131467 dated 28th February 2019 (hereinafter called the "LOA") to the selected bidder requiring, inter alia, the execution of this Concession Agreement within 45 (forty-five) days and on 27th May 2019 it was accepted.

Table 2-3: Review of CA

Article /Clause of CA	Subject	Description in brief	*Remarks*
Article 3	**Concession period**	Concession period includes construction period of 730 days and operational period of 15 years from COD	
	Total Project Cost	Total project cost is 60 % of the Bid Project Cost If there is an increase in WPI, on an average, by more than 3% per annum for the period between the Bid Date and COD, the Total Project Cost shall be increased such that the effect of increase in WPI, more than such 3%, is reflected in the Total Project Cost	
Article 16	**Change in scope**	The Authority shall pay to Concessionaire any increase in scope of work approved by Independent Engineer. While in the case of reduction of scope due to reasons attributed by the Authority, cost of such reduced cost is to be assessed by the Independent Engineer, as per the schedule of rates applicable on the Bid Due Date. The civil cost of the reduced Scope shall be multiplied by the 1.05 to arrive at the estimated cost of reduced Scope. The estimated cost of	

Article /Clause of CA	Subject	Description in brief	*Remarks*
		reduced Scope shall then be multiplied by the ratio of Bid Project Cost to Estimated Project Cost to arrive at the Total Cost of Reduced Scope.	
Article 31	**Termination payment**		
	Termination payment in the event of default by Concessionaire during operation	The Authority shall pay to the Concessionaire an amount equal to 65% (sixty-five per cent) of the sum of Annuity Payments remaining unpaid for and in respect of the Concession Period, including interest thereon up to the Transfer Date.	
	Termination payment in the event of default by Authority during operation Period	An amount equal to the sum of Annuity Payments remaining unpaid for and in respect of the Concession Period, including interest thereon up to the Transfer Date.	
Article 35	**Change in law**		
	Increase in cost	If the Concessionaire suffers aggregate financial effect due to change in law, which exceeds by Rs 1.39 crores or 2% of the total annuity payments in any accounting year the Concessionaire may notify Authority and propose amendments to this agreement so as to place the Concessionaire in the same financial position w/o change in law	*Concessionaire is protected*
	Reduction in cost	If the Concessionaire benefits from reduction in costs and the aggregate financial effect due to change in law, exceeds by Rs 1.39 crores or 2% of the total annuity payments in any accounting year the Authority may notify Concessionaire and propose amendments to this agreement so as to place the Concessionaire in the same financial position w/o change in law	

Article /Clause of CA	Subject	Description in brief	*Remarks*
Clause 6.3	Obligations relating to refinancing	The Authority shall permit and enable Concessionaire for refinancing as per prevailing guidelines upon written request. Authority shall respond within 30 days of the receipt of proposal.	*Positive for the developers and lenders*
Article 28	**Force majeure**		
	Time Extension		
	b) Between Appointed Date and Commercial Operation date (COD)	Time set forth for Project completion extended by time of force majeure event Non-political force majeure: Respective parties to bear the costs. Neither party is required to pay other party	
	c) After COD	After COD, the Concessionaire shall be entitled to receive Annuity Payments plus interest due and payable under this Agreement. Provided any payment to be made under this clause shall be subject to deduction of outstanding dues of the Authority, if any	
	Cost arising out of force majeure event		
	b) After Appointed Date	Non-Political Event: Cost to be shared by respective parties Indirect Political event: To be shared Direct Political: Cost compensated by Authority to concessionaire	*Concessionaire is protected*
Clause 17.8	Damages for breach of Maintenance Obligation	if the Concessionaire fails to repair or rectify any defect or deficiency set forth in the Maintenance Requirements within the period specified the Authority shall be entitled to recover damages, to be calculated and paid for each day of delay until the breach is cured, at the higher of (a) 2% of the Performance Security, and (b) 0.1% of the cost of such repair or rectification as estimated by the Independent Engineer	*Concessionaire is made more responsible*

Article /Clause of CA	Subject	Description in brief	*Remarks*
Clause 17.16	Advertising on the site	The Concessionaire shall not undertake or permit any form of commercial advertising, display or hoarding at any place on the site	
Article 20	Traffic aid post, medical aid post etc.	Concessionaire shall construct a traffic aid post of 25 sqm, medical aid post and two residential quarters at its own cost and hand them over to authority.	
		The Concessionaire shall provide to the State Police Department or a substitute thereof one Jeep or similar vehicle in good working condition along with chauffeurs for round-the-clock patrolling. The operating costs of such vehicle including the salaries and allowances of the chauffeurs shall be borne by Concessionaire.	
		The Concessionaire shall provide to the State Medical Department or a substitute thereof to be designated by the Authority one ambulance in good working condition along with chauffeurs for round-the-clock ambulance services. the operating costs of such ambulance including the salaries and allowances of the chauffeurs	
		The Concessionaire shall also reimburse to the State Medical Department (or a substitute thereof to be designated by the Authority) the actual expenditure incurred by it in each Accounting Year on the medical equipment, and the pay and allowances of up to 2 medical personnel deployed exclusively for the Medical Aid Posts and ambulance and shall maintain the Medical Aid Post buildings.	
Clause 21.3	Payment to independent engineer	The remuneration, cost and expenses of the Independent Engineer shall be paid by Authority and subject to the limits set Schedule-M, one-half of such remuneration, cost and expense shall be reimbursed by the Concessionaire to the Authority within 15 days of receiving a statement of expenditure from the Authority	

Chapter 3
ASSET STATUS

CHAPTER 3. ASSET STATUS

3.1 Review of Highway Current Status

As per letter NHAI/PIU/SNP/NH-334B (Pkg-1)/COD/2022/D-9125 dated 12th May 2022, the Project has received COD on 5th April 2022. SPV is addressing the defects/deficiencies as and when arises and pointed out by the Independent Engineers regularly.

As per our visual inspection, the pavement is in good condition, the observations made by our team are presented below.

Figure 3-1: Project start and end location

The team had following general observations during the visit,

- The median plantation watering process was noted during the site visit, ensuring proper care for the greenery.
- During the site inspection, the installation of road studs and painting of pavement markings was observed, indicating ongoing improvement and safety measures.
- Local authorities have closed the LHS from km 11.100 to km 12.400 due to High Tension wire work the traffic is diverted into slip road.

3.2 Drain

Based on the site inventory, side drain and median drain along the project stretches measures 17.51 km and 21.57 km on both sides respectively, which includes lined drain. Drain provided along the project stretch is found clean and it is in good condition.

Figure 3-2: Drains

3.3 Junctions

Based on the site observation, there are 38 Major/Minor Junctions were found along the project stretch. All junctions are made of rigid pavement and are beneath MCW connecting the slip road with nearby villages.

Figure 3-3:- Junctions

3.4 Road Furniture

Following are the details of road furniture provided along the project stretch as per site.

Table 3-1: List of project furniture's

Type furniture	Unit	Quantity
Metal beam Crash barrier	km	36.124
Overhead Gantry	Nos	03
Cantilever Gantry	Nos	12
VMS	Nos	02
Foot Over Bridge	Nos	03

Metal beam crash barrier

Metal beam safety barriers have been installed along the entire project stretch on shoulder side of the main carriageway and are being well-maintained.

Figure 3-4: Safety crash barrier (MBCB) along the project stretch

Overhead & Cantilever Gantry boards

Overhead Gantry and Cantilever Gantry boards are provided at the Project Stretch. They were newly installed so found in really good condition.

Figure 3-5: Overhead & Cantilever Gantry boards and VMS

Highway Lighting

Highway lighting such as single arm, double arm, and high mast lights have been provided along the project stretch, which includes main carriageway, service roads toll plazas etc. As per site observations, streetlights provided along the project stretch are in good condition.

Figure 3-6: Highway lighting

3.5 Project facilities

Following are the details of project facilities along the project stretch,

Table 3-2: List of project facilities

Type facility	Unit	Quantity
Bus shelters	Nos.	32
Truck lay bye	Nos.	02
Emergency call box (ECB)	Nos.	02

3.6 Toll Plaza and Toll Collection System

One toll plaza (Jhharoti Toll Plaza) is provided in the entire stretch. The Toll Collection System is installed at the toll plaza and is provided by Qualix Information System Private Limited in the year 2021-2022.

The toll plazas have 16 (12 physical + 4 reversible) lanes. All lanes are installed with ETC equipment. View of the toll plazas are shown in figure below.

Figure 3-7: Toll Plaza.

3.6.1 Lane Equipment

Following lane hardware and equipment installed at each toll plaza:

- RFID ETC Transceiver

- Lane Controller with Industrial PC
- AVC Sensors
- Automatic Lane Barrier (ALB)
- Incident Capture Camera
- Overhead Lane Signals
- Traffic Lights
- Toll Booth Equipment

3.6.1.1 RFID ETC Transceiver

- RFID ETC Transceiver reads tags installed on the windshield of vehicles and ETC RFID transceiver near Pay-axis-mounted on pole. Handheld RFID readers are provided (1 no. in each direction)in case a tag is not detected by the fixed reader.
- ETC system lanes are present in 14 Lanes.
- Zebra brand RFID readers are installed at the toll plaza.
- ETC System is Running on ICD 2.5.

Figure 3-8: RFID reader.

3.6.1.2 Lane Controller with Industrial PC

- Toll Lane Controller is in the Electronic Enclosure inside tunnel. It is connected to the common server and can independently store data.
- TLCs are installed in 16 lanes.

Figure 3-9: Toll Lane Controller at Tunnel

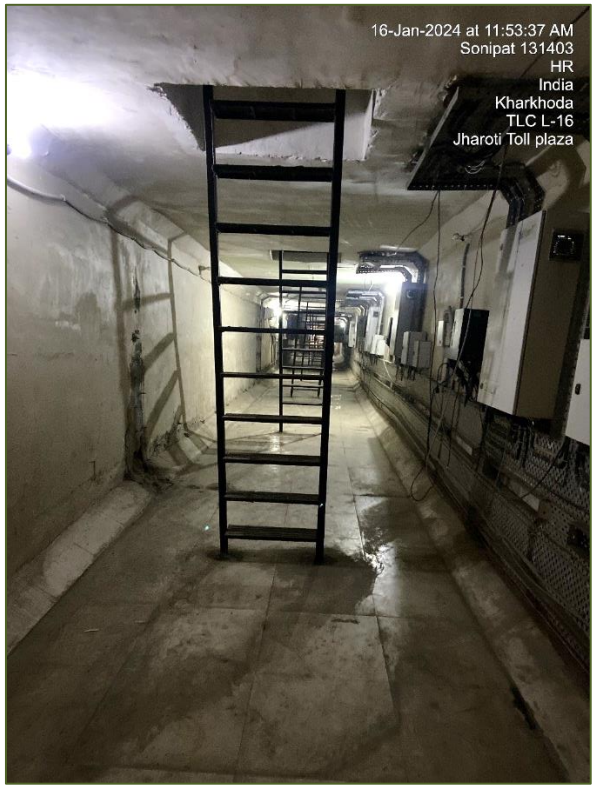


Figure 3-10: Tunnel.

3.6.1.3 Automatic Vehicle Classification (AVC) Sensors

The AVC equipment is installed in 16 lanes. The AVC equipment comprises of a pair of height sensor poles and Axle sensors.

Figure 3-11: AVC IR Sensor.

3.6.1.4 Automatic Lane Barrier

Boom barriers are installed in 16 lanes but operational in 12 lanes and have a working time of 0.6 s. Automatic Lane Barrier is used to allow only authorized vehicles to pass throughthe lane. A torque motor powers the barrier for raising and lowering the boom. The boom weight is exactly balanced by built-in springs.

Figure 3-12: Boom Barrier.

3.6.1.5 Lane Traffic Light (LTL) and User Fare Display (UFD)

Lane Traffic Light (LTL) is used to instruct vehicles to stop or pass through the lane. TheLTL is RED when the toll collector is expecting the vehicle at the booth. After the transaction is done, the LTL turns Green to instruct the vehicle to pass through the lane. The User Fare Display is part of electronic toll collection equipment at the toll booth. It is a mini variable message sign (VMS) made of Light Emitting Diodes (LED). Theuser fare display is used to display the toll fare that is due and that must be paid by the motorist and the classification of vehicle selected by the collector.

LTL and UFD are installed in 16 lanes.

Figure 3-13: Traffic Light (TL) and User Fare Display (UFD).

3.6.1.6 Incident Capture Camera (ICS Camera)

- The incident capture camera is installed on a pole near to the booth to capture the image of the vehicle from the back side. The AVC triggers the Image capture system.
- ICS cameras are installed in 16 lanes.

3.6.1.7 License Plate Image Capture Camera (LPIC)

- License Plate Image capture camera is installed on a pole facing incoming vehicle to capture the vehicle number plate.
- LPIC Cameras are installed in 16 lanes

Figure 3-14: LPIC and ICS Cameras.

3.6.1.8 Overhead Lane Signal (OHLS)

- The **Overhead Lane Signal (OHLS)** for lane "Open" and "Close" sign consists of a pair of"GREEN" (arrow) and "RED" (cross) lights. The OHLS is at the vehicle approaching the canopy to show the drivers whether the lane is open or closed.
- OHLS is installed in 16 lanes.

Figure 3-15: Over Head Lane Signal (OHLS).

3.6.1.9 Toll Booth Equipment

Toll Booth Hardware / Equipment provided are:

- Toll Collector Display (Operator Monitor)
- Customized Industrial Keyboard
- Receipt Printer
- Intercom Slave unit
- Violation Light and alarm
- Manual Booth Control (MBC)
- Booth Camera

The operator monitor called Toll Collector Display (TCD) is on the toll collector's desk. It is the system's interface to the toll collector, to display the status of transactions and status of the lane peripherals.

The keyboard on the toll terminal is a programmable keyboard for Registration of toll operations and is customized for different vehicle types and types of ticket

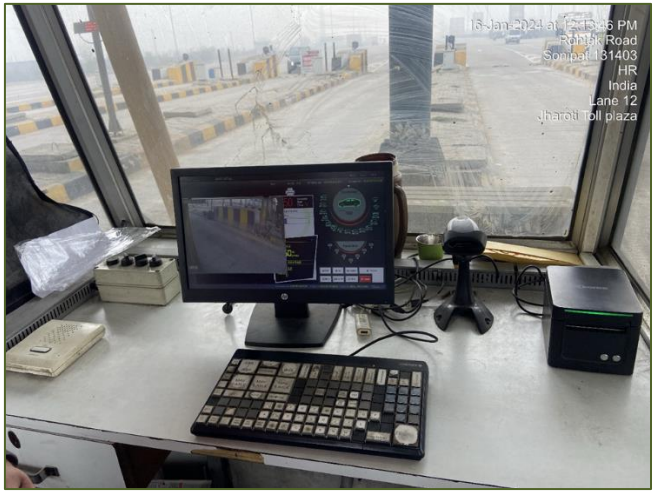


Figure 3-16: Booth Equipment

Thermal Printers are installed at the toll booths to print tickets. Intercom slave unit facilitates communication with the master unit in the control room.

The violation system has an alarm switch which is triggered whenever there is a violation suchas run-through happening on the lane. When there is an emergency, a foot switch pressedby the booth operator alerts the control room.

The booth Cameras are provided on the inside roof corner of the booth to provide surveillancethrough CCTV screen located in the control room. Manual Booth Controller is used to release exempt vehicles.

3.6.1.10 Medium Speed Weigh in Motion (MSWIM)

- Medium Speed Weigh in Motion (MSWIM) is installed on entry lanes. Bending plate strain gauge technology is used with hardware and software support to calculate weight of vehicles running through it up to a speed of 50 km/hr. MSWIM is installed in 16 lanes.
- SWB (Static Weigh Bridge) is installed at both sides of the toll plaza.

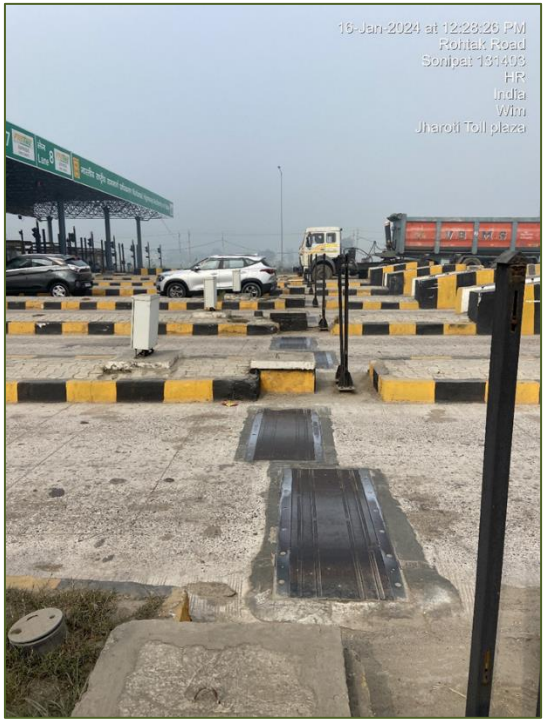


Figure 3-17: Medium Speed Weigh in Motion (MSWIM).

Figure 3-18: Static Weigh Bridge (SWB).

3.6.2 Plaza Equipment

3.6.2.1 TMS Server

- One Plaza Server is provided with a switch rack, 24 channel switch. Firewall and broadband internet connectivity are available.
- The server is HP ProLiant DL380 Gen 10 with the specification of 32GB RAM and 6TB Hard Disk.

Figure 3-19: Server.

3.6.2.2 55" LED screen for CCTV monitoring

One number of 55" inch LED screens for CCTV monitoring installed at the toll plaza admin block provides a viewof all the toll booths, important zones within the plaza where cash transactions take place.

Figure 3-20: CCTV screen at the Toll Plaza Control Room.

The toll plaza manager can observe the activities at the toll lanes and toll booth. When the toll collector calls up on the intercom, the manager can comprehend the situation at the lane by a zoomed view of the lane.

3.6.2.3 Workstations in Control Room, PoS and Cash up room

Workstations are available in the control room for lane monitoring, administration, audit, cash room and PoS with 4 GB RAM and 1 TB HDD

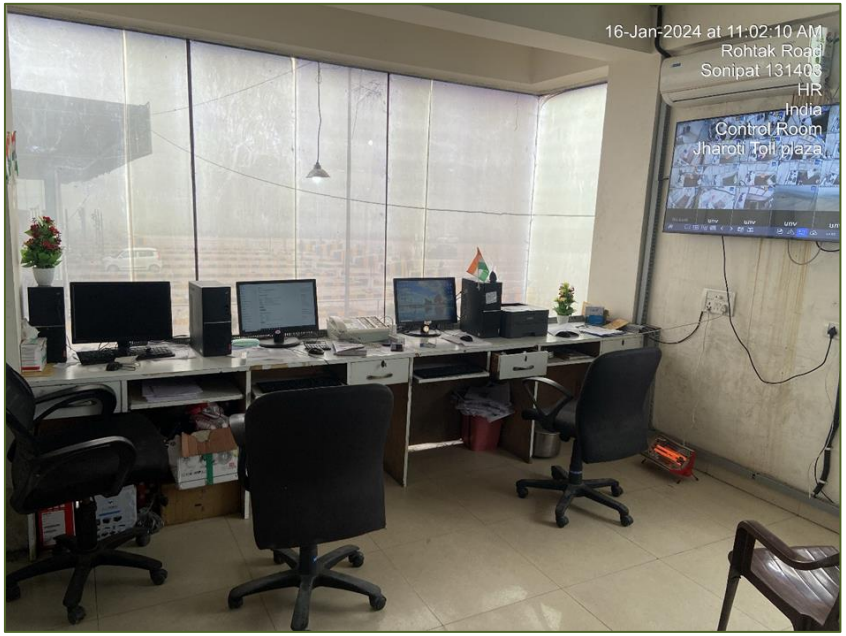


Figure 3-21: Workstations at Control room.

3.6.2.4 UPS

- Following observations were made at toll plaza.
- One 6 KVA UPS and 4 nos of 600VA UPS are present in the UPS Room.
- 3 KVA UPS is present in each lane.

Figure 3-22: UPS room.

Figure 3-23: Lane UPS.

3.7 Advanced Traffic Management System (ATMS)

The Advanced Traffic Management System (ATMS) is installed by Superwave Communication and Infrasolution Private Limited in the year 2022. The ATMS road is controlled by the ATMS Centre at the toll plaza location. It comprises of the following:

- Emergency Call Back System (ECB)
- Variable Message Signboards (VMS)
- Automatic Traffic Counter cum Classifier (ATCC)
- Meteorological Data system (MDS)

- CCTV system
- **V**ideo Incident Detection System (VIDS)
- Vehicle Speed Detection System (VSDS)

3.7.1 Emergency Call Back System (ECB)

2 pairs of Emergency Call Booths are installed along the project road stretch at KM.9+300, KM.23+250.

Figure 3-24: ECB.

3.7.2 Variable Message Signboards (VMS)

Variable message sign boards (VMS) are installed at 2 locations KM.1+100 and KM.43+000 but not operational. These display specific messages to the users based on the prevailing conditions on the highway.

Figure 3-25: VMS.

3.7.3 Automatic Traffic Counter cum Classifier (ATCC)

Camera based Automatic Traffic Counter cum Classifiers (ATCC) is installed at 2 locations at KM.30+100 and KM.31+300.

3.7.4 MDS

MET is installed on the top of Toll Building. Meteorological sensors comprise of sensors to measure the atmospheric temperature, humidity, pavement surface temperature, visibility, and equipment for measuring wind speed and direction.

Figure 3-26: MET.

3.7.5 CCTV and Surveillance Cameras

Surveillance Cameras are installed at 5 locations KM.11+900, KM.30+200, KM.36+000, KM.40+000 and KM.43+000.

Figure 3-27: CCTV Foundation.

3.7.6 Video Incident Detection System.

Video Incident Detection System is installed at 5 locations km 06.200, km 16.400, km 22.400, km 31.300 and km 34.950 but only 2 are working. The 2 working VIDS systems are displaying the live view of the camera.

3.7.7 Vehicle Speed Detection System (VSDS).

VSDS camera is installed at two locations km 22.450 and km.35.100.

Figure 3-28: VIDS Foundation.

3.8 ATMS Control Room.

Server:

- One ATMS Server is provided with a server rack, 24port switch etc.
- The server is Lenovo HP ProLiant DL380 Gen10 with 3TB HDD and 4GB RAM.

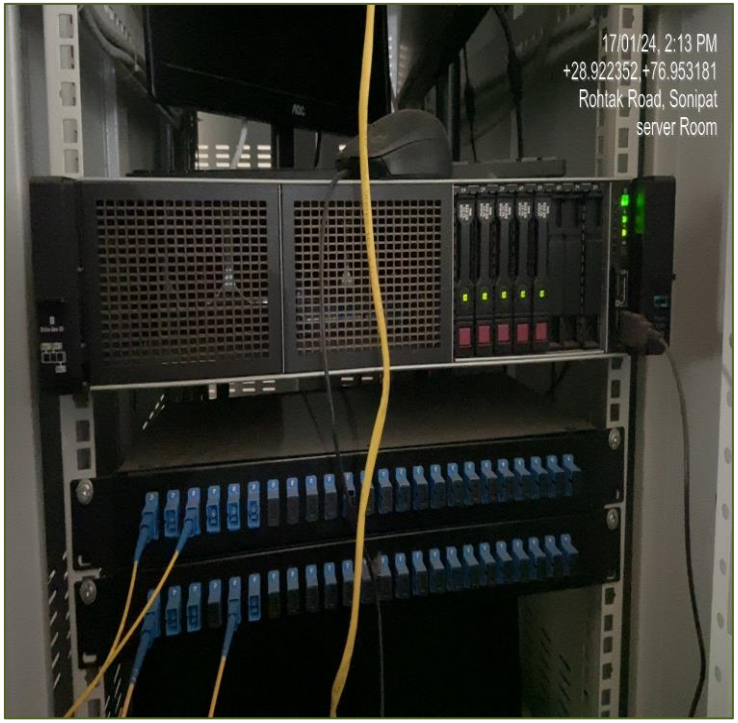


Figure 3-29: ATMS Server.

3.8.1 Control room Equipment

- 2x2 and 1x1 Video wall
- 5 Workstations with 4GB RAM and 1TB HDD
- One network printer
- 32 channel NVR with 4TB HDD
- 24 port switch LIU.
- ATMS equipment is not integrated with ATMS application software.

Figure 3-30: ATMS Control Room Equipment.

3.8.2 UPS

- Following observations were made at ATMS.
- One 20 KVA UPS is present in the UPS Room.

3.9 Adequacy of Toll Collection System and ATMS

- TMS - The software and hardware equipment's are installed in all 16 lanes. The systems need to be checked regularly for maintenance.
- WIM and SWB need to be checked and maintained at regular intervals for proper functioning.

Chapter 4
REVIEW OF STRUCTURES

CHAPTER 4. REVIEW OF STRUCTURES

4.1 Structural investigations

Review of structures inventory and detailed condition survey of structures are the essential requirements for preparation of estimates for Capex and also for O & M cost for highway structures. Keeping in view of importance of this task, review of inventory and conducting visual condition survey were carried out as per procedure and guidelines prescribed in IRC: SP:35 bridge engineers. The details of condition survey of structures were furnished below.

Visual Condition Survey

Salient features for which data is collected as part of conditional survey are in accordance with IRC: SP: 35 Proforma. Main features recorded as part of detailed condition survey are listed below.

- At some locations, the strip seals of expansion joint were filled with dirt & debris, also some strip seal elastomers were damaged/punctured.
- Wider gaps were observed on RE wall at few locations.
- Honeycombing was observed at few structure locations.
- Vegetation growth was observed near the vent area at few culvert locations.
- Drainage spouts assemblies were found missing at a few structure locations.
- Overall structures are in sound and satisfactory condition. However, some treatment has been suggested based on our observations and are being done under the routine maintenance works.

4.2 General

Details of various types of structures as per CA as well as site inventory survey are furnished below,

Table 4-1: Summary of structures

S. no.	Type of Structure	As per CA (Nos.)	As per Site inventory (Nos.)	Remark
1	Minor Bridges	07	9	2 no. was additionally constructed under COS.

S. no.	Type of Structure	As per CA (Nos.)	As per Site inventory (Nos.)	Remark
2	Road Over Bridges	01	01	-
3	Flyover	10	11	1 no. was additionally constructed under COS.
4	Foot Over Bridges	03	03	
5	Vehicular Underpasses	05	06	1 no. was additionally constructed under COS.
6	Light Vehicular Underpasses	0	02	2 no. was additionally constructed under COS.
7	Pedestrian Underpass	0	03	3 no. was additionally constructed under COS.
8	Box/Slab Culverts	30	30	
9	Pipe Culverts	04	04	
	Total	**60**	**69**	

The next section presents the observations on Structures. The visual inspection of all the major structures was conducted by team of Bridge experts to assess the present condition of structures. The detailed condition survey is furnished in subsequent sections of this report.

4.2.1 Minor Bridges:

There are 9 no. of Minor Bridges on the Project Stretch. **The cost for repair and rectification has been factored in the O&M estimation and the Concessionaire has taken up the rectification works. The Structures are found in sound and satisfactory condition.**

Detailed condition survey, necessary repair and pending maintenance works for all the Minor Bridges along the Project Stretch are given below,

Table 4-2: Existing condition and required repairs /maintenance works for Minor Bridges

S. no.	Chainage, km	Span Arrangement, m	Total Length, m	Side	Condition of Structure	Proposed repair and pending maintenance works
1	9.563	1 x 8.75	8.75	LHS	Drainage spouts assembly was missing.	New drainage spouts assembly shall need to be provided with G.I gratings and extension of down take pipe need to be extended up to 500mm down from soffit of slab to prevent water spillage.
				RHS	Drainage spouts assembly was missing.	New drainage spouts assembly shall need to be provided with G.I gratings and extension of down take pipe need to be extended up to 500mm down from soffit of slab to prevent water spillage.

S. no.	Chainage, km	Span Arrangement, m	Total Length, m	Side	Condition of Structure	Proposed repair and pending maintenance works
2	12.050	1 x 10.520	10.520	LHS	Drainage spouts assembly was missing.	New drainage spouts assembly shall need to be provided with G.I gratings and extension of down take pipe need to be extended up to 500mm down from soffit of slab to prevent water spillage.
3	16.625	2 x 4.00	8.00	LHS	Drainage spouts assembly was missing.	New drainage spouts assembly shall need to be provided with G.I gratings and extension of down take pipe need to be extended up to 500mm down from soffit of slab to prevent water spillage.
				RHS	Drainage spouts assembly was missing.	New drainage spouts assembly shall need to be provided with G.I gratings and extension of down take pipe need to be extended up to 500mm down from soffit of slab to prevent water spillage.
4	21.350	1 x 12.00	12.00	LHS	1. Drainage spouts assembly was missing. 2. Vegetation growth was observed near the vent area.	1.New drainage spouts assembly shall need to be provided with G.I gratings and extension of down take pipe need to be extended up to 500mm down from soffit of slab to prevent water spillage. 2. Vegetation shall need to be removed.
				RHS	1. Drainage spouts assembly was missing. 2. Vegetation growth was observed near the vent area.	1. New drainage spouts assembly shall need to be provided with G.I gratings and extension of down take pipe need to be extended up to 500mm down from soffit of slab to prevent water spillage. 2. Vegetation shall need to be removed.
5	22.200	3 x 13.036	46.17	LHS	Drainage spouts assembly was missing.	New drainage spouts assembly shall need to be provided with G.I gratings and extension of down take pipe need to be extended up to 500mm down from soffit of slab to prevent water spillage.
				RHS	Drainage spouts assembly was missing.	New drainage spouts assembly shall need to be provided with G.I gratings and extension of down take pipe need to be extended up to 500mm down from soffit of slab to prevent water spillage.
6	32.523	1 x 10.00	10.00	LHS	Drainage spouts assembly was missing.	New drainage spouts assembly shall need to be provided with G.I gratings and extension of down take

S. no.	Chainage, km	Span Arrangement, m	Total Length, m	Side	Condition of Structure	Proposed repair and pending maintenance works
						pipe need to be extended up to 500mm down from soffit of slab to prevent water spillage.
				RHS	Drainage spouts assembly was missing.	New drainage spouts assembly shall need to be provided with G.I gratings and extension of down take pipe need to be extended up to 500mm down from soffit of slab to prevent water spillage.
7	32.550	1 x 14.50	14.50	LHS	Strip seals of expansion joint were filled with dirt & debris, also some strip seal elastomers were damaged/punctured.	New strip seal elastomer shall need to be fixed for all expansion joints as the existing strip seal is either missing or completely damaged.
		1 x 14.50	14.50	RHS	Strip seals of expansion joint were filled with dirt & debris, also some strip seal elastomers were damaged/punctured.	New strip seal elastomer shall need to be fixed for all expansion joints as the existing strip seal is either missing or completely damaged.
8	34.762	2 x 27.00	54.00	LHS	Strip seals of expansion joint were filled with dirt & debris, also some strip seal elastomers were damaged/punctured.	1. New strip seal elastomer shall need to be fixed for all expansion joints as the existing strip seal is either missing or completely damaged.
				RHS	Strip seals of expansion joint were filled with dirt & debris, also some strip seal elastomers were damaged/punctured.	New strip seal elastomer shall need to be fixed for all expansion joints as the existing strip seal is either missing or completely damaged
9	44.297	1 x 21.816	21.816	LHS	Strip seals of expansion joint were filled with dirt & debris, also some strip seal elastomers were damaged/punctured.	New strip seal elastomer shall need to be fixed for all expansion joints as the existing strip seal is either missing or completely damaged.
		1 x 21.816	21.816	RHS	Strip seals of expansion joint were filled with dirt & debris, also some strip seal elastomers were damaged/punctured.	New strip seal elastomer shall need to be fixed for all expansion joints as the existing strip seal is either missing or completely damaged.

Figure 4-1: Condition of Minor Bridges

4.2.2 Road Over Bridges:

There is 01 no. of Road Over Bridge on the Project Stretch. **The cost for repair and rectification has been factored in the O&M estimation and the Concessionaire has taken up the rectification works. The Structures are found in sound and satisfactory condition**.

Present condition and required repair/ maintenance works for the Road Over Bridge are given below.

Table 4-3: Existing condition and required repairs /maintenance works for Road Over Bridge

S. no.	Chainage, km	Span Arrangement, m	Total Length, m	Side	Condition of Structure	Proposed repair and pending maintenance works
1	17+300	1 x 30.00 + 1 x 82.00 + 1 x 30.00	142.00	LHS	1. Strip seals of expansion joint were filled with dirt & debris, also some strip seal elastomers were damaged/punctured. 2. Honeycombing was observed on the soffit of top slab and pier cap.	1. New strip seal elastomer shall need to be fixed for all expansion joints as the existing strip seal is either missing or completely damaged. 2. Remove the loose material around the affected area and honeycombing, voids shall need to be sealed with epoxy mortar

S. no.	Chainage, km	Span Arrangement, m	Total Length, m	Side	Condition of Structure	Proposed repair and pending maintenance works
					3. Few drainage spouts were clogged.	3. Drainage spouts shall be cleaned and make it functional.
		1 x 30 + 1 x 82 + 1 x 30	142.00	RHS	1. Strip seals of expansion joint were filled with dirt & debris, also some strip seal elastomers were damaged/punctured. 2. Honeycombing was observed on the soffit of top slab and pier cap. 3. Few drainage spouts were clogged.	1. New strip seal elastomer shall need to be fixed for all expansion joints as the existing strip seal is either missing or completely damaged. 2. Remove the loose material around the affected area and honeycombing, voids shall need to be sealed with epoxy mortar 3. Drainage spouts shall be cleaned and make it functional.

Figure 4-2: Condition of ROB

4.2.3 Flyover:

There are 11 Flyovers on the Project Stretch. **The cost for repair and rectification has been factored in the O&M estimation and the Concessionaire has taken up the rectification works. The Structures are found in sound and satisfactory condition.**

Present condition and required repair/ maintenance works for the Flyovers are given below.

Table 4-4: Existing condition and required repairs /maintenance works for Flyovers

S. no.	Chainage, km	Span Arrangement, m	Total Length, m	Side	Condition of Structure	Proposed repair and pending maintenance works
1	6.700	1 x 30.00	30.00	LHS	Strip seals of expansion joint were filled with dirt & debris, also some strip seal elastomers were damaged/punctured.	New strip seal elastomer shall need to be fixed for all expansion joints as the existing strip seal is either missing or completely damaged.
2	10.370	1 x 30.00	30.00	LHS	Strip seals of expansion joint were filled with dirt & debris, also some strip seal elastomers were damaged/punctured.	New strip seal elastomer shall need to be fixed for all expansion joints as the existing strip seal is either missing or completely damaged.
				RHS	Strip seals of expansion joint were filled with dirt & debris, also some strip seal elastomers were damaged/punctured.	New strip seal elastomer shall need to be fixed for all expansion joints as the existing strip seal is either missing or completely damaged.
3	11.973	1 x 20.00 + 2 x 40.00 +1 x 20.00	120.00	LHS	Strip seals of expansion joint were filled with dirt & debris, also some strip seal elastomers were damaged/punctured.	New strip seal elastomer shall need to be fixed for all expansion joints as the existing strip seal is either missing or completely damaged.
				RHS	Strip seals of expansion joint were filled with dirt & debris, also some strip seal elastomers were damaged/punctured.	New strip seal elastomer shall need to be fixed for all expansion joints as the existing strip seal is either missing or completely damaged.
4	12.100	1 x 50.00	50.00	LHS	Strip seals of expansion joint were filled with dirt & debris, also some strip seal elastomers were damaged/punctured.	New strip seal elastomer shall need to be fixed for all expansion joints as the existing strip seal is either missing or completely damaged.

S. no.	Chainage, km	Span Arrangement, m	Total Length, m	Side	Condition of Structure	Proposed repair and pending maintenance works
				RHS	Strip seals of expansion joint were filled with dirt & debris, also some strip seal elastomers were damaged/punctured.	New strip seal elastomer shall need to be fixed for all expansion joints as the existing strip seal is either missing or completely damaged.
5	14.497	2 x 20.00	40.00	LHS	Honeycombing and exposure of reinforcement was noticed on the soffit of deck slab.	Remove the loose material around the affected area and honeycombing, voids shall need to be sealed with epoxy mortar.
				RHS	Strip seals of expansion joint were filled with dirt & debris, also some strip seal elastomers were damaged/punctured.	New strip seal elastomer shall need to be fixed for all expansion joints as the existing strip seal is either missing or completely damaged.
6	16.600	2 x 20.00	40.00	LHS	1.Exposure of reinforcement was noticed on the soffit of girder. 2.Horizontal/vertical down-take pipe was missing at one location.	1.Remove the loose material around the affected area and honeycombing, voids shall need to be sealed with epoxy mortar. 2.Horizontal drainage pipe shall need to provide connecting all drainage spouts in each span and further run along the external wall down to ground level drains.
				RHS	Strip seals of expansion joint were filled with dirt & debris, also some strip seal elastomers were damaged/punctured.	New strip seal elastomer shall need to be fixed for all expansion joints as the existing strip seal is either missing or completely damaged.
7	22.100	1 x 100.00	100.00	LHS	Drainage spouts are clogged with dirt, debris.	Drainage spouts shall need to be cleaned, make it functional.
				RHS	Drainage spouts are clogged with dirt, debris.	Drainage spouts shall need to be cleaned, make it functional.
8	35.975	1 x 30.00	30.00	RHS	Structure was in good condition	
9	37.717	2 x 30.00	60.00	LHS	Wider gaps were observed on RE wall.	Gaps shall need to be sealed and rectified with epoxy mortar.
		2 x 30.00	60.00	RHS	Wider gaps were observed on RE wall.	Gaps shall need to be sealed and rectified with epoxy mortar.

S. no.	Chainage, km	Span Arrangement, m	Total Length, m	Side	Condition of Structure	Proposed repair and pending maintenance works
10	41.935	1 x 30.00	30.00	RHS	Strip seals of expansion joint were filled with dirt & debris, also some strip seal elastomers were damaged/punctured.	New strip seal elastomer shall need to be fixed for all expansion joints as the existing strip seal is either missing or completely damaged.
11	43.850	1 x 30.00	30.00	RHS	Strip seals of expansion joint were filled with dirt & debris, also some strip seal elastomers were damaged/punctured.	New strip seal elastomer shall need to be fixed for all expansion joints as the existing strip seal is either missing or completely damaged.

Figure 4-3: Condition of Flyover

4.2.4 Foot Over Bridges:

There are 03 nos. of Foot Over Bridges on the Project Stretch. **The cost for repair and rectification has been factored in the O&M estimation and the Concessionaire has taken up the rectification works. The Structures are found in sound and satisfactory condition.**

Present condition and required repair/ maintenance works for the Foot Over Bridges are given below.

Table 4-5: Existing condition and required repairs /maintenance works for Foot Over Bridges

S. no.	Chainage, km	Span Arrangement, m	Total Length, m	Side	Condition of Structure	Proposed repair and pending maintenance works
1	4.700	12.20 + 17.40 + 17.40	47.00		Strip seals of expansion joint were filled with dirt & debris, also some strip seal elastomers were damaged/punctured.	New strip seal elastomer shall need to be fixed for all expansion joints as the existing strip seal is either missing or completely damaged.
2	5.980	21.45 + 17.40 + 13.45	52.30		Strip seals of expansion joint were filled with dirt & debris, also some strip seal elastomers were damaged/punctured.	New strip seal elastomer shall need to be fixed for all expansion joints as the existing strip seal is either missing or completely damaged.
3	36.650	20.20 + 20.20	40.40		Strip seals of expansion joint were filled with dirt & debris, also some strip seal elastomers were damaged/punctured.	New strip seal elastomer shall need to be fixed for all expansion joints as the existing strip seal is either missing or completely damaged.

Figure 4-4: Foot Over Bridge at km 4.700 and km 5.980

4.2.5 Vehicular Underpasses:

There are 06 nos. of Vehicular Underpasses on the Project Stretch.

The cost for repair and rectification has been factored in the O&M estimation and the Concessionaire has taken up the rectification works. The Structures are found in sound and satisfactory condition.

Present condition and required repair/ maintenance works for the Vehicular Underpasses are given below.

Table 4-6: Existing condition and required repairs /maintenance works for Vehicular Underpasses

S. no.	Chainage, km	Span Arrangement, m	Total Length, m	Side	Condition of Structure	Proposed repair and pending maintenance works
1	8.330	1 x 12.00 x 4.00	12.00	LHS	Exposure of reinforcement was noticed on the soffit of deck slab.	Remove the loose material around the affected area and honeycombing, voids shall need to be sealed with epoxy mortar.
				RHS	Drainage spouts provision was not provided in span.	New drainage spout assembly shall need to be provided and necessary horizontal/vertical down take pipe shall need to provide connecting all drainage spouts in each span and further run along the external wall down to ground level drains.
2	17.155	1 x 12.00 x 5.50	12.00	LHS	Honeycombing was observed on the soffit of top slab.	Remove the loose material around the affected area and honeycombing, voids shall need to be sealed with epoxy mortar.
				RHS	Honeycombing was observed on the soffit of top slab.	Remove the loose material around the affected area and honeycombing, voids shall need to be sealed with epoxy mortar.
3	19.520	1 x 12.00 x 5.50	12.00	LHS	Drainage spouts provision was not provided in span.	New drainage spout assembly shall need to be provided and necessary horizontal/vertical down take pipe shall need to provide connecting all drainage spouts in each span and further run along the external wall down to ground level drains.
				RHS	Drainage spouts provision was not provided in span.	New drainage spout assembly shall need to be provided and necessary horizontal/vertical down take pipe shall need to provide connecting all drainage

S. no.	Chainage, km	Span Arrangement, m	Total Length, m	Side	Condition of Structure	Proposed repair and pending maintenance works
						spouts in each span and further run along the external wall down to ground level drains.
4	22.701	1 x 21.70	21.70	LHS	Strip seals of expansion joint were filled with dirt & debris, also some strip seal elastomers were damaged/punctured.	New strip seal elastomer shall need to be fixed for all expansion joints as the existing strip seal is either missing or completely damaged.
				RHS	Strip seals of expansion joint were filled with dirt & debris, also some strip seal elastomers were damaged/punctured.	New strip seal elastomer shall need to be fixed for all expansion joints as the existing strip seal is either missing or completely damaged.
5	23.945	1 x 12.00 x 5.50	12.00	LHS	Drainage spouts provision was not provided in span.	New drainage spout assembly shall need to be provided and necessary horizontal/vertical down take pipe shall need to provide connecting all drainage spouts in each span and further run along the external wall down to ground level drains.
				RHS	Drainage spouts provision was not provided in span.	New drainage spout assembly shall need to be provided and necessary horizontal/vertical down take pipe shall need to provide connecting all drainage spouts in each span and further run along the external wall down to ground level drains.
6	39.449	1 x 12.00 x 5.50	12.00	LHS	Drainage spouts provision was not provided in span.	New drainage spout assembly shall need to be provided and necessary horizontal/vertical down take pipe shall need to provide connecting all drainage spouts in each span and further run along the external wall down to ground level drains.
				RHS	Drainage spouts provision was not provided in span.	New drainage spout assembly shall need to be provided and necessary horizontal/vertical down take pipe shall need to provide connecting all drainage spouts in each span and further run along the external wall down to ground level drains.

Figure 4-5: Condition of Vehicular Underpasses

4.2.6 Light Vehicular Underpasses:

There are 02 nos. of Light Vehicular Underpasses on the Project Stretch. **The cost for repair and rectification has been factored in the O&M estimation and the Concessionaire has taken up the rectification works. The Structures are found in sound and satisfactory condition.**

Present condition and required repair/ maintenance works for the Light Vehicular Underpasses were given below.

Table 3 11: Existing condition and required repairs /maintenance works for Light Vehicular Underpasses

S. no.	Chainage, km	Span Arrangement, m	Total Length, m	Side	Condition of Structure	Proposed repair and pending maintenance works
1	0.400	1 x 12.00	12.00	LHS	Drainage spouts provision was not provided in span.	New drainage spout assembly shall need to be provided and necessary horizontal/vertical down take pipe shall need to provide connecting all drainage spouts in each span and further run along the external wall down to ground level drains.

S. no.	Chainage, km	Span Arrangement, m	Total Length, m	Side	Condition of Structure	Proposed repair and pending maintenance works
				RHS	Drainage spouts provision was not provided in span.	New drainage spout assembly shall need to be provided and necessary horizontal/vertical down take pipe shall need to provide connecting all drainage spouts in each span and further run along the external wall down to ground level drains.
2	36.765	1 x 10.403	10.40	LHS	Drainage spouts provision was not provided in span.	New drainage spout assembly shall need to be provided and necessary horizontal/vertical down take pipe shall need to provide connecting all drainage spouts in each span and further run along the external wall down to ground level drains.
				RHS	Drainage spouts provision was not provided in span.	New drainage spout assembly shall need to be provided and necessary horizontal/vertical down take pipe shall need to provide connecting all drainage spouts in each span and further run along the external wall down to ground level drains.

4.2.7 Pedestrian Underpasses:

There are 03 nos. of Pedestrian Underpasses on the Project Stretch. **The cost for repair and rectification has been factored in the O&M estimation and the Concessionaire has taken up the rectification works. The Structures are found in sound and satisfactory condition.**

Present condition and required repair/ maintenance works for the Pedestrian Underpasses were given below.

Table 4-7: Existing condition and required repairs /maintenance works for Pedestrian Underpasses

S. no.	Chainage, km	Span Arrangement, m	Total Length, m	Side	Condition of Structure	Proposed repair and pending maintenance works
1	8.250	1 x 3.00	3.00	LHS	Structure was in good condition	
				RHS	Structure was in good condition	
2	8.450	1 x 3.00	3.00	LHS	Structure was in good condition	
				RHS	Structure was in good condition	

S. no.	Chainage, km	Span Arrangement, m	Total Length, m	Side	Condition of Structure	Proposed repair and pending maintenance works
3	32.486	1 x 5.00	5.00	LHS	1.Drainage spouts provision was not provided in span. 2.Vegetation was observed near the structure.	1.Horizontal drainage pipe shall need to provide connecting all drainage spouts and further run along the external wall down to ground level drains. 2. Vegetation growth shall need to be removed.
				RHS	1.Drainage spouts provision was not provided in span. 2.Vegetation was observed near the structure.	1.Horizontal drainage pipe shall need to provide connecting all drainage spouts and further run along the external wall down to ground level drains. 2. Vegetation growth shall need to be removed.

Figure 4-6: Condition of Pedestrian Underpasses

4.2.8 Culverts:

There are 30 nos. of culverts on the Project Stretch out of which 24 nos. were box, 2 nos. were slab culverts and 4 nos. were pipe culverts. **The cost for repair and rectification has been factored in the O&M estimation and the Concessionaire has taken up the rectification works. The Structures are found in sound and satisfactory condition.**

Common defects and / or pending maintenance works observed in condition survey, necessary repair and pending maintenance works for all the box culverts along the project stretch are given below,

Table 4-8: Existing condition and required repairs /maintenance works for Culverts

S. no.	Type of Culverts	No. of Culverts	Condition of Structure	Proposed repair and pending maintenance works
1	Box/Slab Culverts	26	1. Dense vegetation was observed near the vent area for culverts. 2. Silt and debris accumulation was observed in the vent area and few culverts were fully / partially buried. 3. Stagnated water observed at some of the culverts. 4. Scouring was observed near the vent way at km 9.100.	1. Vegetation shall need to be removed. 2. Silt and debris accumulation shall be removed from the vent area. 3. Both U/s and D/s shall be regarded for free flow water. 4. Erosion shall need to be rectified.
2	Pipe Culverts	04	1.Dense Vegetation was observed near the vent area for culverts. 2.Quadrant pitching was disturbed at some locations. 3. For most of the culverts pipe vent area was clogged with debris.	1.Vegetation shall be removed. 2. Quadrant pitching shall be rectified. 3. Debris shall be removed from the pipe vents.

Figure 4-7: Condition of Culverts

Chapter 5
CONDITION ASSESSMENT OF EXISTING PAVEMENT

CHAPTER 5. CONDITION ASSESSMENT OF EXISTING PAVEMENT

To evaluate the existing pavement condition of a Project Highway, investigations are to be carried out on the field to collect data from the field. The collected data is processed and analysed to obtain complete information on the pavement condition.

5.1 Pavement Condition Assessment for Technical Due Diligence

As a part of technical due diligence, the different investigations performed on the Project site are listed below.

- Assessment of Pavement Condition based on Visual Condition Survey

Based on the visual condition survey, the type of distress, its quantity, and severity for each Stretch are obtained. The same is used to evaluate the present condition of pavement, which classifies pavement conditions ranging from 'Good' to 'Distress'.

The pavement investigation studies carried out on the Project Highway from 16th January to 17th January 2024 as a part of technical due diligence and their outcomes are detailed in the sections below

5.2 Review of Concession Agreement

As per Schedule K of the Concession Agreement, the Concessionaire shall repair and rectify the defects and deficiencies as specified below

Table 5-1: Major maintenance criteria as per CA

S .No	Nature of Defect or Deficiency	Time limit for Repair/Rectification
1	Roughness value exceeding 2750 mm in a stretch of 1km (as measured by a standardized rough meter/bump integrator)	180 Days
2	Cracking in more than 5% of road surface in a stretch of 1 km	30 Days
3	Rutting exceeding 10mm in more than 2% of road surface in a stretch of 1km (measured with 3m straight edge)	30 Days

5.3 Review of Pavement Design Report

- The Schedule-B of concession agreement stipulates that design of Flexible pavement shall be carried out, but the Rigid pavement type is considered for main carriageway due to poor performance of existing flexible pavement.

- The design of Rigid pavement has been carried out in accordance with guidelines of IRC-58-2015.
- The thickness of Rigid-layers is designed for a period of 30 years and adopted Subgrade CBR is taken as 12%.
- The thickness of bituminous-layers is designed for a period of 15 years for Main Carriageway (Ch 0+000 to Ch 01+000) and Approach Section. Design traffic is 124.37 MSA and Subgrade CBR is taken as 12%.
- The pavement for the service/slip road has been designed as per IRC: 37-2018; Design traffic is 10 MSA and Subgrade CBR is taken as 12%.

Table 5-2: Pavement Design Thicknesses of Rigid Pavement for Main carriageway as per Pavement Design Report

Layer	Thickness(mm)
Pavement Quality Concrete (PQC)	260
Dry Lean Concrete	150
Granular Sub-base (GSB)	150

Table 5-3: Pavement Design Thicknesses for main carriageway (Ch 0+000 to 1+000) and Approach Section as per Pavement Design Report

Layer	Thickness(mm)
Bituminous Concrete (BC)	50
Dense Bituminous Macadam	90
Reclaimed Asphalt Pavement (RAP)	100
Cement Treated Sub-base (CTSB)	200

Table 5-4: Pavement Design Thicknesses for service/slip roads as per Pavement Design Report

Layer	Thickness(mm)
Bituminous Concrete (BC)	30
Reclaimed Asphalt Pavement (RAP)	65
Cement Treated Sub-base (CTSB)	200

5.4 Key Observations

Few observations made during the site visit by the pavement investigation team are as follows,

- Majority of the Pavement condition was observed to be good on both sides of the project stretch.

- Heavily loaded traffic was observed on both sides of the project stretch.
- Most of the heavily loaded trucks choose the inner lane as a travel path.
- Low severity cracks, Patchwork and Raveling were observed at some places.

Based on the observations made during the visual condition survey, the pavement condition is categorized into three categories 'Good', 'Fair', and 'Distress'. The visual survey data and summary of the pavement condition of Project Stretch is given below.

Table 5-5: Pavement Visual Condition Survey Results

Condition	LHS		RHS	
	Length (m)	Length (%)	Length (m)	Length (%)
Good	37500	95%	36500	90%
Fair	2000	5%	3000	8%
Distress	0	0%	1000	2%

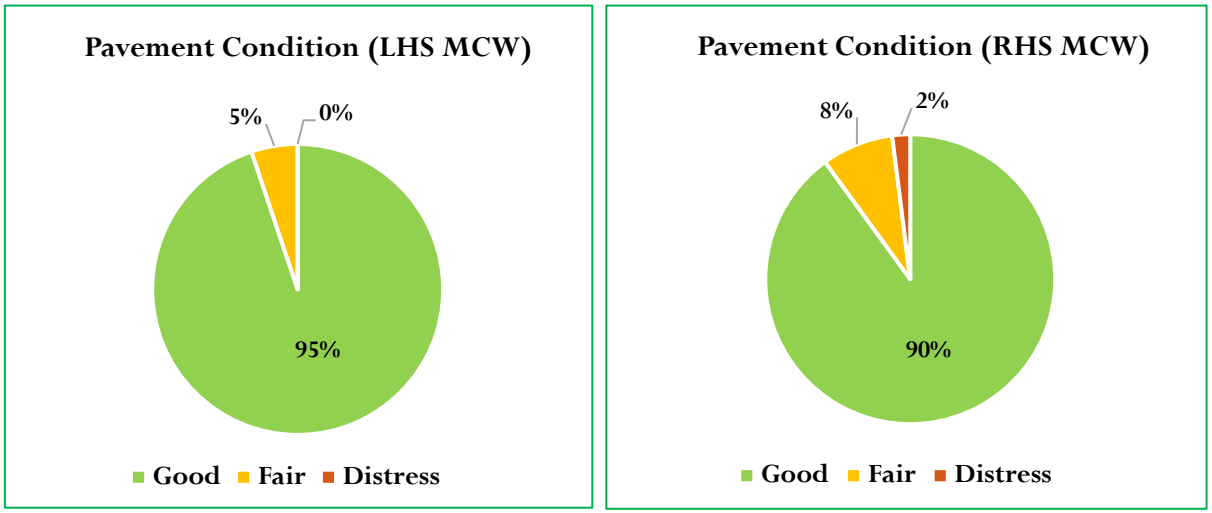


Figure 5-1: Pavement condition based on Visual condition survey

5.5 Pavement Roughness

Roughness is one of the important parameters for determining the functional characteristics of pavements. According to the American Society for Testing and Materials (ASTM), roughness is defined as "the deviations of a pavement surface from a true planar surface with characteristic dimensions that affect vehicle dynamics, ride quality, dynamic loads, and drainage, for example, longitudinal profile, transverse profile and cross-slope".

The roughness of road surfaces is measured using different equipment/techniques such as rod and level survey, dip stick profiler, profilographs, response type road roughness meters, and profiling devices.

In India, the roughness is measured using the fifth wheel bump integrator (developed by CRRI) and is reported as Unevenness Index (UI) in mm/km. In this report, Roughness is measured using an NSV profilometer on 01st March 2024, and a summary of the results are presented below:

Table 5-6: Summary of the Roughness values using NSV

Surface Condition	Roughness Criteria as per IRC SP-16 2019		LHS MCW						RHS MCW					
	Bituminous Surface	Cemented Surface	Lane 1 (m)	Lane 1 (%)	Lane 2 (m)	Lane 2 (%)	Lane 3 (m)	Lane 3 (%)	Lane 1 (m)	Lane 1 (%)	Lane 2 (m)	Lane 2 (%)	Lane 3 (m)	Lane 3 (%)
Good	<1800	<2000	18.735	48.16%	10.345	26.59%	7.960	54.97%	14.040	36.09%	13.140	33.77%	10.755	69.32%
Fair	1800-2400	2000-2400	19.370	49.79%	27.385	70.39%	6.095	42.09%	23.765	61.08%	24.365	62.63%	3.900	25.14%
Distress	>2400	>2400	0.800	2.06%	1.175	3.02%	0.425	2.94%	1.100	2.83%	1.400	3.60%	0.860	5.54%

Chapter 6
ROAD SAFETY ASSESSMENT ALONG THE PROJECT STRETCH

CHAPTER 6. ROAD SAFETY ASSESSMENT ALONG THE PROJECT STRETCH

6.1 General

This chapter presents general road safety concerns observed along the Project Road (Rohna to Sonipat) and improvements suggested to address the same.

6.2 Site visit

Road Safety along the highway depends upon the condition of various components of the highway, such as coordination between horizontal and vertical alignment, provision and placement of road furniture, intersection geometry, availability of adequate sight distance, night-time visibility along the highway, etc. It is essential to understand all these aspects of the highway from a point of view of safety of each type of road user. The purpose of this assignment is to understand the road safety worthiness of Project Road and quantify road furniture items that are required as per the provisions of the Concession Agreement (CA). The report also summarizes high-risk safety concerns that persist for a reasonable length along the Project Road that helps improve the safety of road user upon implemented. It may be noted that, few minor observations that are part of regular O&M activities have not been quantified in this report and also geometrical improvements along with blackspots are not reviewed as part of this assignment. The scope has been constrained keeping in view the operational status of the Project Road and the focus is largely on the major safety concerns and deviations from CA provisions in road furniture, if any.

The Safety Team of CUBE Highways Technologies Pvt Ltd. visited the Project Road from 16th to 17th Jan 2024.

It may be noted that the Findings and Recommendations in this chapter are based on an independent inspection during a site visit along the Project Road and review of available information / documents. This chapter mainly focuses on high-risk safety concern and work zones related issues along the Project Road, and any major geometrical improvements, or location-specific improvements are not covered. However, based on visual observations and safety requirements identified by the safety team during the site visit, the requirement for additional safety furniture in line with CA provisions has been broadly identified and presented in the report. The chainages mentioned in the report may vary from the ground by approximately 50 to 100 meters within acceptable tolerances.

Along with manual observations, the entire Project Road is video graphed using Vehicle Video Recorder Driver's Eye Level Video, a snapshot of output obtained from the app view is shown below:

Figure 6-1: Snapshot-displaying output format of driver's eye level video

As can be seen in above image, the Vehicle Video Recorder records following details along with video:

- Video recording (front view – Driver's Eye Level View)
- Location of Video on the Google Map (along with coordinates of the location)
- Speed of the Recording Vehicle, in km/hour

6.3 Review of Project Documents and Communications related to Road Safety aspects

The following documents have been reviewed as a part of the Road Safety Assessment.

Table 6-1: Review of Project Documents and Communications related to road safety aspects

Document	Broad comments from Road Safety aspects
Concession Agreement (CA) -Signed on 27/05/2019 *(Concessionaire – M/s Gawar Rohna Sonepat Highway Pvt. Ltd)*	Clauses and warrants of various facilities along the Project Road, applicable manual and specifications, deviations from specifications manual, etc., are reviewed. The Project Road has been developed as per IRC: SP:84-2014 (applicable manual). All furniture items are to be provided in accordance with the applicable manual.

Document	Broad comments from Road Safety aspects
Monthly progress report (MPR) by IE *(IE -M/s SA Infrastructure Consultants Pvt. Ltd.)*	4 IE MPRs i.e. from August 2023 to December 2023 (except Oct 2023) has been received from the Project Company for review. This report provides a project overview, executive summary on project aspects, physical progress of site activities, financial progress, strip chart, and details of NCR etc.
COD correspondences	**COD:** As per Letter No. SAICPL/ROHNA/NH-334B/PKG-01/2022/18015; COD of Project Road as per Clause 14.2 and 14.3 has been received on 05/04/2022
Plan & Profile, TCS, COS, and approved drawings	• TCS, Plan & Profile, Signage, and Marking drawings have been received and reviewed with respect to CA provisions. However, as mentioned earlier, location-specific/Black Spots-related geometrical aspects are not studied as part of this assignment.
Accident Data	• Accident data for the four months (August 2023 to December 2023, except October 2023) has been reported and the same has been summarized in further sections of the report

6.4 Accident data analysis

Accident data for the four months – August to December 2023 (except October 2023) have been submitted for review.

Table 6-2: Accident Data summary along the Project Road

SI. No.	Month of accidents	Type of Accident			Major cause of accidents
		Fatal	Grievous	Minor	
1	Aug-23	0	1	0	The cause of the accident is mentioned as a vehicle hitting another vehicle or person
2	Sept-23	2	1	0	
3	Oct-23	-	-	-	
4	Nov-23	0	1	1	
5	Dec-23	0	1	0	
Total accidents - 7		**2**	**4**	**1**	

In the table provided, it is evident that 7 accidents occurred during the four months, i.e. from August to December 2023 (except October 2023 month). The cause of the accident is mentioned as a vehicle hitting another vehicle or person.

Chapter 7
OPERATION & MAINTENANCE COST

CHAPTER 7. OPERATION AND MAINTENANCE COST

7.1 General

This Chapter presents details on the O&M expenditure to be incurred. The expenses are divided into four heads.

- Routine Maintenance Expenses to maintain the asset to the standards set forth in the Concession Agreement.
- Major/ Periodic Maintenance Expenses
- Operating Expenses

7.2 Estimation of Operation & Maintainance cost

The Routine Maintenance activities related to pavement include pothole repair, crack sealing, shoulder repair, drain maintenance, renewal of road markings, maintenance of cross drainage works etc. A before-hand estimate of repairs to be carried annually, must be determined to calculate the anticipated routine maintenance cost of the Project. Most of the annual routine maintenance activities are estimated based on experience and the past data of the Project as these activities varies Project to Project and there are no hard and fast rules to obtain exact quantity.

Routine maintenance cost for this Project is summarized in next section of Cost Estimates. The list of items considered in routine maintenance are summarized in the table below,

Table 7-1: List of Items Considered in Routine Maintenance Cost Estimate

S. No	Description of Item
1	**HIGHWAY**
	Flexible Pavement
	▪ Potholes ▪ Cracks ▪ Rutting/Depression/Settlement ▪ Ravelling/Stripping ▪ Re-surfacing
	Rigid Pavement

S. No	Description of Item
	▪ Slab Replacement ▪ Crack Sealing ▪ Ravelling/honeycombing, scaling, Polished Surface
	Hard/Earth shoulders, side slopes
	▪ Edge drop at shoulders ▪ Blading/reshaping to restore proper slopes and sides so as to maintain the standard formation width ▪ Rain cuts/gullies in slope ▪ Repairs of Stone Pitching/Turfing
2	**STRUCTURES**
	Superstructure of Bridges
	▪ Cracks ▪ Temporary Measures ▪ Permanent Measures ▪ Spalling / Scaling
	Foundation of Bridges
	▪ Scouring and /or Cavitation
	Piers, abutments, return walls and wing walls of bridges
	▪ Cracks and damages including settlement and tilting
	Joints in bridges
	▪ Loosening and malfunctioning of joints
	Other items relating to bridges

S. No	Description of Item
	▪ Gathering of dirt in bearings and joints or clogging of spouts, weep holes and vent-holes ▪ Damage or deterioration in parapets and handrails ▪ Rain-cuts or erosion of banks of the side slopes of approaches ▪ Damage to wearing coat ▪ Damage or deterioration in approach slabs, pitching, apron, toes, floor or guide bunds ▪ Growth of vegetation affecting the structure or obstructing the waterway
3	**ROAD FURNITURES, SIGNAGES AND PAVEMENT MARKING**
	▪ Repair to road signs -damage to shape or position; Poor visibility or loss of retro-reflectivity ▪ Replacing/installing delineators ▪ Replacing uninstalling delineators & all type of road sign ▪ Repairs MBCB ▪ Replacing of MBCB /New jersey crash barrier ▪ Repairs to Handrails /Pedestrian guard rails /flyover railings etc. ▪ Replace Handrails /Pedestrian guardrails/flyover railings etc. ▪ Fixing of distance measurement stone ▪ Hectometre stones ▪ Kilometre stones ▪ 5th Kilometre stones ▪ Boundary stones ▪ Painting ▪ Hectometre stones ▪ Pavement Marking ▪ Hot applied thermoplastic compound ▪ Painting kerb with synthetic enamel paint
4	**MISCELLANEOUS ITEMS**
	Street Lighting, Electrical systems repair and maintenance etc

The routine maintenance expenses to maintain the asset to the standards set forth in the Concession Agreement are given in the table below.

Table 7-2: Routine maintenance cost of the Project

S. No.	Particulars	Frequency	Cost including GST (Cr.)	Remarks
1	**Routine Maintenance Cost**	**Annual**		
	Highway		1.00	
	Structures		0.98	
	Road Furniture, Signage & Pavement marking		0.69	
	Project Facilities		0.19	
	Total RM cost		**2.85**	

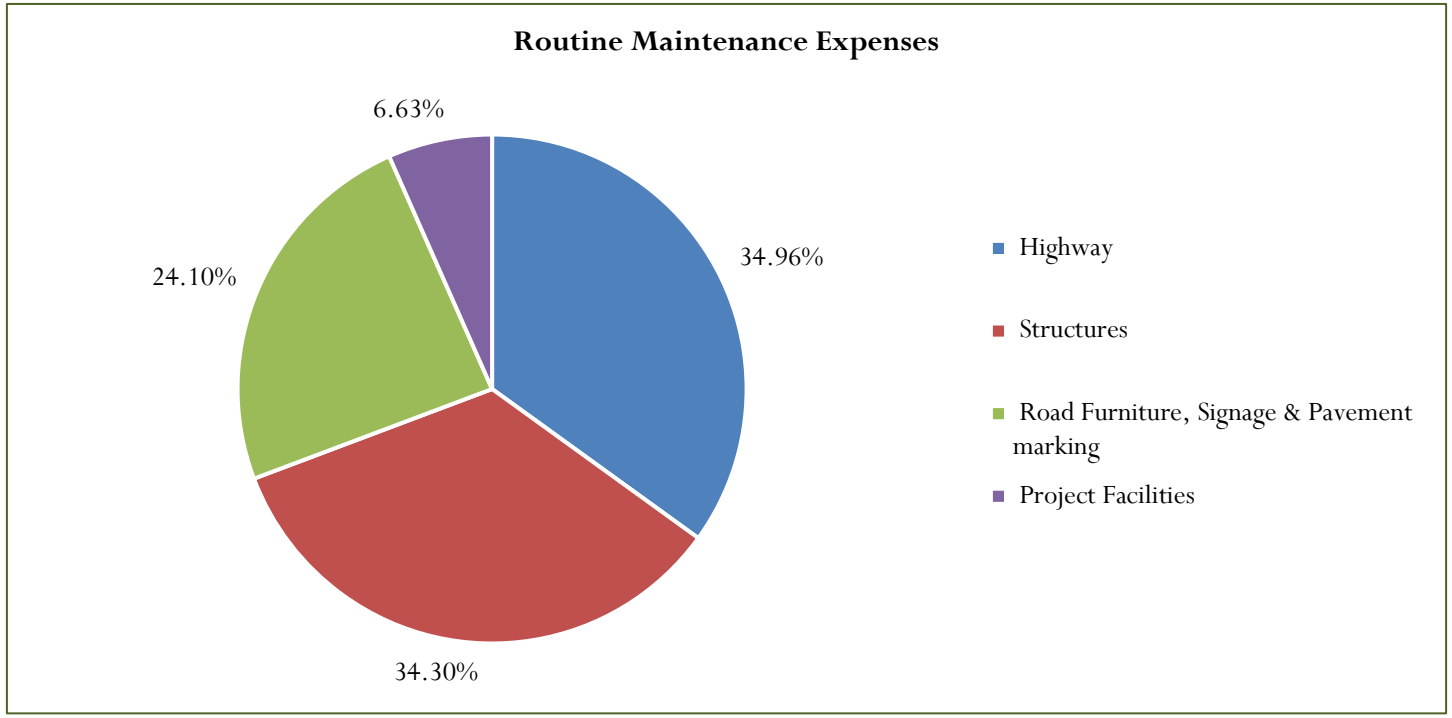


Figure 7-1: Breakup of Routine Maintenance

Table 7-3: Operational Expenditure of the Project for the Base Year FY 25

The calculation of operational expenditure for the base year FY 25 is given below:

S. no.	Description	Manpower	Annual Exp. (in Lakhs)
A.1	SPV staff and salaries	12.75	65.1
A.2	Tolling Operations Services_Outsourced	0	0.0
A.3	Security Services_Outsourced	4	15.9
A.4	Incident Management Services	29	116.0
A.5	RoW and Horticulture Works_ Manpower		67.4
A.6	Electricity and Diesel Charges		73.9
A.7	TMS/HTMS System Expenses		33.9
A.8	Office Operating Expenses		4.9
A.9	Vehicle Running Expenses		18.2
A.10	Professional Fee		36.3
A.11	Community Development		0.0
A.12	Communication Expenses		1.2
A.13	Conveyance Expenses		2.4
A.14	Insurance Expenses		100.2
A.15	IE Fees		60.0
A.16	Contingency	1%	6.0
	OPEX		**601.4**

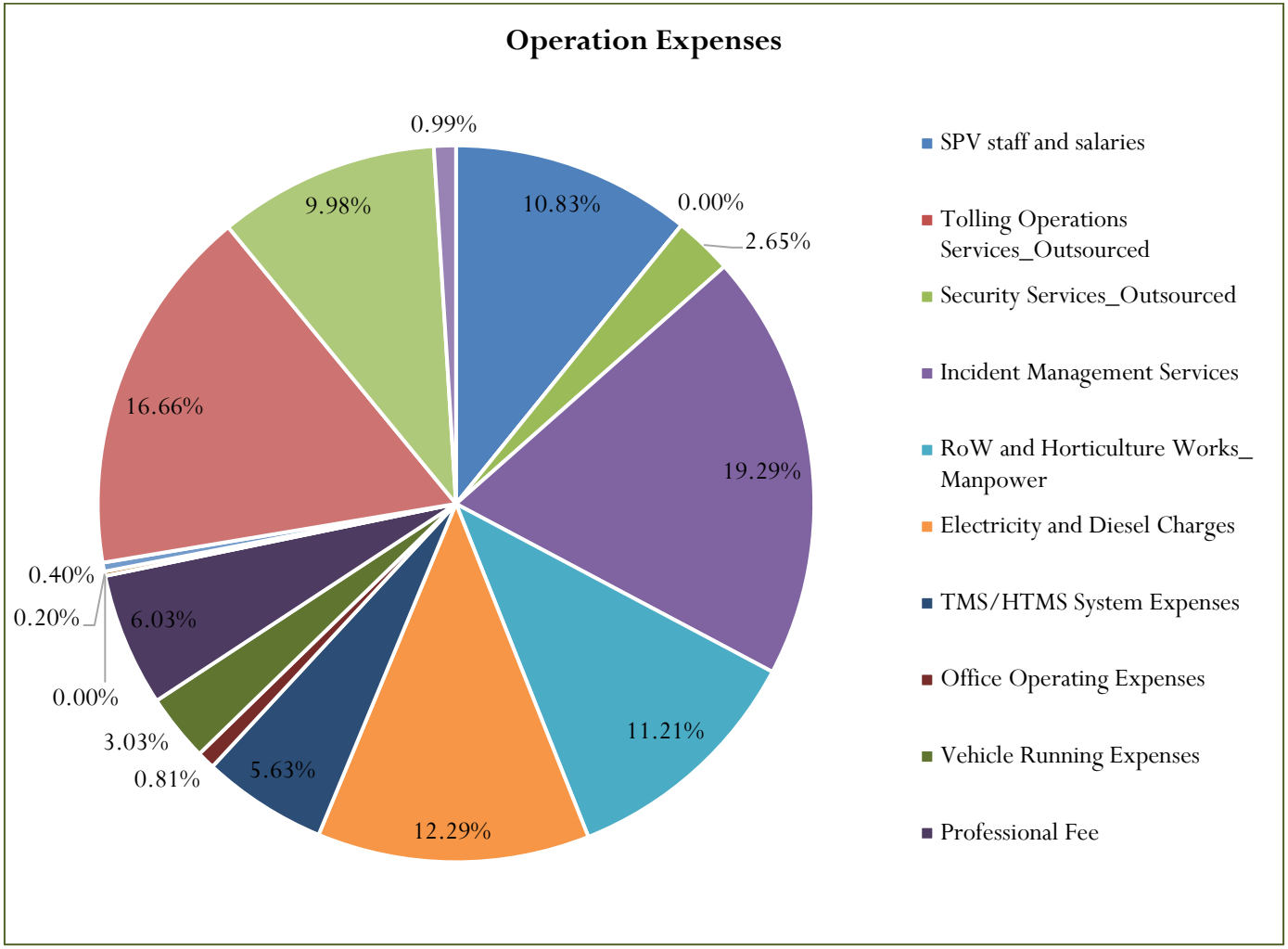


Figure 7-2: Breakup of Operation Cost

7.3 Major Maintenance Estimate

The estimate for Major Maintenance activities of the Project Stretch is as detailed below:

Table 7-4: Major Maintenance Cost for MM Cycle 1

Major Maintenance - 1st Cycle					
S. No.	**Description**	**Unit**	**Qty**	**Rate**	**Amount**
1	Slab replacement cost (PQC)	Cum	3,856.67	7,364	2,84,00,525
2	Joint seal defects, spalling and faulting of joints	Rm	25,855.00	120	31,02,600
3	PQC Taxing	Sqm	2,47,222.50	100	2,47,22,250
4	Road Marking	Sqm	44,791.64	520	2,32,91,654
5	Kerb Painting	Sqm	31,901.25	90	28,71,113
6	Tack coat	Sqm	8,13,947.64	13	1,05,81,319
7	Earthen Shoulder	Cum	17,008.50	375	63,78,188
8	Bituminous Concrete	Cum	32,557.91	10,225	33,29,04,583
9	ATMS & TMS equipment replacement	LS	1.00	1,00,00,000	1,00,00,000
10	Miscellaneous and Contingencies (2%)				88,45,045
			Total		**45,10,97,275.94**
			GST (18%)		**53,22,94,785.61**
			Grand Total		**53.23**

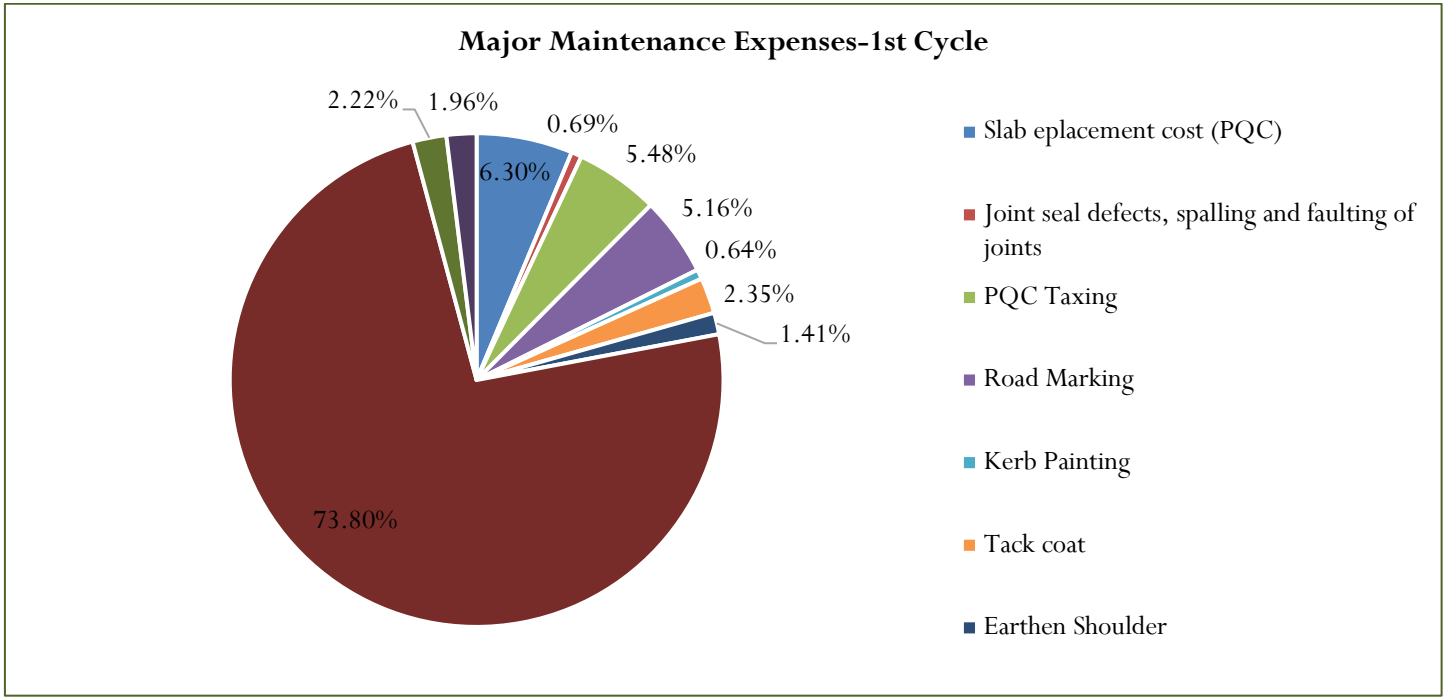


Figure 7-3: Breakup of Major Maintenance Expenses 1st Cycle

Major Maintenance – 2nd Cycle					
S. No.	**Description**	**Unit**	**Qty**	**Rate**	**Amount**
1	Slab replacement cost (PQC)	Cum	3,856.67	7,364	2,84,00,525
2	Joint seal defects, spalling and faulting of joints	Rm	25,855.00	120	31,02,600
3	PQC Taxing	Sqm	2,47,222.50	100	2,47,22,250
4	Road Marking	Sqm	44,791.64	520	2,32,91,654
5	Kerb Painting	Sqm	31,901.25	90	28,71,113
6	Tack coat	Sqm	8,13,947.64	13	1,05,81,319
7	Earthen Shoulder	Cum	17,008.50	375	63,78,188
8	Bituminous Concrete	Cum	32,557.91	10,225	33,29,04,583
9	ATMS & TMS equipment replacement	LS	1.00	1,00,00,000	1,00,00,000

Major Maintenance – 2nd Cycle					
S. No.	**Description**	**Unit**	**Qty**	**Rate**	**Amount**
10	Miscellaneous and Contingencies (2%)				88,45,045
			Total		**45,10,97,275.94**
			GST (18%)		**53,22,94,785.61**
			Grand Total		**53.23**

Table 7-5: Major Maintenance Cost for MM Cycle 2

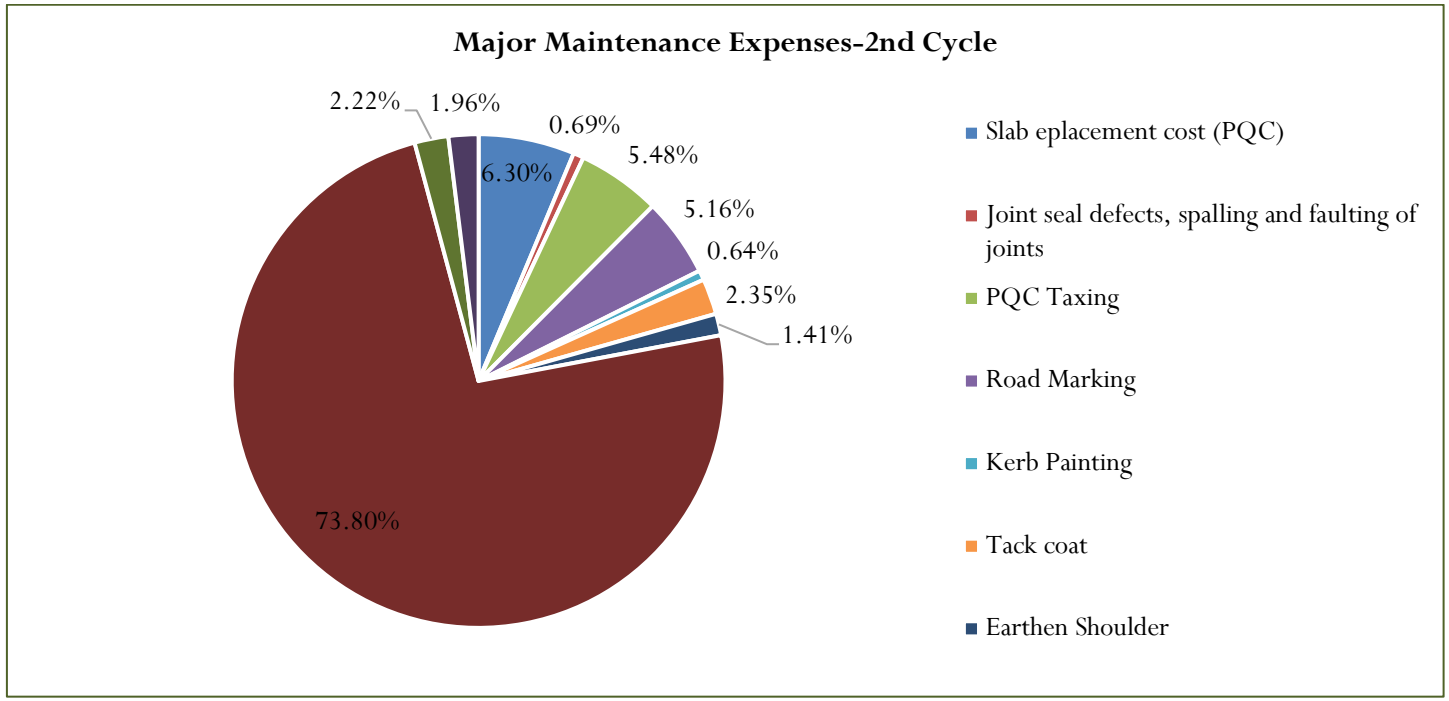


Figure 7-4: Major Maintenance Expenses 2nd Cycle

7.3.1 Major Maintenance expenses during O&M period

As per the Cube Tech estimate, the total Major Maintenance expense including the escalation is Rs.141.26 cr.

7.4 Projections of O&M Expenses

The O&M expenses for the entire Concession Period is presented in this section .

The following escalations are considered:

Table 7-6: Escalation Factors

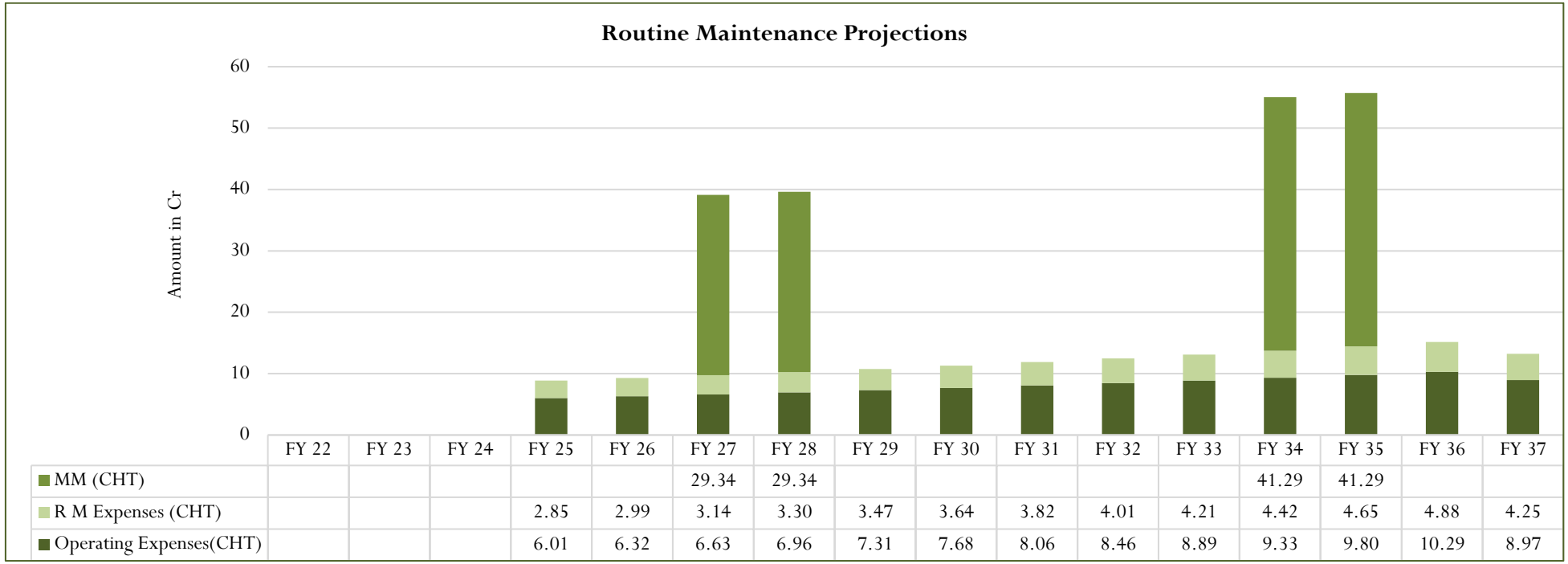
Items	Escalation
Operating Expenses	5.00%
Routine Maintenance	5.00%
Major Maintenance	5.00%

The Projections of total O& M expenses including Major Maintenance for 2 Cycles of the Project Company and CHT is given in the table below

Table 7-7: Projections of total O&M expenses of the Project during O&M period

Particulars	Total Expense (In Cr.)	Base-FY 25	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	FY 32	FY 33	FY 34	FY 35	FY 36	FY 37
Operating Expenses (CHT)	**104.70**	6.01	6.01	6.32	6.63	6.96	7.31	7.68	8.06	8.46	8.89	9.33	9.80	10.29	8.97
R M Expenses (CHT)	**49.65**	2.85	2.85	2.99	3.14	3.30	3.47	3.64	3.82	4.01	4.21	4.42	4.65	4.88	4.25
MM (CHT)	**141.26**				29.34	29.34						41.29	41.29		
O&M and MM (CHT)	**295.61**		**8.87**	**9.31**	**39.12**	**39.61**	**10.78**	**11.32**	**11.88**	**12.48**	**13.10**	**55.04**	**55.73**	**15.16**	**13.22**

The graph for the total cost Projections of expenses during O&M period given by the Cube Highways Technologies is shown in the figure below.



	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	FY 32	FY 33	FY 34	FY 35	FY 36	FY 37
MM (CHT)						29.34	29.34						41.29	41.29		
R M Expenses (CHT)				2.85	2.99	3.14	3.30	3.47	3.64	3.82	4.01	4.21	4.42	4.65	4.88	4.25
Operating Expenses(CHT)				6.01	6.32	6.63	6.96	7.31	7.68	8.06	8.46	8.89	9.33	9.80	10.29	8.97

Figure 7-5: O&M, RM and MM Expenses Projections

The total O&M cost including Major Maintenance estimated by the CHT is Rs.295.61 Cr.

ANNEXURES

Annexure I: Completion Certificate

SCHEDULE–J

(See Clause 14.2 & 14.3)

COMPLETION CERTIFICATE

1. I /We, "SA Infrastructure Consultants Pvt. Ltd. in Association with Shambhavi Techno Solutions Pvt. Ltd.", acting as Independent Engineer, under and in accordance with the Concession Agreement dated 27th day of May, 2019 (the "Agreement"), for development and operation of the Redesigning, Rehabilitation and Upgradation to Four Lane configuration & Strengthening of UP/Haryana Border to Rohna Section from Km 0.00 to Km 44.80 (Design Chainage) (Length– 40.500 Km) of NH-334B in the State of Haryana on HAM Mode (Package–1) Project (the "Project") on design, build, operate and transfer (the "DBOT Annuity or Hybrid Annuity") basis, through "M/s Gawar Rohna Sonepat Highway Pvt. Ltd." hereby certify that the Tests specified in Article 14 and Schedule–I of the Agreement have been successfully undertaken to determine compliance of the Project with the provisions of the Agreement, and I/We am/are satisfied that the Project can be safely and reliably placed in commercial service of the Users thereof.

2. It is certified that, in terms of the aforesaid Agreement, all works forming part of the Project have been completed, and the Project is hereby declared fit for entry into commercial operation on this the **5th day of April 2022.**

SIGNED, SEALED AND DELIVERED

For and on behalf of

INDEPENDENT ENGINEER by:

Saurav Shekhar
Independent Engineer
1101A, 11th Floor, Tower A–II, Corporate Park,
Plot No.: 7A/1, Sector–142,
Noida -201301, Uttar Pradesh

Annexure II: Pavement Visual Condition Survey data

Remarks	Condition	From	To	Condition	Remarks
No distress	Good	0+000	1+000	Good	No distress
No distress	Good	1+000	2+000	Good	50m Crack
No distress	Good	2+000	3+000	Good	No distress
No distress	Good	3+000	4+000	Good	No distress
No distress	Good	4+000	5+000	Good	No distress
No distress	Good	5+000	6+000	Good	No distress
No distress	Good	6+000	7+000	Good	50m Crack
No distress	Good	7+000	8+000	Good	No distress
No distress	Good	8+000	9+000	Good	No distress
No distress	Good	9+000	10+000	Good	No distress
No distress	Good	10+000	11+000	Good	No distress
Diversion due to High Tension Wire work		11+000	12+000	Good	No distress
No distress	Good	12+000	13+000	Good	No distress
No distress	Good	13+000	14+000	Good	No distress
No distress	Good	14+000	15+000	Good	No distress
No distress	Good	15+000	16+000	Good	No distress
No distress	Good	16+000	17+000	Good	No distress
100m Patch	Good	17+000	18+000	Good	20m Patch and 50m Crack on shoulder
No distress	Good	18+000	19+000	Good	No distress
300m Patch	Fair	19+000	20+000	Good	200m Patch
20m Patch	Good	20+000	21+000	Good	No distress
50m Patch	Good	21+000	22+000	Good	100m Patch+20m Settlement+50m Crack
30m Patch	Good	22+000	23+000	Good	No distress
No distress	Good	23+000	24+000	Good	No distress

Remarks	Condition	From	To	Condition	Remarks
No distress	Good	24+000	25+000	Good	No distress
Excluding length of Break Chainage from 25+480 to 29+800 as per CA (Schedule B)		25+000	26+000	Excluding length of Break Chainage from 25+480 to 29+800 as per CA (Schedule B)	
		26+000	27+000		
		27+000	28+000		
		28+000	29+000		
		29+000	30+000		
No distress and toll plaza @ch 30+100	Good	30+000	31+000	Good	No distress and toll plaza@ch 30+100
No distress	Good	31+000	32+000	Good	No distress
No distress	Good	32+000	33+000	Good	No distress
No distress	Good	33+000	34+000	Good	No distress
No distress	Good	34+000	35+000	Good	No distress
No distress	Good	35+000	36+000	Good	No distress
50m Crack+20m Patch	Good	36+000	37+000	Good	50m Crack
300m Patch	Fair	37+000	38+000	Good	50m Crack
50m Patch	Good	38+000	39+000	Good	50m Patch
20m Patch	Good	39+000	40+000	Good	50m Crack
No distress	Good	40+000	41+000	Fair	200m Crack
No distress	Good	41+000	42+000	Fair	200m Crack
No distress	Good	42+000	43+000	Distress	300m Crack
No distress	Good	43+000	44+000	Fair	200m Crack
No distress	Good	44+000	44+800	Good	50m Patch

Annexure III: Pavement Distress Survey

A pavement condition survey gives an indication of the serviceability of the road pavement and is vital in deciding the maintenance activities. Some methods to conduct this survey are the Visual Condition Survey method (manual), Network Survey Vehicle (NSV) method, etc. However, Visual Condition Survey was conducted in this Project.

In a visual condition survey, the technical experienced staff makes a traverse along the project stretch, observing the different types of distresses on the pavement surface, and observations are made on each distress type.

Distresses on bituminous pavements include

- Cracks – Longitudinal, Transverse, and Alligator cracks
- Corner breaks
- Spalling of Joints
- Raveling
- Rutting
- Bleeding
- Potholes
- Patches

The cost for repair and rectification has been factored in the O&M estimation and the Concessionaire has taken up the rectification works.

Observations made during the visual condition survey are detailed below.

Longitudinal Cracks

Structural cracks like longitudinal cracks develop parallel to the traffic direction and extend through the depth of the bituminous pavement layer/concrete layer, which can be bottom-up or top-down crack.

These cracks are proposed for route and seal, partial depth repair, full depth repair based on their severity.

Longitudinal cracks were observed at isolated locations of the project Stretch.

Figure: Longitudinal Cracks

Transverse Cracks

Structural cracks like transverse cracks develop perpendicular to the traffic direction and extend through the depth of the bituminous pavement layer/Concrete layer.

Transverse cracks was observed at isolated locations of the project Stretch.

Figure: Tranverse Cracks

Alligator Cracks

Alligator cracking also referred to as fatigue cracking or crocodile cracking, refers to a pattern of asphalt damage that resembles the scales on an alligator's skin. The cracks form co-joined, irregular "blocks' that are often four-sided, such as rectangles, but they can also have more sides and, on occasion, as few as three sides.

Alligator cracks were observed at isolated locations of the project Stretch.

Figure: Alligator Cracks

Corner Break

A portion of the slab is separated by a crack, which intersects the adjacent transverse and longitudinal joints, describing approximately a 45-degree angle with the direction of traffic. The length of the sides is from 0.3 m to half the width of the slab on each side of the corner.

Corner breaks were observed at a few isolated locations along the Project.

Spalling of Joint

Cracking, breaking, chipping, or fraying of slab edges within 0.3 m from the face of the joint.

Spalling of joint was observed at a few isolated locations along the Project Stretch.

Raveling

Raveling is wearing away of the pavement surface due to loss of bitumen binder and dislodged aggregate particles. This distress indicates that either the bitumen binder has hardened appreciably, or a poor-quality mixture is present. In addition, ravelling may be caused by certain types of traffic, for example, tracked vehicles. Softening of the surface and dislodging of the aggregates due to oil spillage and weathering are also included under ravelling.

Low severity Raveling was observed at some locations of the project Stretch.

Figure: Raveling

Rutting

A rut is a surface depression of pavement in the wheel paths, and pavement uplift may occur along the sides of the rut. Rutting stems from a permanent deformation in any pavement layers or subgrade usually caused by consolidated or lateral movement of the materials due to traffic load.

Low severity Rutting associated with bleeding was observed at a few isolated locations of the project Stretch.

Bleeding

A surface having a thin film of excess or free bituminous binder on it, which creates a shiny, glass like reflecting surface tending to become soft in hot weather and slippery in cold and wet weather, eventually developing low skid resistance is referred to as bleeding or fatty bituminous surface.

Bleeding was observed at isolated locations of the project Stretch.

Potholes

Potholes are small (or big, based on severity) bowl-shaped depressions on the pavement surface. In general, potholes are formed in later stages of highly ravelled or cracked pavement surface resulting in bowl-shaped depressions.

Potholes were not observed in the project Stretch.

Patches

The patch is an area of the pavement which have been repaired or replaced by new material to remove a certain defect on the pavement. The patch is considered a defect no matter how well it is performing, and some roughness is associated with this type of distress.

Patches were observed at few isolated locations of the project Stretch.

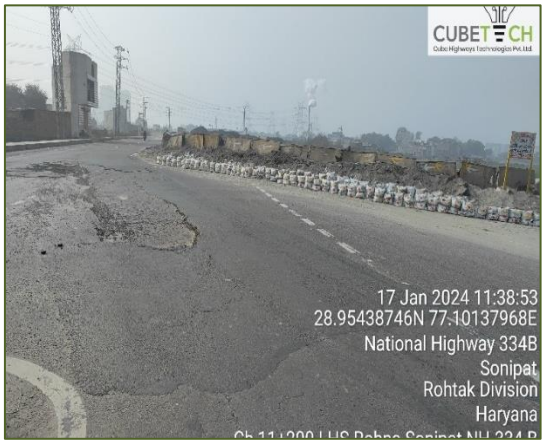


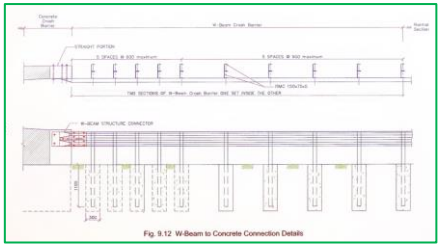
Figure: Patchwork

Annexure VI: Identified Safety Concerns along the Project Road

Keeping in view the scope of assignment, safety concerns have been recorded on site and reported in the table below. Remarks and recommendation column includes information on clauses of CA & applicable manual, any observations in the IE reports/project documents and our recommendations against the highlighted safety concern. Risk and priority of each safety concern are also included as per the following criteria given in line with IRC: SP:88-2019 (Manual on Road Safety Audit).

- Risk categories for identified safety concern: Very High, High, and Medium
- Priority level for recommendations: Essential, Highly Desirable and Desirable

Table: Safety Concerns Observed along the Project Road

S. No.	Safety concern		Recommendation		Type of concern
	Current Situation	Risk	Recommendation and Remarks	Priority	
1	**Safety Barrier**				
A	**Issue with connection between MBCB and Rigid barrier**	**Very High**		**Essential**	**Installation issue**
	Inadequate transition arrangements between MBCB and the Rigid barrier. The fishplate arrangement between the MBCB and the rigid crash barrier along the project road is generally adequate. However, at very few locations, fishplates are missing, posing a high hazard for fast-moving traffic. The picture below illustrates the current scenario of the issue on site. Improper connection of MBCB and Rigid Barriers Also, MBCB post spacing in transition arrangement portion are not as suggested in the applicable manual. In the transition arrangement to the rigid barrier, number		As per applicable manual of CA (Fig.9.12 of IRC: SP:84-2014); the following transition arrangement shall be reviewed to minimize the severity of accident.  Fig. 9.12 W-Beam to Concrete Connection Details		

S. No.	Safety concern		Recommendation		Type of concern
	Current Situation	Risk	Recommendation and Remarks	Priority	
	and spacing of post vary to provide greater rigidity to the semi-flexible barriers. (5 posts at intervals of 0.9m c/c, and next set of 5 posts at intervals of 0.6m c/c.)				
B	**Improper start and end treatment of MBCB**	**Very High**		**Essential**	**No Issue**
	As shown in the photograph below, the W-beam start/end treatment is not provided as per the applicable manual. W-beam barrier end terminals directly terminated into the ground without proper start treatment (MELT) and end (TT) arrangement. This might launch the high-speed errant vehicle in the air and lead to severe accidents.		As per the IRC: SP: 84-2014, Clause 9.7.2 – Roadside steel Barrier, (b) – End Treatment: *The end treatment on approach shall be Modified Eccentric Loader Terminal (MELT) arrangement and on departure side it shall be Trailing Terminal (TT) arrangement. The recommended end treatment arrangement shall be as per Figure no. 9.11 and 9.12 of IRC: SP: 84-2014.* It is recommended to review these locations in accordance with the applicable manual of CA.		
C	**Damaged Metal beam crash barrier**	**-**		**-**	**No Issue**
	During site visit, the team has not encountered any damaged MBCB along the Project Road. However, proactive rectification of damaged furniture is key for safety of road users.				
D	**Wrong overlapping of MBCB plates**	**-**		**-**	**No Issue**
	No wrong overlapping was observed during the site visit.				
E	**Improper Arrangement of MBCB and Kerb**	**-**		**-**	**No Issue**
	No issue was observed.				
F	**MBCB Setback distance**	**-**		**-**	**No Issue**
	Based on visual inspection, MBCB setback distance is observed to be adequate.				
G	**Height of Crash barriers**	**-**		**-**	**No Issue**
	Based on visual inspection, the height of the crash barrier is adequate.				
H	**Welded connection of MBCB Plates**	**-**			**No Issue**

S. No.	Safety concern		Recommendation		Type of concern
	Current Situation	Risk	Recommendation and Remarks	Priority	
	No issue was observed.				
I	**Wire Rope Barrier Setback distance**	**-**		**-**	**NA**
	NA		NA		
J	**Wire Rope Barriers Distance from face of the kerb**	**-**		**-**	**NA**
	NA		NA		
K	**Start of RCC crash barrier w.r.t. grade separator**	**-**		**-**	**NA**
	NA				
L	**RCC crash barrier at Bridges**	**-**		**-**	**No Issue**
	No issue was observed.				
2	**Pedestrian Guard Rail**				
A	**PGR and rigid barrier connection**	**-**		**-**	**No Issue**
	NA		NA		
3	**Pedestrian Facilities**	**-**		**-**	**No Issue**
	Pedestrian facilities such as pedestrian cross marking, sign at every median opening and three foot over bridges has been provided.		MBCB at the base of foot over bridge abutments shall be provided.		
4	**Median walls in b/w structures**	**-**		**-**	**No Issue**
	No issue was observed.				
5	**Highway Lighting**				
A	**Highway Lighting underside of Grade separated structures**	**High**		**Essential**	**New Installation**
	Adequate lighting is observed below grade separator structures. However, during the inspection, it was noted that floodlights below underpasses are non-functional at few locations.		Suggested to review and rectify such locations on priority.		

S. No.	Safety concern		Recommendation		Type of concern
	Current Situation	Risk	Recommendation and Remarks	Priority	
B	**Highway Lighting on Top of Grade separated structures**	**High**		**Essential**	**New Installation**
	Upon visual inspection, it has been observed that highway lighting is provided only on the deck of the grade-separated structures. Highway lighting is not provided on the approaches to grade separate structures. Additionally, the provided highway lighting was not functional at a few locations along the Project Road.		As per clause 12.3.3, IRC: SP:84-2014, Highway lighting shall be provided at *Grade separated Structures, Interchanges, Flyovers, Underpasses (vehicular / pedestrian) and Overpasses: Lighting shall be provided as per Para 3.3.4 of the Manual.* As per Clause 3.3.4 of IRC: SP:84-2014, *"The top and underside of the grade-separated structures and interchange area at the ground* ***level up to 50 m beyond the point*** *from where flaring of the main carriageway takes place shall be provided with lighting".*		
6	**Solar Blinker**				
A	**Non-Functional solar blinkers and missing blinker lights**	**High**		**Essential**	**New Installation**
	Adequate solar blinkers have been observed along the Project Road. However, a few are non-functional (3 Nos. i.e. at km 20+250 and km 30).		Suggested to review and rectify such locations on priority.		
B	**Height of solar blinkers**	**-**		**-**	**No Issue**
	Based on visual inspection, it was observed that the height of solar blinker was adequate.		No issue was observed		
C	**LED Traffic Beacons/Solar Blinkers arrangement**	**-**			**No Issue**
	No issue was observed		No issue was observed		
7	**Night-time visibility**	**-**		**-**	**No Issue**
	Adequate delineation of the Project Road with retroreflective stickers on the road furniture is provided wherever required.		No issue was observed.		

S. No.	Safety concern		Recommendation		Type of concern
	Current Situation	Risk	Recommendation and Remarks	Priority	
8	**Sign Board**				
A	**Issue with an existing installation of sign boards (Damaged, faded, visibility, etc.,)**	-		-	**No Issue**
	As per the visual inspection, all the sign boards provided are as per the applicable manual and in good condition.		No issue was observed		
9	**Object and Kerb Painting**	**Medium**		**Essential**	**New Installation**
	During the site visit, it was observed that kerb painting and object painting of structures were adequate along the Project Road. However, a few of the soffits of the superstructures lack object painting. The current scenario of these concerns is depicted below.		**Object Hazard Marking on Fixed Objects:** *All the entry and exit of the VUP/PUPs, face of the wall of VUP/PUP shall be marked with OHM to enhance safety during nighttime.*		
10	**Safety Measures at critical locations, i.e., Transverse Bar Marking**	-		-	**No Issue**
	Transverse Bar Marking has been provided at median openings and hazardous approaches.		No issue was observed		
11	**Road Studs**	-		-	**No Issue**
	Road studs have been provided for most locations along the Project Road.		No issue was observed		
12	**Road Delineator**	-		-	**No Issue**
	No issue was observed.				
13	**Road Geometry**				
A	**Improper connections of Minor Roads**	**High**		**Essential**	**Deviation from CA**

S. No.	Safety concern		Recommendation		Type of concern
	Current Situation	Risk	Recommendation and Remarks	Priority	
	During the site visit, it has been observed that, few of minor roads are not properly connected to the main carriageway, which reduce visibility at the junction. The minor road meets the main carriageway at a steep gradient, leaving no level space for vehicles to wait and judge the acceptable gap between vehicles on the MCW.		It suggested to review such locations.		
B	**Absence of storage lane at median opening/U-turn locations**	**-**		**-**	**No Issue**
	All existing median openings are equipped with storage lanes on BHS.		No issue was observed		
C	**Un-Authorized Median Openings (UMO)**	**-**		**-**	**No Issue**
	No issues are currently observed. If any UMO is encountered in the future, it will be addressed with priority and closed promptly.				
14	**Landscaping and Tree Plantation**				
A	**Avenue plantation condition**	**-**		**-**	**No Issue**
	During the site visit it was observed that adequate plantation is provided all along the project road.		No issue was observed		
B	**Median Plantation in No Plantation Zone**	**-**		**-**	**No Issue**
	No issue was observed				
15	**Truck Lay Bays/Bus Bays/Wayside Amenities**				
A	**Truck Lay Bye Layout**	**-**		**-**	**No Issue**
	No issue was observed				
B	**Bus Bays and Bus Shelters**	**High**		**-**	**Deviation from CA**

S. No.	Safety concern		Recommendation		Type of concern
	Current Situation	Risk	Recommendation and Remarks	Priority	
	Bus bays are equipped with road markings and studs. However, one single-arm lights are provided at each bus-bay as shown in the image.		As per applicable manual Clause 12.5.8 of IRC: SP:84-2014, *"**The entire bus bay** shall be provided with lighting (minimum illumination of 40lux)".*		
C	**Rest Areas / Wayside Amenities**	**-**		**-**	**NA**
	As per the CA, there is no proposal for rest area along the project road.				
16	**Other General Issues**				
A	**Water Stagnation**	**-**		**-**	**No Issue**
	Water stagnation was not observed during our site visit. However, a review of drainage plan is essential to eliminate situations of water stagnation in future.		No issue was observed		
B	**Encroachment by temporary shops**	**-**		**-**	**No Issue**
	During the site visit, encroachment is not observed along the project road.				
17	**High Transmission Line Vertical clearance**	**-**		**-**	**No Issue**
	No issue was observed				
18	**Ongoing Construction-Related Issues**	**-**		**-**	**No Issue**
	No ongoing construction activities were observed during the site visit.		No issue was observed		

Summary of recommendations

It may be noted that during the safety inspection, few safety concerns which can be attributed to deviation from the applicable manual have been identified and presented in the Report. However, it is acknowledged that the site has been mostly constructed in accordance with the approved drawings. It shall be noted that, the identified safety concerns

may deteriorate the safe operation of the project over the years. To rectify these issues cost intensive measures would be required. The cost for repair and rectification has been factored in the O&M estimation and the Concessionaire has taken up the rectification works.

Following points below provides a summary of recommendation based on the site visit and review of submitted documents that shall help in elevating the overall profile of the Project Road.

Engineering measures that can be reviewed for implementation:

- Provision of safety barriers on either side of rigid crash barriers, at the base of overhead signs, FOB supports, and along high embankment sections.
- Improve the connection between MBCB and rigid crash barriers, as well as the start/end treatments of MBCB, to enhance road safety.
- Install the missing OHM to highlight hazards close to the travel path.
- Provision of overhead cable signs at sections where the HT line intersects where it shall be attentive for Over Size Vehicles (OSV) while crossing.
- Rectify solar blinkers and highway lighting to warn road users of hazardous approaches and better visibility during night respectively.
- Provide information about authorized parking at regular intervals and discourage parking on paved shoulders.
- Enhance the visibility of superstructures and safety of road users by providing object painting and hazard markers.
- Review minor road profile correction to enhance the visibility of junctions.

It may be noted that apart from above mentioned safety concerns, overall road safety scenario along the Project Road is satisfactory.

Technical Due Diligence for Four Laning of Rajauli-Bakhtiyarpur Section of New NH-20 (Old NH-31) from Design Ch 54+405 to Design Ch 101+630 (Design Length 47.225 km) in the State of Bihar on Hybrid Annuity Mode

Technical Due Diligence Report (Private and Confidential)

July 2024

Submitted to:

Hardiya Hasanpur Highway Private Limited

Cube Highways Technologies Private Limited

Technical Due Diligence for Four Laning of Rajauli-Bakhtiyarpur Section of New NH-20 (Old NH-31) from Design Ch 54+405 to Design Ch 101+630 (Design Length 47.225 km) in the State of Bihar on Hybrid Annuity Mode

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S. No.	Revision	Description	Date	Sign
1	R0	Technical Due Diligence Report	July 2024	

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ABBREVIATIONS

Abbreviation	Description
ASTM	American Society for testing and Materials
AVC	Automatic Vehicle Classifier
ABP	Allahabad bypass package
BBD	Benkelman Beam Deflection
BC	Bituminous Concrete
BOT	Built, Operate and Transfer
CA	Concession Agreement
CC Drain	Cement Concrete Drains
COD	Commercial Operation Date
CRRI	Central Road Research Institute
CBR	California Bearing Ratio test
DBFOT	Design, Build, Finance, Operate and Transfer
ETC	Electronic Toll Collection
FWD	Falling Weight Deflectometer
GOI	Government of India
GCL	Gawar Construction Limited
HPC	Hume Pipe Culvert
IE	Independent Engineer
IRC	Indian Roads Congress
LA	Land Acquisition
LHS	Left Hand Side
LOA	Letter of Acceptance
MBCB	Metal Beam Crash Barrier
MJB	Major Bridge
MNB	Minor Bridge

Abbreviation	Description
NH	National Highway
NHAI	National Highway Authority of India
NSV	Network Survey Vehicle
O&M	Operation and Maintenance
OHLS	Overhead Lane Signal
OHM	Object Hazard Marker
PCOD	Provisional Commercial Operation Date
POS	Point of Sale
POS	Point of sale
RCC	Reinforced Cement Concrete
RHS	Right Hand Side
ROB	Road/Rail Over Bridge
ROW	Right of Way
RPV	Route Petrol Vehicle
RUB	Road/Rail Under Bridge
SH	State Highway
SPV	Special Purpose Vehicle
SR	Service Road
SSWIM	Slow Speed Weigh in Motion
SWB	Static Weigh Bridge
TOT	Toll Operate Transfer
TC	Toll Collector
Team	Team of Cube Highways Technologies Pvt Ltd.
TMS	Toll Management System
WIM	Weigh in Motion
WMM	Wet Mix Macadam

Chapter 1
INTRODUCTION

CHAPTER 1. INTRODUCTION

1.1 Background

Infrastructure Sector is a key driver for the Indian economy. In 2014, the Government of India have introduced a new investment vehicle which allows investors to participate in the growth story of infrastructure sector, named Infrastructure Investment Trusts (hereinafter referred to as 'InvITs'). InvITs are instruments on pattern of mutual funds and are designed to pool in money from a number of investors to invest in assets that give cash flow over a period of time. The InvITs are regulated by the SEBI (Infrastructure Investment Trusts) Regulations Act, 2014.

In highway sector, InvIT as an instrument provide greater flexibility to investors and is expected to attract patient capitals (for say, 20-30 years) to the market, as these investors are averse to construction risks and are interested in investment in assets which provide long-term stable returns.

InvIT shall have a (i) Trustee, (ii) Sponsor(s) (iii) Investment Manager and (iv) Project Manager, Sponsor and Project Manager are the same entities. During maintenance period of the project stretch, Gawar Construction Limited. (In its capacity as the Project Manager of National Infrastructure Trust) has appointed M/s Cube Highways Technologies Private Limited as Technical Consultant for carrying out technical study and assessment of Opex and Major Maintenance requirement (MMR) for balance concession period. The scope includes review of operation and maintenance system and to prepare maintenance schedule for entire duration of concession period based on a technical analysis. In turn, Cube Highways Technologies undertook the site visits to carry out site inspection. The report is based on findings during this period.

National Infrastructure Trust ("Trust") was settled on September 25, 2023, in Gurugram pursuant to the Trust Deed as a contributory irrevocable trust in accordance with the Indian Trusts Act, 1882. The Trust is an Infrastructure Investment Trust (InvIT) established for making investments in special purpose vehicles as defined under Regulation 2(1) (zy) of the InvIT Regulations, or infrastructure projects or securities of Indian companies engaged in the infrastructure sector, as may be permitted in terms of Regulation 18(5) of the InvIT Regulations. Axis Trustee Services Limited (ATSL) is the Trustee to the Trust. Gawar Investment Manager Private Limited (GIMPL) was incorporated as a private limited company on August 26, 2023, under the Companies Act, 2013. GIMPL is a wholly owned subsidiary Gawar Construction Limited. GIMPL has been appointed as the Investment Manager to the NIT InvIT by Axis Trustee Services Limited (ATSL); the trustee to NIT InvIT and is responsible for managing the operations of InvIT in accordance with InvIT regulations.

Table 1-1: Projects comprising the Initial Portfolio Assets of National Infrastructure Trust

S. No.	Name of the Project	Length (km)
1.	Gawar Rohna Jhajjar Highway Private Limited	35.45
2.	Gawar Khajuwala BAP Highway Private Limited	212.107

S. No.	Name of the Project	Length (km)
3.	Gawar Narnaul Highway Private Limited	45.3
4.	Gawar Rohna Sonepat Highways Private Limited	40.50
5.	**Hardiya Hasanpur Highway Private Limited**	**47.225**
6.	Gawar Kiratpur Nerchowk Highway Private Limited	47.753
7.	Dewas Ujjain Highway Private Limited	41.42
8.	Gawar Bangalore Highways Private Limited	164.34
9.	Gawar Nainital Highways Private Limited	43.905

1.2 Asset Background

The National Highway Authority of India (NHAI) on behalf of Ministry of Road Transport and Highways (MoRT&H), Government of India, have taken up the development of various National Highway corridors where the intensity of traffic has increased significantly and there is requirement of augmentation of capacity for safe and efficient movement of traffic. In this regard, NHAI has been entrusted to develop projects for selected corridors through Public Private Partnership (PPP) basis on Design, Build, Operate and Transfer (DBOT) pattern.

As part of this endeavour, the Government of India (GOI) had entrusted to the Authority the development, maintenance, and management of National Highway (NH) 20 (old NH 31) including the section from km 54+405 to km 101+630. The Authority had resolved to augment Four Laning of Rajauli-Bakhtiyarpur section of NH 31(New NH-20) from km 54+405 to km 101+630 (Package II) on Hybrid annuity mode in the state of Bihar. By Four-Laning thereof (the "Project") on design, build, operate and transfer (the "DBOT Annuity" or "Hybrid Annuity") basis, which shall be partly financed by the Concessionaire who shall recover its investment and costs through payments to be made by the Authority, in accordance with the terms and conditions as set forth in the Concession Agreement (CA).

The Hybrid Annuity Model (HAM) is a mix of Built, Operate and Transfer (BOT) Annuity and Engineering, Procurement and Construction (EPC) models. As per the design, the Authority will contribute up-to 40% of the Project Cost in five equal instalments of 8% each during the Construction Period of 730 days with the provisions of Clause 23.4 of CA. The remaining payment will be made based on the assets created and the performance of the developer. Here, hybrid annuity means the first 40% payment is made as fixed amount in five equal instalments whereas the remaining 60% is paid as variable annuity amount after the completion of the Project. As per the design, the Authority will contribute 40% of the Bid Project Cost (BPC) and the balance cost is funded by the Concessionaire through debt and equity.

The Authority had adopted a single stage two envelope bidding process and accordingly invited proposals by its Request for Proposals dated 26th May 2020 (the "Request for Proposals" or "RFP") for qualification and short listing of bidders for construction, operation, and maintenance of the above referred Project on Hybrid Annuity basis. The

Authority had prescribed the technical and commercial terms and conditions in the RFP and invited bids comprising technical and financial bids from the bidders for undertaking the Project.

After evaluation of the bids received, the Authority had technically qualified certain bidders including, inter alia, the selected bidder and accepted the financial bid of the selected bidder i.e., Gawar Construction Limited (GCL).

The Authority issued its Letter of Award No.NHAI/BH/Rajauli-Bakh(Pkg-II)/HAM/2019/Proc/104 dated 14th September 2020(hereinafter called the "LOA") to the selected bidder requiring, inter alia, the execution of this Concession Agreement within 45 (forty-five) days, accordingly, it was executed on 33rd day as per terms of Concession Agreement (CA), of the date of issue thereof.

Accordingly, Special Purpose Vehicle (SPV) **Hardiya Hasanpur Highway Private Limited** ("HHHPL") has been formed, for implementing the Project the "Concessionaire"). As the Concessionaire of this Project, they will be developing the Project, operate and maintain the facilities after completion of construction.

Under Hybrid Annuity Model (HAM), toll collection on the Project shall be responsibility of NHAI. The Concessionaire will be recovering its costs through annuity payments made during Concession Period of 17 years (annuity payments during Construction as well as in Operations Period), including Construction Period of 730 days from the Appointed Date and Operation Period of 15 years from Commercial Operation Date (COD).

1.3 Report Structure

The report contains eight chapters, including this Chapter on Introduction.

Chapter 2 Project Overview

Chapter 3 Asset Status

Chapter 4 Review of Structures

Chapter 5 Review of the pavement condition survey

Chapter 6 General Safety Concerns along the Project stretch and Improvements

Chapter 7 Operation and Maintenance Cost

Chapter 2
PROJECT OVERVIEW

CHAPTER 2. PROJECT OVERVIEW

2.1 Location

The existing Project Highway starts at km 54+405 Hardiya and ends at km. 101+630 at Hasanpur in the state of Bihar. The Start co-ordinate of the Project is Latitude 24°36'11.88" N and Longitude 85°30'49.68" E. The end co-ordinate of the Project is Latitude 25°0'24.84" N and Longitude 85°31'38.28" E.

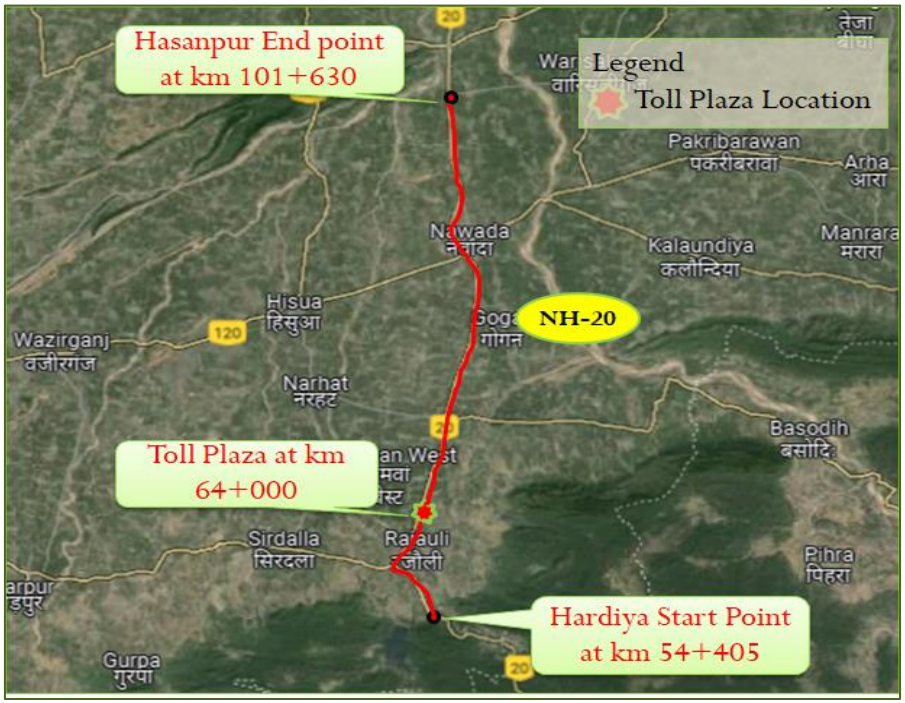

Figure 2-1: Project Alignment

2.2 Salient features

The salient features of the Project are summarised in the table below:

Table 2-1 Project Salient Features

S. No	Scope	Description
1	Name of the Project	Four Laning of Rajauli-Bakhtiyarpur section of new NH-20 (Old NH-31) from Design Chainage 54+405 to Design Chainage 101+630 (Design Length 47.225 km) in the State of Bihar on Hybrid Annuity Mode
2	Name of Client	National Highways Authority of India
3	Name of Concessionaire	M/s Hardiya Hasanpur Highway Private Limited
4	Name of EPC Contractor	M/s Gawar Constructions Ltd.
5	Independent Engineer	M/s Intercontinental Consultants and Technocrats Pvt. Ltd in association with MSPARK Futuristics & Associates
7	Length of the Project	47.225 km
8	Project Cost	Rs. 1065 crores
9	Letter of award	14th September 2020
10	Signing of Concession Agreement date	28th October 2020
12	Appointed Date	28th April 2021
13	Construction Period	730 days from Appointed Date
14	Operation Period	15 years from COD
15	Provisional Completion date	27th April 2023
16	Concession Period End Date	23rd April 2038

2.3 Scope of the Project

The scope of the Project (the "Scope of the Project") shall mean and include,

- Construction of the Project on the site set forth in Schedule-A and as specified in Schedule-B together with provision of Project Facilities as specified in Schedule- C, and in conformity with the Specifications and Standards set forth in Schedule- D of the Concession Agreement.
- Operation and Maintenance of the Project in accordance with the provisions of Concession Agreement; and
- Performance and fulfilment of all other obligations of the Concessionaire in accordance with the provisions of Concession Agreement and matters incidental there to or necessary for the performance of any or all the obligations of the Concessionaire under Concession Agreement.

2.4 Physical features of the Project

The Concessionaire shall operate, manage and maintain the project stretch for entire Concession Period, subject to and in accordance with the provisions of this Agreement. The Concessionaire shall visit the Site and assess the durability and strength of Project Assets and make his own assessment for operation, management. and maintenance as per Specifications and Standards and bear and pay all costs, expenses and charges in connection with or incidental to the performance of operation, management and maintenance.

The project includes the following physical features.

Table 2-2: Project Physical Features

S. No	Project Physical Features	UoM	As per CA	As per Site	Remarks
1	Total Length of project stretch	km	47.225	47.225	
2	Total length of Service Road	km	35.580	31.559	Remaining not constructed due to hinderances
3	Major Bridges	nos.	02	02	
4	ROB	nos.	01	01	
5	Flyover	nos.	02	02	
6	Vehicular Underpass	nos.	09	10	1 no as per COS
7	Light Vehicular Underpass	nos.	04	04	
8	Small Vehicular Underpass	nos.	01	07	6 nos are in COS
9	Box Culverts	nos.	106	106	
10	Major Junctions	nos.	13	13	
11	Minor Junctions	nos.	74	74	
12	Toll Plaza	nos.	1	1	Staggered

All the above features as per site have been accounted for the estimation of routine maintenance, repair and rehabilitation, major maintenance and operation expenditure.

2.5 Review of Concession Agreement

The Authority had adopted a single stage two envelope bidding process and accordingly invited proposals by its Request for Proposals dated 28th December 2017 (the "Request for Proposals" or "RFP") for qualification and short listing of bidders for construction, operation and maintenance of the above referred Project on Hybrid Annuity basis.

The Authority had prescribed the technical and commercial terms and conditions in the RFP and invited bids comprising technical and financial bids from the bidders for undertaking the Project.

After evaluation of the bids received, the Authority had technically qualified certain bidders including, inter alia, the selected bidder and accepted the financial bid of the selected bidder i.e., M/s Gawar Constructions Ltd. and issued its Letter of Award No. NHAI/11012/NH-334-B/UPHBSJ/PKG-1/2017/HR/131467 dated 28th February 2019 (hereinafter called the "LOA") to the selected bidder requiring, inter alia, the execution of this Concession Agreement within 45 (forty-five) days and on 27th May 2019 it was accepted.

Table 2-3: Review of CA

Article /Clause of CA	Subject	Description in brief	*Remarks*
Article 3	**Concession period**	Concession period includes construction period of 730 days and operational period of 15 years from COD	
	Total Project Cost	Total project cost is 60 % of the Bid Project Cost If there is an increase in WPI, on an average, by more than 3% per annum for the period between the Bid Date and COD, the Total Project Cost shall be increased such that the effect of increase in WPI, more than such 3%, is reflected in the Total Project Cost	
Article 6 Clause 6.1.2	**Obligation of Authority**	The authority undertakes rehabilitation and resettlement of persons affected by construction of project and must bear all cost and expenses thereof. The authority is also required to procure forest clearance as a condition precedent to concession agreement.	*Positive for developers as it shall result in increase in pace of execution*

Article /Clause of CA	Subject	Description in brief	*Remarks*
Clause 23.2	**Adjusted bid project cost**	For every month occurring after the Appointed Date, the Authority shall compute the variation in Price Index occurring between the Reference Index Date preceding the Bid Date and the Reference Index Date preceding the date of Invoice and shall express the latter as a multiple of the former (the "Price Index Multiple").	
Article 14	**Provisional completion certificate**	If the Concessionaire has completed construction of 100% of the site made available to the Concessionaire up to 146 days from the appointed date, the Concessionaire is eligible for provisional completion certificate	*Positive for developer*
Clause 14.2	**Completion certificate**	Upon completion of the construction works and the independent engineer determining the tests to be successful, it shall forthwith issue to the Concessionaire and the Authority a certificate substantially in the form set forth in Schedule-J (the "Completion Certificate").	
Article 15	**Commercial Operation Date (COD)**	The Project should be regarded to be finished when the Completion Certificate or the Provisional Certificate, by and large, is issued under the arrangements of Article 14, and accordingly, the commercial operation date of the Project shall be the date on which such Completion Certificate or the Provisional Certificate is issued (the "COD").Upon Concessionaire failure to pay damages, the same shall be paid with interest of bank rate plus 3% and shall be deducted from the annuity payments till the recovery of entire damages	*Positive for the authority and more binding on developers to complete the project within stipulated time frame*

Article /Clause of CA	Subject	Description in brief	*Remarks*
Clause 15.2	**Damages for delays attributed to the Concessionaire**	if COD does not occur prior to the 91st day after the Scheduled Completion Date, unless the delay is on account of reasons attributable to the Authority or due to Force Majeure, the Concessionaire shall pay Damages to the Authority in a sum calculated at the rate of 0.2% of the amount of Performance Security for delay of each day until COD is achieved	
Article 16	**Change in scope**	The Authority shall pay to Concessionaire any increase in scope of work approved by Independent Engineer. While in case of reduction of scope due to reasons attributed by the Authority, cost of such reduced cost is to be accessed by the Independent Engineer, as per the schedule of rates applicable on the Bid Due Date. The civil cost of the reduced Scope shall be multiplied by the 1.05 to arrive at the estimated cost of reduced Scope. The estimated cost of reduced Scope shall then be multiplied by the ratio of Bid Project Cost to Estimated Project Cost to arrive at the Total Cost of Reduced Scope.	
Article 31	**Termination payment**		
	Termination payment in the event of default by Concessionaire prior to COD	Termination payment is allowed subject to achievement of second milestone for the payment of grant (i.e.,30% of the physical progress). Termination payment shall be paid in the range of 50-80% of the debt due or 5.25-32% of the project cost whichever is less minus insurance cover depending upon achievement of second to fifth milestone for release of construction grant.	Positive for the lenders as it protects their interest to a considerable extent
	Termination payment in the event of default by Concessionaire during operation	Authority shall pay to the Concessionaire an amount equal to 65% (sixty-five per cent) of the sum of Annuity Payments remaining unpaid for and in respect of the Concession Period, including interest thereon up to the Transfer Date.	

Article /Clause of CA	Subject	Description in brief	*Remarks*
	Termination payment in the event of default by Authority prior to COD	a) Termination payment shall be paid debt due less insurance cover or 1.50% -40.50% of the bid project cost whichever is less minus insurance cover depending upon achievement of second to fifth milestone for release of construction grant. b) 150% (one hundred and fifty per cent) of the Adjusted Equity	
	Termination payment in the event of default by Authority during operation Period	An amount equal to sum of Annuity Payments remaining unpaid for and in respect of the Concession Period, including interest thereon up to the Transfer Date.	
Article 35	**Change in law**		
	Increase in cost	If the Concessionaire suffers aggregate financial effect due to change in law, which exceeds by Rs 1.69 crores or 2% of the total annuity payments in any accounting year the Concessionaire may notify Authority and propose amendments to this agreement so as to place the Concessionaire in the same financial position w/o change in law	*Concessionaire is protected*
	Reduction in cost	If the Concessionaire benefits from reduction in costs and the aggregate financial effect due to change in law, exceeds by Rs 1.69 crores or 2% of the total annuity payments in any accounting year the Authority may notify Concessionaire and propose amendments to this agreement so as to place the Concessionaire in the same financial position w/o change in law	
Clause 6.3	Obligations relating to refinancing	Authority shall permit and enable Concessionaire for refinancing as per prevailing guidelines upon written request. Authority shall respond within 30 days of the receipt of proposal.	*Positive for the developers and lenders*
Article 28	**Force majeure**		

Article /Clause of CA	Subject	Description in brief	*Remarks*
	Time Extension		
	a) Before Financial closure (Appointed Date)	Time set forth for achieving Financial closure extended by time of force majeure event	
	b) Between Appointed Date and Commercial Operation date (COD)	Time set forth for Project completion extended by time of force majeure event Non-political force majeure: Respective parties to bear the costs. Neither party is required to pay other party	
	c) After COD	After COD, the Concessionaire shall be entitled to receive Annuity Payments plus interest due and payable under this Agreement. Provided any payment to be made under this clause shall be subject to deduction of outstanding dues of the Authority, if any	
	Cost arising out of force majeure event		
	a) Before Appointed date	Cost to be borne by Concessionaire & Authority respectively	
	b) After Appointed Date	Non-Political Event: Cost to be shared by respective parties Indirect Political event: To be shared Direct Political: Cost compensated by Authority to concessionaire	*Concessionaire is protected*
Clause 17.8	Damages for breach of Maintenance Obligation	if the Concessionaire fails to repair or rectify any defect or deficiency set forth in the Maintenance Requirements within the period specified the Authority shall be entitled to recover damages, to be calculated and paid for each day of delay until the breach is cured, at the higher of (a) 2% of the Performance Security, and (b) 0.1% of the cost of such repair or rectification as estimated by the Independent Engineer	*Concessionaire is made more responsible*

Article /Clause of CA	Subject	Description in brief	*Remarks*
Clause 17.16	Advertising on the site	The Concessionaire shall not undertake or permit any form of commercial advertising, display or hoarding at any place on the site	
Article 20	Traffic aid post, medical aid post etc	Concessionaire shall construct a traffic aid post of 25 sqm, medical aid post and two residential quarters at its own cost and hand them over to authority.	
		Concessionaire shall provide to the State Police Department or a substitute thereof one Jeep or similar vehicle in good working condition along with chauffeurs for round-the-clock patrolling. The operating costs of such vehicle including the salaries and allowances of the chauffeurs shall be borne by Concessionaire.	
		Concessionaire shall provide to the State Medical Department or a substitute thereof to be designated by the Authority one ambulance in good working condition along with chauffeurs for round-the-clock ambulance services. the operating costs of such ambulance including the salaries and allowances of the chauffeurs	
		The Concessionaire shall also reimburse to the State Medical Department (or a substitute thereof to be designated by the Authority) the actual expenditure incurred by it in each Accounting Year on the medical equipment, and the pay and allowances of up to 2 medical personnel deployed exclusively for the Medical Aid Posts and ambulance and shall maintain the Medical Aid Post buildings.	
Clause 21.3	Payment to independent engineer	The remuneration, cost and expenses of the Independent Engineer shall be paid by Authority and subject to the limits set Schedule-M, one-half of such remuneration, cost and expense shall be reimbursed by the Concessionaire to the Authority within 15 days of receiving a statement of expenditure from the Authority	

Article /Clause of CA	Subject	Description in brief	*Remarks*
Clause 23.9.1	Treatment to Incomplete works	The Parties acknowledge and agree that in the event COD occurs upon issuance of a Provisional Certificate, the Annuity Payments and O&M Payments as specified shall be made as if all works comprising the Project have been completed. The works remaining incomplete shall be completed by the Concessionaire in accordance with the provisions of this Agreement and thereupon, the Completion Certificate shall be issued forthwith.	*Positive for both Concessionaire and Lender*
Clause 23.9.2		in the event the Authority determines that any incomplete works referred to in clause 23.9.1 are not required to be completed for any reason, it shall be modifying the Scope of this Project in accordance with the provisions of Article 16 and the Completion Cost, Annuity Payments and O&M payments shall be reduced on account of such Change of scope.	*Will affect Annuity Payments in one hand and will decrease O&M expenditure on the other hand*

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Chapter 3
ASSET STATUS

CHAPTER 3. ASSET STATUS

3.1 Review of Highway Stretch

Entire main carriageway has been completed and as per our visual inspection, the pavement is in good condition, the observations made by our team are presented below.

Figure 3-1: Project start and end location

The team had following general observations during the visit,

- The median plantation watering process was noted during the site visit, ensuring proper care for the greenery.
- At km 66+450 LHS, road stud installation work was in progress under routine maintenance works.
- At km 68+600 RHS, MBCB installation work was in progress under routine maintenance works.
- At some locations, the width of service/slip road was not fully met due to constraint in land acquisition.

3.2 Service Road

Based on site inspection, service road of 31.559 km was found on site. At some locations, width of service/slip road were not fully met due to constraint in land acquisition. The detailed list of service road along the project stretch is enclosed in **Annexure I**.

Figure 3-2: Service Road

3.3 Drain

Based on the site inventory, closed RCC drain along the project stretches measures 27.876 km on both sides. Drain cleaning work found in progress under routine maintenance works. The detailed list of drains along the project stretch is enclosed in **Annexure II**.

Figure 3-3: Drains

3.4 Junctions

Based on the site observation, 13 Major and 74 Minor Junctions were found along the project stretch. All junctions were made of paver blocks connecting the slip road with nearby villages.The list of at Major and minor junctions along the project stretch are enclosed in **Annexure III.**

Figure 3-4:- Junctions

3.5 Road Furniture

Following are the details of road furniture provided along the project stretch as per site.

Table 3-1: List of project furniture's

Type furniture	Unit	Quantity
Metal beam Crash barrier	km	47.558
Overhead Gantry	Nos	13
Cantilever Gantry	Nos	9
VMS	Nos	4
Blinkers	Nos	24
Rigid Crash Barrier	Km	29.111
Streetlights		
Single arm	Nos	256

Type furniture	Unit	Quantity
Double arm	Nos	303
High mast	Nos	6

Metal beam crash barrier

Metal beam crash barriers have been installed along the entire project stretch on the median and are being well-maintained. A list of metal beam crash barrier is enclosed in **Annexure IV**.

Figure 3-5: Metal beam crash barrier (MBCB) along the project stretch

Overhead & Cantilever Gantry boards and VMS

Overhead Gantry and Cantilever Gantry boards are provided at the Project Stretch. They were found in really good condition. VMS has also been installed and found functional during the site visit. A list of Overhead & Cantilever Gantry boards and VMS is enclosed in **Annexure V**.

Figure 3-6: Overhead & Cantilever Gantry boards and VMS

Rigid Crash Barrier

Rigid Crash barrier was provided along the project stretch of 29.111 km. It is provided to be used as a separator between main carriageway and service road. The list of rigid crash barrier installed along the project stretch are enclosed in **Annexure VI.**

Figure 3-7: Rigid Crash Barrier

Highway Lighting

Highway lighting such as single arm, double arm, and high mast lights have been provided along the project stretch, which includes main carriageway, service roads, toll plazas, bus bay, truck lay bye, rest area etc. As per site observations, streetlights provided along the project stretch are in good condition. The list of streetlights installed along the project stretch are enclosed in **Annexure VII.**

Figure 3-8: Highway lighting

3.6 Project facilities

Following are the details of project facilities along the project stretch,

Table 3-2: List of project facilities

Type facility	Unit	Quantity
Bus bays / shelters	nos.	20
Truck lay bye	nos.	2
Rest area	nos.	1
Emergency call box (ECB)	nos.	20

Bus bays/shelters

Bus bays along with bus shelters are provided at 20 locations along the Project stretch. All are found in good conditions. The list of bus bays /shelters installed along the project stretch are enclosed in **Annexure VIII.**

Figure 3-9: Bus bays / shelters

Truck lay bye

Truck Lay bye has been provided along the project stretch with toilet blocks at 2 locations.

Figure 3-10: Truck Lay bye

Rest Area

Rest area has been provided along the project stretch at 1 location.

Figure 3-11: Rest Area

Emergency call box (ECB)

ECB has been provided along the project stretch at 20 locations.. The list of ECBs along the project stretch are enclosed in **Annexure IX.**

Figure 3-12: Emergency call box

3.7 Toll Plaza and Toll Collection System

One staggered toll plaza is provided in the stretch. The Toll Collection System is installed at the toll plaza and is provided by Vaaan Infra Private Limited in the year 2023.

The toll plazas have 16 (8+8) lanes. All lanes are installed with ETC equipment. The view of the toll plazas is shown in figure below.

Figure 3-13: Toll Building.

Figure 3-14: LHS & RHS Plaza.

Lane Equipment

Following lane hardware and equipment are installed at each toll plaza:

- RFID ETC Transceiver
- Lane Controller with Industrial PC
- AVC Sensors
- Automatic Lane Barrier (ALB)
- Incident Capture Camera
- Overhead Lane Signals
- Traffic Lights
- Toll Booth Equipment

RFID ETC Transceiver

- RFID ETC Transceiver reads tags installed on the windshield of vehicles and ETC RFID transceiver near Pay-axis-mounted over gantry. Handheld RFID readers are provided (1 no. in each direction)in case a tag is not detected by the fixed reader.
- ETC system is present in 16 Lanes.
- ETC System is Running on ICD 2.5.

Figure 3-15: RFID Reader.

Lane Controller with Industrial PC

- Toll Lane Controller is located within the Electronic Enclosure placed inside booth which is connected to the common server and is capable of independent storage of data.
- TLCs are installed in 16 lanes. Each TLC has the specification of 8GB RAM and 1TB hard disk with windows 10 OS installed.

Figure 3-16: Toll Lane Controller inside Booth

Automatic Vehicle Classification (AVC) Sensors

The AVC equipment is installed in 16 lanes. The AVC utilized IR profiler.

Figure 3-17: AVC Profiler.

Automatic Lane Barrier

Boom barriers installed in 16 lanes and have a working time of 0.6 s.

Figure 3-18: Boom Barrier.

Lane Traffic Light (LTL) and User Fare Display (UFD)

Lane Traffic Light (LTL) is used to instruct vehicles to stop or pass through the lane. The LTL is RED when the toll collector is expecting the vehicle at the booth. After the transaction is done, the LTL turns Green to instruct the vehicle to pass through the lane. The User Fare Display is a part of electronic toll collection equipment located at the toll booth. It is a mini variable message sign (VMS) made of Light Emitting Diodes (LED). Theuser fare display is used to display the toll fare that is due and that must be paid by the motorist and the classification of vehicle selected by the collector.

LTL and UFD are installed in 16 lanes.

Figure 3-19: Traffic Light (TL) and User Fare Display (UFD).

Incident Capture Camera (ICS Camera)

The incident capture camera is installed on a pole near to the booth to capture the image of the vehicle from the back side. The AVC triggers the Image capture system.

ICS cameras are installed in 16 lanes.

License Plate Image Capture Camera (LPIC)

- License Plate Image capture camera is installed on a pole facing incoming vehicle to capture the image of the vehicle number plate.
- LPIC Cameras are installed in 16 lanes.

Figure 3-20: LPIC and ICS Cameras.

Over Head Lane Signal (OHLS)

- The **Overhead Lane Signal (OHLS)** for lane "Open" and "Close" sign consists of a pair of"GREEN" (arrow) and "RED" (cross) lights. The OHLS is located at the vehicle approaching side of the canopy to show the drivers whether the lane is open or closed.
- OHLS is installed in 16 lanes.

Figure 3-21: Over Head Lane Signal (OHLS).

Toll Booth Equipment

Toll Booth Hardware / Equipment provided are:

- Toll Collector Display (Operator Monitor)
- Customized Industrial Keyboard
- Receipt Printer
- Intercom slave unit
- Violation Light and alarm
- Manual Booth Control (MBC)
- Booth Camera

The operator monitor termed as Toll Collector Display (TCD) is located on the toll collector's desk. It is the system's interface to the toll collector, to display the status of transactions and status of the lane peripherals.

The keyboard on the toll terminal is a programmable keyboard for Registration of toll operations and is customized for different vehicle types and types of ticket. Thermal Printers are installed at the toll booths to print tickets. Intercom slave unit facilitates communication with the master unit located in the control room.

Violation system has an alarm switch which is triggered whenever there is a violation suchas run-through happening on the lane. When there is an emergency, a foot switch pressed by the booth operator alerts the control room.

Booth Cameras are provided on the inside roof corner of the booth to provide surveillance through CCTV screen located in the control room. Manual Booth Controller is used to release exempt vehicles.

Toll booth equipment is installed in 16 lanes.

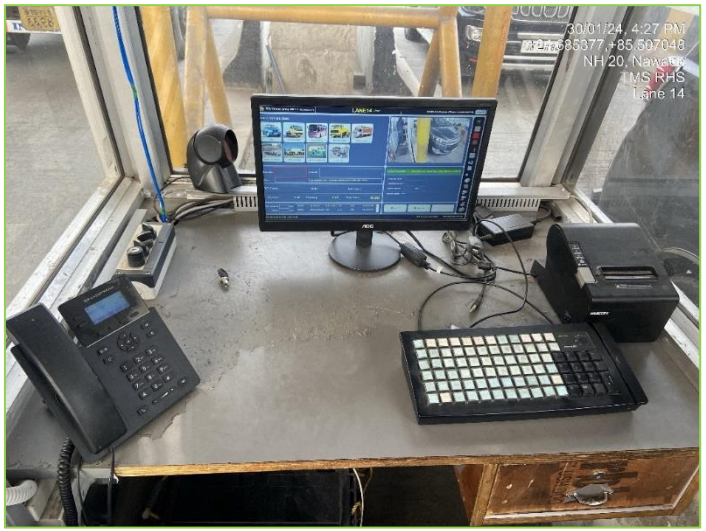


Figure 3-22: Booth Equipment's.

Medium Speed Weigh in Motion (MSWIM)

- Medium Speed Weigh in Motion (MSWIM) is installed on entry lanes. Bending plate strain gauge technology is used with hardware and software support to calculate weight of vehicles running through it up to a speed of 50 km/hr. MSWIM is installed in 16 lanes but not operational at the time of visit.

- SWB is installed at both sides of the toll plaza.

Figure 3-23: Medium Speed Weigh in Motion (MSWIM).

Figure 3-24: Static Weigh Bridge (SWB).

Plaza Equipment

TMS Server

- Two Servers are provided with a switch rack and 24 channel switch. Firewall and broadband internet connectivity are available.
- The server is HP ProLiant DL380 Gen 10

Figure 3-25: Servers.

42” LED screen for CCTV monitoring

One number of 42” inch LED screens for CCTV monitoring installed at the toll plaza admin block provides a view of all the toll booths and important zones within the plaza where cash transactions take place(server room, control room, cash up)

Figure 3-26: CCTV screen at the Toll Plaza Control Room.

The toll plaza manager can observe the activities at the toll lanes and toll booth. When the toll collector calls up on the intercom, the manager can comprehend the situation at the lane by a zoomed view of the lane.

Workstations in Control Room, PoS and Cash up room

Two Workstations are available in the control room for lane monitoring, administration, and audit with 4 GB RAM and 1 TB HDD.

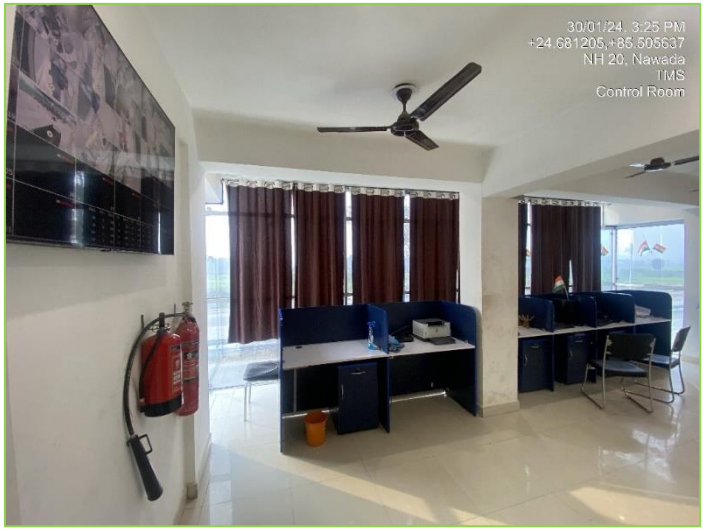


Figure 3-27: Workstations at Control room.

UPS

Following observations were made at toll plaza.

- Two no of 6 KVA UPS are present in the UPS Room.
- 3 KVA UPS is present in each lane.

Figure 3-28: UPS Room.

Figure 3-29: Lane UPS.

3.8 Advanced Traffic Management System (ATMS)

The Advanced Traffic Management System (ATMS) is installed by Vaaan Infra private limited in the year 2023 for the project road which is controlled by the ATMS Centre at the toll plaza location. It comprises of the following:

- Emergency Call Back System (ECB)
- Variable Message Signboards (VMS)
- Automatic Traffic Counter cum Classifier (ATCC)
- Meteorological Data system (MDS)
- CCTV system
- **V**ideo Incident Detection System (VIDS)
- Mobile Radio Communication System (MRCS)

Emergency Call Back System (ECB)

20 no of OFC based Emergency Call Booths are installed along the project road as shown in figure. The users can access these ECBs and communicate to the ATMS control centre in case of emergency such as vehicle breakdown. ECB are powered with solar power.

Figure 3-30: ECB.

Variable Message Signboards (VMS)

Variable message sign boards (VMS) are installed at 4 locations KM.100+000, KM.63+000, KM.65+000 and KM.68+500 but working only in 3 locations. These display specific messages to the users based on the prevailing conditions on the highway. The message can be changed at any point of time from the ATMS Centre.

One portable VMS is also available at the project.

Figure 3-31: VMS.

Figure 3-32: Portable VMS.

Automatic Traffic Counter cum Classifier (ATCC)

Camera based Automatic Traffic Counter cum Classifiers (ATCC) is installed at 2 locations and are in working condition.

MET

MET is installed on the top of Toll Building and operational. Meteorological sensors comprise of sensors to measure the atmospheric temperature, humidity, visibility, Road temperature and equipment for measuring wind speed and direction.

Figure 3-33: MET.

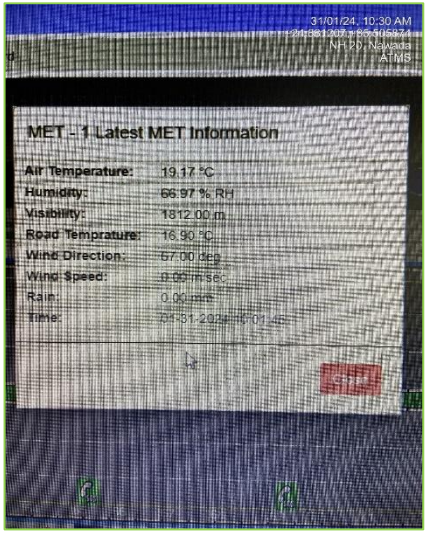


Figure 3-34: MET Report.

CCTV and Surveillance Cameras

Surveillance Cameras are installed at 4 locations.

Figure 3-35: CCTV.

Video Incident Detection System.

Video Incident Detection System is installed and working at 4 locations KM.58+100, KM.60+400, KM.85+550 and KM.88+500.

Figure 3-36: VIDS.

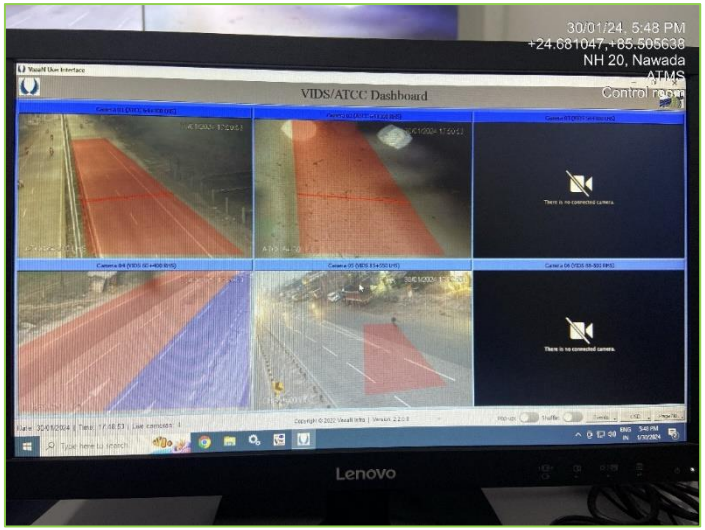


Figure 3-37: VIDS Software.

Mobile Radio Communication System (MRCS).

MRCS is installed at one location KM.79+430 and is in working condition.

Figure 3-38: MRCS.

3.9 ATMS Control Room.

Server:

- Two ATMS Servers are provided with a server rack, 24port switch, NVR, media converter etc.
- One server is HP ProLiant DL380 Gen10 with 6TB HDD and 32GB RAM with windows server 2022 standard while the other one is Dell precision 5820 with 500GB HDD and 32GB RAM with UBUNTU OS installed.

Figure 3-39: ATMS Server.

Control room equipment

- 3X3 Video wall
- 5 Workstations with 8GB RAM and 1TB HDD with Windows11 OS installed
- One network printer
- NVR
- 24 port switches.

Figure 3-40: Video Wall.

Figure 3-41: Workstations in ATMS control room.

UPS

- One 6 KVA and one 3KVA UPS are present in the UPS Room.

Figure 3-42: ATMS UPS

3.10 Adequacy of Toll Collection System and ATMS

- TMS system is installed recently and is working in good condition.
- WIM and SWB need to be checked and maintained at regular intervals for proper functioning.
- **ATMS:** Some of the PTZ cameras and VMS as mentioned above need to be checked at regular intervals for proper working.

Chapter 4
REVIEW OF STRUCTURES

CHAPTER 4. REVIEW OF STRUCTURES

4.1 Structural investigations

Review of structures inventory and detailed condition survey of structures are the essential requirements for preparation of estimates for Capex and also for O & M cost for highway structures. Keeping in view of importance of this task, review of inventory and conducting visual condition survey were carried out as per procedure and guidelines prescribed in IRC: SP:35 bridge engineers. The details of condition survey of structures were furnished below.

4.2 Visual Condition Survey

Salient features for which data is collected as part of conditional survey are in accordance with IRC: SP: 35 Proforma. Main features recorded as part of detailed condition survey are listed below.

- New strip seal elastomer shall need to be fixed for all expansion joints as the existing strip seal is either missing or completely damaged.
- Dust, debris and any other foreign material accumulation shall need to be cleaned from POT/PTFE bearings surroundings
- Rain cuts need to be rectified
- Drainage spouts shall need to be cleaned, missing top gulley gratings shall need to be provided with G.I gratings
- Visible honeycombs on the concrete surfaces.
- Overall structures are in sound and satisfactory condition. However, some treatment has been suggested based on our observations and the Concessionaire has taken up the rectification works. The cost of the above rectification works is factored in the routine O&M cost.

General Details of various types of structures as per CA as well as site inventory survey are furnished below,

Table 4-1: Summary of structures

S. no.	Type of Structure	As per CA (nos.)	As per Site inventory (nos.)	Remarks
1	Major Bridges	02	02	-
2	Road Over Bridges	01	01	-
3	Flyover	02	02	-

S. no.	Type of Structure	As per CA (nos.)	As per Site inventory (nos.)	Remarks
4	Vehicular Underpasses	09	10	1 VUP was constructed under COS.
5	Light Vehicular Underpasses	04	04	-
6	Small Vehicular Underpasses	01	07	6 SVUP's were constructed under COS.
7	Box Culverts	106	106	
	Total	**125**	**131**	

The next section presents the observations on structures. The visual inspection of all major structures was conducted to assess the present condition of structures. The detailed condition survey is furnished in subsequent sections of this report.

4.3 Major Bridges:

There are 02 nos. of Major Bridges on the Project Stretch. The cost for repair and rectification has been factored in the O&M estimation and the Concessionaire has taken up the rectification works. Structures are found in sound and satisfactory condition. Detailed condition survey, necessary repair and maintenance works for all the Major Bridges along the Project Stretch are given below,

Table 4-2: Existing condition and required repairs /maintenance works for Major Bridges

S. no.	Chainage, km	Span Arrangement, m	Total Length, m	Side	Condition of Structure	Proposed repair and pending maintenance works
1	60.780	6 x 31.50	189.00	LHS	1. Strip seal expansion joints were filled with dirt, debris and at most of the locations elastomer is either missing or completely damaged at the expansion joints, resulting in leakage of rainwater and falling of dirt and debris on to bearings and pier/abutment caps. 2. Honeycombing and exposure of reinforcement was noticed on the side face of deck slab at A1 side. 3. Hazardous signboard was missing.	1. New strip seal elastomer shall need to be fixed for all expansion joints as the existing strip seal is either missing or completely damaged. 2. Remove the loose material around the affected area and honeycombing, voids shall need to be sealed with epoxy mortar. 3. Hazardous signboard shall need to be installed.

S. no.	Chainage, km	Span Arrangement, m	Total Length, m	Side	Condition of Structure	Proposed repair and pending maintenance works
				RHS	1. Strip seal expansion joints were filled with dirt, debris and at most of the locations elastomer is either missing or completely damaged at the expansion joints, resulting in leakage of rainwater and falling of dirt and debris on to bearings and pier/abutment caps. 2. Drainage spouts were clogged with dust and most of the top gully gratings were missing. 3. Rain cuts were observed on A2 side and PCC layer above quadrant was damaged.	1. New strip seal elastomer shall need to be fixed for all expansion joints as the existing strip seal is either missing or completely damaged. 2. Drainage spouts shall need to be cleaned, missing top gulley gratings shall need to be provided with G.I gratings. 3. Rain cut, and damaged portion of PCC layer shall need to be rectified.
2	89.920	8 x 30.375	243.00	LHS	1. Strip seal expansion joints were filled with dirt, debris and at most of the locations elastomer is either missing or completely damaged at the expansion joints, resulting in leakage of rainwater and falling of dirt and debris on to bearings and pier/abutment caps. 2. Rain cuts were observed on the A1 side and the PCC layer above quadrant was damaged.	1. New strip seal elastomer shall need to be fixed for all expansion joints as the existing strip seal is either missing or completely damaged. 2. Rain cut, and damaged portion of PCC layer shall need to be rectified.
				RHS	1. Strip seal expansion joints were filled with dirt, debris and at most of the locations elastomer is either missing or completely damaged at the expansion joints, resulting in leakage of rainwater and falling of dirt and debris on to bearings and pier/abutment caps.	1. New strip seal elastomer shall need to be fixed for all expansion joints as the existing strip seal is either missing or completely damaged.

S. no.	Chainage, km	Span Arrangement, m	Total Length, m	Side	Condition of Structure	Proposed repair and pending maintenance works
					2. Rain cuts were observed on the A2 side and the PCC layer above quadrant was damaged.	2.Rain cut, and damaged portion of PCC layer shall need to be rectified.

Figure 4-1: Condition of Major Bridges

4.4 Road Over Bridges:

There is 01 no. of Road Over Bridge on the Project Stretch. The cost for repair and rectification has been factored in the O&M estimation and the Concessionaire has taken up the rectification works. Structure is found in sound and satisfactory condition Detailed condition survey, necessary repair and pending maintenance works for all the Road Over Bridges along the Project Stretch are given below,

Table 4-3: Existing condition and required repairs /maintenance works for Road Over Bridges

S. no.	Chainage, km	Span Arrangement, m	Total Length, m	Side	Condition of Structure	Proposed repair and pending maintenance works
1	86.185	1 x 24.00 + 1 x 30.00 + 1 x 36.00 + 1 x 30.00 + 1 x 24.00	144.00	LHS	1. Drainage spouts assembly was missing only 100mm dia hole was made in the deck slab and horizontal/vertical down take pipes were missing, which resulted rainwater falling on road users. 2. Wider gaps were observed on RE wall.	1. New drainage spouts assembly shall need to be installed and horizontal drainage pipe shall need to provide connecting all drainage spouts in each span and further run along the external wall down to ground level drains.

S. no.	Chainage, km	Span Arrangement, m	Total Length, m	Side	Condition of Structure	Proposed repair and pending maintenance works
					3. Vertical down take pipes were missed on RE wall.	2. Gaps shall need to be sealed and rectified with epoxy mortar. 3. Missed down take pipes shall need to be restored.
				RHS	1. Drainage spouts assembly was missing only 100mm dia hole was made in the deck slab and horizontal/vertical down take pipes were missing, which resulted rainwater falling on road users. 2. Wider gaps were observed on RE wall. 3. Vertical down take pipes were missed on RE wall.	1. New drainage spouts assembly shall need to be installed and horizontal drainage pipe shall need to provide connecting all drainage spouts in each span and further run along the external wall down to ground level drains. 2. Gaps shall need to be sealed and rectified with epoxy mortar. 3. Missed down take pipes shall need to be restored.

Figure 4-2: Condition of Road Over Bridges

4.5 Flyover:

There are 02 nos. of Flyovers on the Project Stretch. The cost for repair and rectification has been factored in the O&M estimation and the Concessionaire has taken up the rectification works. Structures are found in sound and satisfactory condition. Detailed condition survey, necessary repair and pending maintenance works for all the Flyovers along the Project Stretch are given below,

Table 4-4: Existing condition and required repairs /maintenance works for Flyover

S. no.	Chainage, km	Span Arrangement, m	Total Length, m	Side	Condition of Structure	Proposed repair and pending maintenance works
1	59.578	1 x 15.00 + 1 x 30.00 + 1 x 15.00	60.00	LHS	1. Vertical down take pipes were missed on RE wall.	1. Missed down take pipes shall need to be restored.
				RHS	1. Vertical down take pipes were missed on RE wall.	1. Missed down take pipes shall need to be restored.
2	86.700	1 x 15.00 + 1 x 30.00 + 1 x 15.00	60.00	LHS	1. Vertical down take pipes were missed on RE wall.	1. Missed down take pipes shall need to be restored.
				RHS	1. Vertical down take pipes were missed on RE wall.	1. Missed down take pipes shall need to be restored.

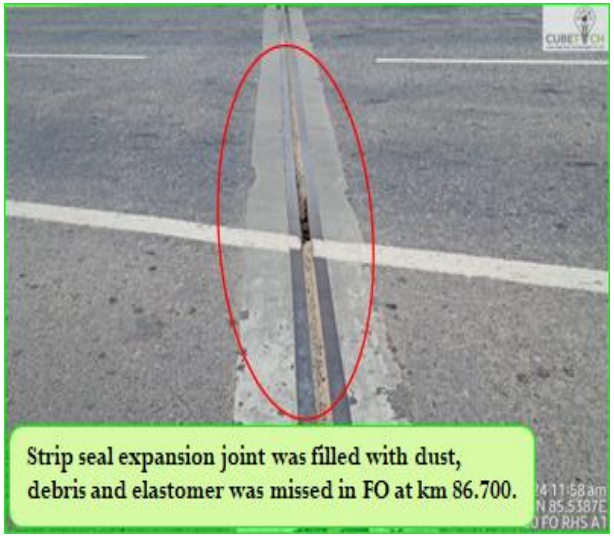


Figure 4-3: Condition of Flyover

4.6 Vehicular Underpasses:

There are 10 nos. of Vehicular Underpasses on the Project Stretch. The cost for repair and rectification has been factored in the O&M estimation and the Concessionaire has taken up the rectification works. Structures are found in sound and satisfactory condition Detailed condition survey, necessary repair and pending maintenance works for all the Vehicular Underpasses along the Project Stretch are given below,

Table 4-5: Existing condition and required repairs /maintenance works for Vehicular Underpasses

S. no.	Chainage, km	Span Arrangement, m	Total Length, m	Side	Condition of Structure	Proposed repair and pending maintenance works
1	58.630	1 x 20.00	20.00	LHS	1. Vertical down take pipes were missed on RE wall. 2. Wider gaps were observed on RE wall.	1. Missed down take pipes shall need to be restored. 2. Gaps shall need to be sealed and rectified with epoxy mortar.
				RHS	1. Drainage spouts are clogged with dirt, debris and horizontal/vertical down take pipes were missing, which resulted rainwater falling on road users. 2. Crack were observed on gap slab A2 side. 3.Vertical down take pipes were missed on RE wall. 4. Wider gaps were observed on RE wall.	1. Drainage spouts shall need to be cleaned, make it functional and horizontal drainage pipe shall need to provide connecting all drainage spouts in each span and further run along the external wall down to ground level drains. 2. Cracks shall need to be sealed with epoxy grouting. 3. Missed down take pipes shall need to be restored. 4. Gaps shall need to be sealed and rectified with epoxy mortar.
2	61.590	1 x 20.00	20.00	LHS	1. Drainage spouts are clogged with dirt, debris and horizontal/vertical down take pipes were missing, which resulted rainwater falling on road users. 2. Crack were observed on gap slab A1 side.	1. Drainage spouts shall need to be cleaned, make it functional and horizontal drainage pipe shall need to provide connecting all drainage spouts in each span and further run

S. no.	Chainage, km	Span Arrangement, m	Total Length, m	Side	Condition of Structure	Proposed repair and pending maintenance works
					3. Vertical down take pipes were missed on RE wall. 4. Wider gaps were observed on RE wall.	along the external wall down to ground level drains. 2. Cracks shall need to be sealed with epoxy grouting. 3. Missed down take pipes shall need to be restored. 4. Gaps shall need to be sealed and rectified with epoxy mortar.
				RHS	1. Drainage spouts are clogged with dirt, debris and horizontal/vertical down take pipes were missing, which resulted rainwater falling on road users. 2. Vertical down take pipes were missed on RE wall. 3. Wider gaps were observed on RE wall.	1. Drainage spouts shall need to be cleaned, make it functional and horizontal drainage pipe shall need to provide connecting all drainage spouts in each span and further run along the external wall down to ground level drains. 2. Missed down take pipes shall need to be restored. 3. Gaps shall need to be sealed and rectified with epoxy mortar.
3	72.252	1 x 20.00	20.00	LHS	1. Drainage spouts are clogged with dirt, debris and horizontal/vertical down take pipes were missing, which resulted rainwater falling on road users. . Vertical down take pipes were missed on RE wall. 3. Wider gaps were observed on RE wall.	1. Drainage spouts shall need to be cleaned, make it functional and horizontal drainage pipe shall need to provide connecting all drainage spouts in each span and further run along the external wall down to ground level drains. 2. Missed down take pipes shall need to be restored. 3. Gaps shall need to be sealed and rectified with epoxy mortar.
				RHS	1. Drainage spouts are clogged with dirt, debris and horizontal/vertical down take	1. Drainage spouts shall need to be cleaned, make it functional and

S. no.	Chainage, km	Span Arrangement, m	Total Length, m	Side	Condition of Structure	Proposed repair and pending maintenance works
					pipes were missing, which resulted rainwater falling on road users. 2. Vertical down take pipes were missed on RE wall. 3. Wider gaps were observed on RE wall.	horizontal drainage pipe shall need to provide connecting all drainage spouts in each span and further run along the external wall down to ground level drains. 2. Missed down take pipes shall need to be restored. 3. Gaps shall need to be sealed and rectified with epoxy mortar.
4	83.045	1 x 20.00	20.00	LHS	1. Drainage spouts are clogged with dirt, debris and horizontal/vertical down take pipes were missing, which resulted rainwater falling on road users. 2. Vertical down take pipes were missed on RE wall. 3. Wider gaps were observed on RE wall.	1. Drainage spouts shall need to be cleaned, make it functional and horizontal drainage pipe shall need to provide connecting all drainage spouts in each span and further run along the external wall down to ground level drains. 2. Missed down take pipes shall need to be restored. 3. Gaps shall need to be sealed and rectified with epoxy mortar.
				RHS	1. Drainage spouts are clogged with dirt, debris and horizontal/vertical down take pipes were missing, which resulted rainwater falling on road users. 2. Vertical down take pipes were missed on RE wall. 3. Wider gaps were observed on RE wall.	1. Drainage spouts shall need to be cleaned, make it functional and horizontal drainage pipe shall need to provide connecting all drainage spouts in each span and further run along the external wall down to ground level drains. 2. Missed down take pipes shall need to be restored. 3. Gaps shall need to be sealed and rectified with epoxy mortar.

S. no.	Chainage, km	Span Arrangement, m	Total Length, m	Side	Condition of Structure	Proposed repair and pending maintenance works
5	87.948	1 x 20.00	20.00	LHS	1. Drainage spouts are clogged with dirt, debris and horizontal/vertical down take pipes were missing, which resulted rainwater falling on road users. 2. Vertical down take pipes were missed on RE wall.	1. Drainage spouts shall need to be cleaned, make it functional and horizontal drainage pipe shall need to provide connecting all drainage spouts in each span and further run along the external wall down to ground level drains. 2. Missed down take pipes shall need to be restored.
				RHS	1. Drainage spouts are clogged with dirt, debris and horizontal/vertical down take pipes were missing, which resulted rainwater falling on road users. 2. Vertical down take pipes were missed on RE wall.	1. Drainage spouts shall need to be cleaned, make it functional and horizontal drainage pipe shall need to provide connecting all drainage spouts in each span and further run along the external wall down to ground level drains. 2. Missed down take pipes shall need to be restored.
6	88.750-COS	1 x 20.00	20.00	LHS	1. Drainage spouts are clogged with dirt, debris and horizontal/vertical down take pipes were missing, which resulted rainwater falling on road users. 2. Vertical down take pipes were missed on RE wall.	1. Drainage spouts shall need to be cleaned, make it functional and horizontal drainage pipe shall need to provide connecting all drainage spouts in each span and further run along the external wall down to ground level drains. 2. Missed down take pipes shall need to be restored.
				RHS	1. Drainage spouts are clogged with dirt, debris and horizontal/vertical down take pipes were missing, which resulted rainwater falling on road users.	1. Drainage spouts shall need to be cleaned, make it functional and horizontal drainage pipe shall need to provide connecting all drainage spouts in each span and further run

S. no.	Chainage, km	Span Arrangement, m	Total Length, m	Side	Condition of Structure	Proposed repair and pending maintenance works
					2. Vertical down take pipes were missed on RE wall.	along the external wall down to ground level drains. 2. Missed down take pipes shall need to be restored.
7	90.450	1 x 20.00	20.00	LHS	1. Drainage spouts are clogged with dirt, debris and horizontal/vertical down take pipes were missing, which resulted rainwater falling on road users. 2. Vertical down take pipes were missed on RE wall.	1. Drainage spouts shall need to be cleaned, make it functional and horizontal drainage pipe shall need to provide connecting all drainage spouts in each span and further run along the external wall down to ground level drains. 2. Missed down take pipes shall need to be restored.
				RHS	1. Strip seal expansion joints were filled with dirt; debris, the elastomer are either missing or completely damaged at the expansion joints and edge angle concrete was damaged on A1 side. 2. Drainage spouts are clogged with dirt, debris and horizontal/vertical down take pipes were missing, which resulted rainwater falling on road users. 3. Vertical down take pipes were missed on RE wall.	1. New strip seal elastomer shall need to be fixed for all expansion joints as the existing strip seal is either missing or completely damaged and damaged portion of edge angle shall need to be rectified. 2. Drainage spouts shall need to be cleaned, make it functional and horizontal drainage pipe shall need to provide connecting all drainage spouts in each span and further run along the external wall down to ground level drains. 3. Missed down take pipes shall need to be restored.
8	93.570	1 x 20.00	20.00	LHS	1. Drainage spouts are clogged with dirt, debris and horizontal/vertical down take pipes were missing, which resulted rainwater falling on road users.	1. Drainage spouts shall need to be cleaned, make it functional and horizontal drainage pipe shall need to provide connecting all drainage

S. no.	Chainage, km	Span Arrangement, m	Total Length, m	Side	Condition of Structure	Proposed repair and pending maintenance works
					2. Vertical down take pipes were missing on RE wall. 3. Wider gaps were observed on RE wall.	spouts in each span and further run along the external wall down to ground level drains. 2. Missed down take pipes shall need to be restored. 3. Gaps shall need to be sealed and rectified with epoxy mortar.
				RHS	1. Drainage spouts are clogged with dirt, debris and horizontal/vertical down take pipes were missing, which resulted rainwater falling on road users. 2. Vertical down take pipes were missing on RE wall. 3. Wider gaps were observed on RE wall.	1. Drainage spouts shall need to be cleaned, make it functional and horizontal drainage pipe shall need to provide connecting all drainage spouts in each span and further run along the external wall down to ground level drains. 2. Missed down take pipes shall need to be restored. 3. Gaps shall need to be sealed and rectified with epoxy mortar.
9	96.250	1 x 20.00	20.00	LHS	1. Drainage spouts are clogged with dirt, debris and horizontal/vertical down take pipes were missing, which resulted rainwater falling on road users. 2. Vertical down take pipes were missing on RE wall. 3. Wider gaps were observed on RE wall.	1. Drainage spouts shall need to be cleaned, make it functional and horizontal drainage pipe shall need to provide connecting all drainage spouts in each span and further run along the external wall down to ground level drains. 2. Missed down take pipes shall need to be restored. 3. Gaps shall need to be sealed and rectified with epoxy mortar.
				RHS	1. Drainage spouts are clogged with dirt, debris and horizontal/vertical down take	1. Drainage spouts shall need to be cleaned, make it functional and horizontal drainage pipe shall need to

S. no.	Chainage, km	Span Arrangement, m	Total Length, m	Side	Condition of Structure	Proposed repair and pending maintenance works
					pipes were missing, which resulted rainwater falling on road users. 2. Vertical down take pipes were missing on RE wall. 3. Wider gaps were observed on RE wall.	provide connecting all drainage spouts in each span and further run along the external wall down to ground level drains. 2. Missed down take pipes shall need to be restored. 3. Gaps shall need to be sealed and rectified with epoxy mortar.
10	100.400	1 x 20.00	20.00	LHS	1. Drainage spouts are clogged with dirt, debris and horizontal/vertical down take pipes were missing, which resulted rainwater falling on road users. 2. Vertical down take pipes were missed on RE wall.	1. Drainage spouts shall need to be cleaned, make it functional and horizontal drainage pipe shall need to provide connecting all drainage spouts in each span and further run along the external wall down to ground level drains. 2. Missed down take pipes shall need to be restored.
				RHS	1. Drainage spouts are clogged with dirt, debris and horizontal/vertical down take pipes were missing, which resulted rainwater falling on road users. 2. Vertical down take pipes were missed on RE wall.	1. Drainage spouts shall need to be cleaned, make it functional and horizontal drainage pipe shall need to provide connecting all drainage spouts in each span and further run along the external wall down to ground level drains. 2. Missed down take pipes shall need to be restored.

Figure 4-4: Condition of Vehicular Underpasses

4.7 Light Vehicular Underpasses:

There are 04 nos. of Light Vehicular Underpasses on the Project Stretch. The cost for repair and rectification has been factored in the O&M estimation and the Concessionaire has taken up the rectification works. Structures are found in sound and satisfactory condition Detailed condition survey, necessary repair and pending maintenance works for all the Light Vehicular Underpasses along the Project Stretch are given below,

Table 4-6: Existing condition and required repairs /maintenance works for Light Vehicluar Underpasses

S. no.	Chainage, km	Span Arrangement, m	Total Length, m	Side	Condition of Structure	Proposed repair and pending maintenance works
1	67.945	1 x 12.00 x 4.00	12.00	LHS	1. Water leakage marks were noticed on the expansion gap in between box structures of two carriage ways which is falling in median.	1. Polymer bituminous sealant shall be applied on top and bottom of expansion gap to arrest the water leakage from median gap.
				RHS	1. Drainage spout assembly was missing only 100mm dia hole was made in crash barrier.	1. New drainage spouts assembly shall need to be provided with G.I gratings and down

S. no.	Chainage, km	Span Arrangement, m	Total Length, m	Side	Condition of Structure	Proposed repair and pending maintenance works
						take pipe shall need to connect to horizontal and vertical pipes.
2	70.222	1 x 12.00 x 4.00	12.00	LHS	1. Water leakage marks were noticed on the expansion gap in between box structures of two carriage ways which is falling in median.	2. Polymer bituminous sealant shall be applied on top and bottom of expansion gap to arrest the water leakage from median gap.
				RHS		
3	75.520	1 x 12.00 x 4.00	12.00	LHS	1. Water leakage marks were noticed on the expansion gap in between box structures of two carriage ways which is falling in median.	1. Polymer bituminous sealant shall be applied on top and bottom of expansion gap to arrest the water leakage from median gap.
				RHS	1. Drainage spout assembly was missing only 100mm dia hole was made in crash barrier. 2. Honeycombing was noticed on soffit of top slab.	1. New drainage spouts assembly shall need to be provided with G.I gratings and down take pipe shall need to connect to horizontal and vertical pipes. 2. Honeycombing shall need to be sealed with epoxy mortar.
4	79.285	1 x 12.00 x 4.00	12.00	LHS	1. Drainage spout assembly was missing only 100mm dia hole was made in crash barrier. 2. Water leakage marks were noticed on the expansion gap in between box structures of two carriage ways which is falling in median.	2. Polymer bituminous sealant shall be applied on top and bottom of expansion gap to arrest the water leakage from median gap.
				RHS	1. Drainage spout assembly was missing only 100mm dia hole was made in crash barrier.	1. New drainage spouts assembly shall need to be provided with G.I gratings and down take pipe shall need to connect to horizontal and vertical pipes.

Figure 4-5: Condition of Light Vehicular Underpasses

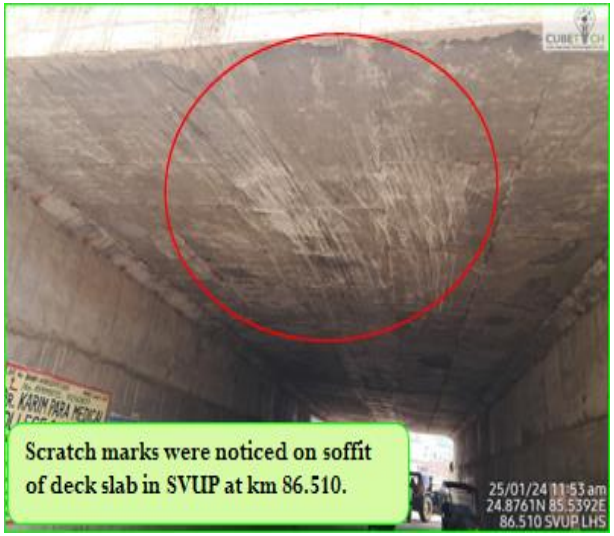
4.8 Small Vehicular Underpasses:

There are 07 nos. of Small Vehicular Underpasses on the Project Stretch. The cost for repair and rectification has been factored in the O&M estimation and the Concessionaire has taken up the rectification works. Structures are found in sound and satisfactory condition. Detailed condition survey, necessary repair and pending maintenance works for all the Small Vehicular Underpasses along the Project Stretch are given below,

Table 4-7: Existing condition and required repairs /maintenance works for Small Vehicular Underpasses

S. no.	Chainage, km	Span Arrangement, m	Total Length, m	Side	Condition of Structure	Proposed repair and pending maintenance works	Remarks
1	60.100	1 x 7.00 x 3.00	7.00	LHS	Structure was in good condition	-	COS
				RHS	Structure was in good condition	-	
2	85.800	1 x 7.00 x 3.00	7.00	LHS	Structure was in good condition	-	COS
				RHS	Structure was in good condition	-	

S. no.	Chainage, km	Span Arrangement, m	Total Length, m	Side	Condition of Structure	Proposed repair and pending maintenance works	Remarks
3	86.510	1 x 7.00 x 4.00	7.00	LHS	1. Scratches was observed on soffit of a deck slab due to oversized vehicle movement.	1. Height guard should be provided on both sides of underpass to avoid the entry of oversized vehicle movement.	
				RHS	1. Scratches was observed on soffit of a deck slab due to oversized vehicle movement.	1. Height guard should be provided on both sides of underpass to avoid the entry of oversized vehicle movement.	
4	86.945	1 x 7.00 x 3.00	7.00	LHS	Structure was in good condition	-	COS
				RHS	Structure was in good condition	-	
5	87.685	1 x 7.00 x 3.00	7.00	LHS	Structure was in good condition	-	COS
				RHS	Structure was in good condition	-	
6	89.632	1 x 6.00 x 3.60	6.00	LHS	Structure was in good condition	-	COS
				RHS	Structure was in good condition	-	
7	96.500	1 x 7.00 x 3.00	7.00	LHS	Structure was in good condition	-	COS
				RHS	Structure was in good condition	-	



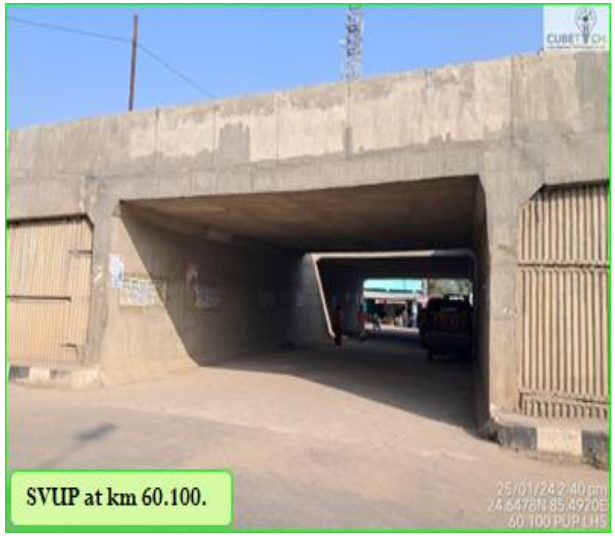


Figure 4-6: Condition of Small Vehicular Underpasses

4.9 Culverts:

There are 106 Box Culverts on the Project Stretch. The cost for repair and rectification has been factored in the O&M estimation and the Concessionaire has taken up the rectification works. Structures are found in sound and satisfactory condition Common defects and / or pending maintenance works observed in condition survey, necessary repair and pending maintenance works for all the Box Culverts along the Project Stretch are given below,

Table 4-8: Existing condition and required repairs /maintenance works for Box Culverts

S. no.	Type of Culverts	No. of Culverts	Condition of Structure	Proposed repair and pending maintenance works
1	Box Culverts	106	1. Protection work (Rigid apron, Flexible apron and Curtain walls) was missing. 2. Parapet/Crash barrier was missing on most of the culverts. 3. For some of the culverts hazardous board was missing.	1. Protection work (Rigid apron, Flexible apron and Curtain walls) shall need to be provided as per As-Built drawings. 2. Parapet/Crash barrier shall need to be provided as per As-Built drawings. 3. Hazardous sign board shall need to be installed.

Figure 4-7: Condition of Box Culverts

Chapter 5
CONDITION ASSESSMENT OF EXISTING PAVEMENT CONDITION

CHAPTER 5. CONDITION ASSESSMENT OF EXISTING PAVEMENT CONDITION

To evaluate the existing pavement condition of a Project Highway, investigations are to be carried out on the field to collect data from the field. The collected data is processed and analyzed to obtain complete information on the pavement condition.

5.1 Pavement Condition Assessment for Technical Due Diligence

As a part of technical due diligence, the different investigations performed on the Project site are listed below.

- Assessment of Pavement Condition based on Visual Condition Survey

Based on the visual condition survey, the type of distress, its quantity, and severity for each Stretch are obtained. The same is used to evaluate the present condition of pavement, which classifies pavement conditions ranging from 'Good' to 'Fair'.

The pavement investigation studies carried out on the Project Highway from 24th January to 25th January 2024 as a part of technical due diligence and their outcomes are detailed in the sections below

5.2 Review of Concession Agreement

As per Schedule K of the Concession Agreement, the Concessionaire shall repair and rectify the defects and deficiencies as specified below

Table 5-1: Major maintenance criteria as per CA

S .No	Nature of Defect or Deficiency	Time limit for Repair/Rectification
1	Roughness value exceeding 2750 mm in a stretch of 1km (as measured by a standardized rough meter/bump integrator)	180 Days
2	Cracking in more than 5% of road surface in a stretch of 1 km	30 days
3	Rutting exceeding 10mm in more than 2% of road surface in a stretch of 1km (measured with 3m straight edge)	30days

5.3 Review of Pavement Design Report

- The Schedule-B of concession agreement stipulates that design of Flexible pavement shall be carried out, but the Rigid pavement type is considered for main carriageway due to poor performance of existing flexible pavement.

- The design of Rigid pavement has been carried out in accordance with guidelines of IRC-58-2015.
- The thickness of Rigid-layers is designed for a period of 30 years and adopted Subgrade CBR is taken as 10%.
- The pavement for the service road has been designed as per IRC: 37-2018; Design traffic is 10 MSA and Subgrade CBR is taken as 8%.

Table 5-2: Pavement Design Thicknesses of Rigid Pavement for Main carriageway as per Pavement Design Report

Layer	Thickness(mm)
Pavement Quality Concrete (PQC)	240
Dry Lean Concrete (DLC)	150
Granular Sub-base (GSB)	200

Table 5-3: Pavement Design Thicknesses for Service roads (Option 1) as per Pavement Design Report

Layer	Thickness(mm)
Bituminous Concrete (BC)	40
Wet Mix Macadam (WMM)	150
Cement Treated Sub-base (CTSB)	200

Table 5-4: Pavement Design Thicknesses for Service roads (Option 2) as per Pavement Design Report

Layer	Thickness(mm)
Bituminous Concrete (BC)	40
Reclaimed Asphalt Pavement (RAP)	135
Granular Sub-base (GSB)	200

5.4 Key Site Visit Observations

Few observations made during the site visit by the pavement investigation team are as follows,

- Majority of the Pavement condition was observed to be good on RHS of the project stretch.
- Majority of the Pavement condition was observed to be good on LHS of the project stretch.

- Longitudinal and transverse cracks were observed as the predominant distresses in the project stretch.
- Low severity Settlements and Cracks were observed at some places on Service roads.
- Some of the service roads are not functional or not yet constructed due to land constraints observed.

Based on the observations made during visual condition survey the pavement condition is categorized into three categories as 'Good', 'Fair' and 'Distress'. The visual survey data and summary of the pavement condition of Project Stretch is given below.

Table 5-5: Pavement Visual Condition Survey Results-Main Carriageway

Condition	LHS		RHS	
	Length (Km)	Length (%)	Length (Km)	Length (%)
Good	47225	100%	47225	100%
Fair	0	0%	0	0%
Distress	0	0%	0	0%

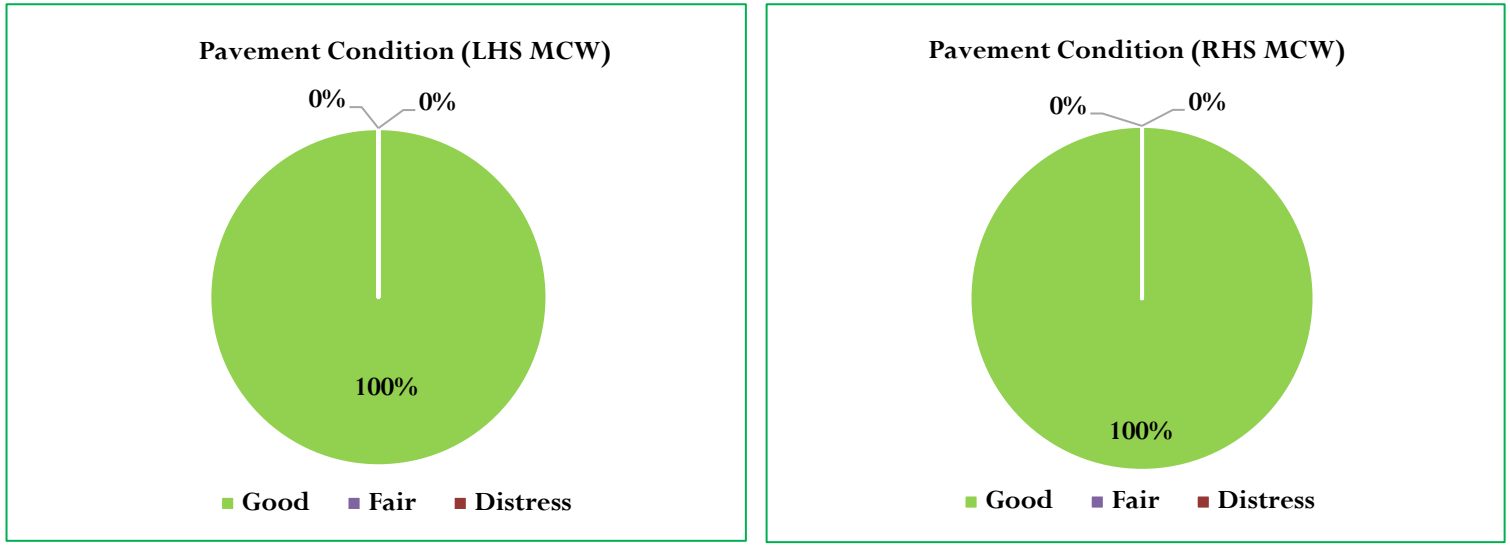


Figure 5-1: Pavement condition based on Visual condition survey-Main Carriageway

Pavement Roughness

Roughness is one of the important parameters for determining the functional characteristics of pavements. According to the American Society for Testing and Materials (ASTM), roughness is defined as "the deviations of a pavement surface from a true planar surface with characteristic dimensions that affect vehicle dynamics, ride quality, dynamic loads, and drainage, for example, longitudinal profile, transverse profile and cross-slope".

The roughness of road surfaces is measured using different equipment/techniques such as rod and level survey, dip stick profiler, profilographs, response type road roughness meters, and profiling devices.

In India, the roughness is measured using the fifth wheel bump integrator (developed by CRRI) and is reported as Unevenness Index (UI) in mm/km. In this report, Roughness is measured using an NSV profilometer on 11th December 2023, and a summary of the results are presented below:

Table 5-6: Summary of the Roughness values using NSV

Roughness Criteria		LHS				RHS			
		Inner (m)	Inner (%)	Outer (m)	Outer (%)	Inner (m)	Inner (%)	Outer (m)	Outer (%)
Good	<2000	47225	100.00%	47225	100.00%	47225	100.00%	47225	100.00%
Fair	2000-2400	0	0.00%	0	0.00%	0	0.00%	0	0.00%
Poor	>2400	0	0.00%	0	0.00%	0	0.00%	0	0.00%

Chapter 6
ROAD SAFETY ASSESSMENT ALONG THE PROJECT STRETCH

CHAPTER 6. ROAD SAFETY ASSESSMENT ALONG THE PROJECT STRETCH

6.1 General

This chapter presents general road safety concerns observed along the Project Road (Hardiya to Hasanpur) and improvements suggested to address the same.

6.2 Site visit

Road Safety along the highway depends upon the condition of various components of the highway, such as coordination between horizontal and vertical alignment, provision and placement of road furniture, intersection geometry, availability of adequate sight distance, night-time visibility along the highway, etc. It is essential to understand all these aspects of the highway from a point of view of safety of each type of road user. The purpose of this assignment is to understand the road safety worthiness of Project Road and quantify road furniture items that are required as per the provisions of the Concession Agreement (CA). The report also summarizes high-risk safety concerns that persist for a reasonable length along the Project Road that helps improve the safety of road user upon implemented. It may be noted that a few minor observations that are part of regular O&M activities have not been quantified in this report and geometrical improvements along with blackspots are not reviewed as part of this assignment. The scope has been constrained keeping in view the operational status of Project Road and the focus is largely on the major safety concerns and deviations from CA provisions in road furniture, if any.

The Safety Team of CUBE Highways Technologies Pvt Ltd. visited the Project Road from 16th to 17th Jan 2024.

It may be noted that the Findings and Recommendations in this chapter are based on an independent inspection during a site visit along the Project Road and review of available information / documents. This chapter mainly focuses on high-risk safety concern and work zones related issues along the Project Road, and any major geometrical improvements, or location-specific improvements are not covered. However, based on visual observations and safety requirements identified by the safety team during the site visit, the requirement for additional safety furniture in line with CA provisions has been broadly identified and presented in the report. The chainages mentioned in the report may vary from the ground by approximately 50 to 100 meters within acceptable tolerances.

Along with manual observations, the entire Project Road is video graphed using Vehicle Video Recorder Driver's Eye Level Video, a snapshot of output obtained from the app view is shown below:

Figure 6-1: Snapshot-displaying output format of driver's eye level video

As can be seen in above image, the Vehicle Video Recorder records following details along with video:

- Video recording (front view – Driver's Eye Level View)
- Location of Video on the Google Map (along with coordinates of the location)
- Speed of the Recording Vehicle, in km/hour

6.3 Analysis of Accident along the Project Road

Accident data from May 2023 to May 2024 has been analysed to understand the accident scenario along the Project Road. This section presents the findings from the accident data analysis. Historical accident data along the Project Road is available from May 2023 to May 2024. Table below summarizes the yearly accident trends and severity levels of available data observed along the Project Road.

Table 6-1: Monthly Trend of Accident observed on the Project Road from May 2023 to May 2024

Month	Total Accidents	No. of Persons			Severity Index (Number of persons killed per 100 accidents)	Number of Persons Injured per 100 Accidents
		Killed	Grievous Injury	Minor Injury		
May-2023	4	2	0	2	50.0	50.0
June-2023	3	1	0	2	33.3	66.7
July-2023	4	1	0	2	25.0	50.0

Month	Total Accidents	No. of Persons			Severity Index (Number of persons killed per 100 accidents)	Number of Persons Injured per 100 Accidents
		Killed	Grievous Injury	Minor Injury		
August-2023	3	0	0	0	0.0	0.0
September-2023	10	2	2	1	20.0	30.0
October-2023	3	0	0	7	0.0	233.3
November-2023	4	2	1	5	50.0	150.0
December-2023	4	2	2	2	50.0	100.0
January-2024	5	2	1	3	40.0	80.0
February-2024	7	3	3	4	42.9	100.0
March-2024	8	3	3	5	37.5	100.0
April-2024	6	0	2	4	0.0	100.0
May-2024	11	4	8	2	36.4	90.9
Total	**72**	**22**	**22**	**39**	**30.6**	**84.7**

Total number of accidents along the section of road and severity of accidents determine the requirement of prioritization of a section for safety improvements. From the data, it is evident that there has been variation in the total number of accidents reported from May 2023 to May 2024. The analysis of accident data from January 2023 to May 2024 indicates a total of 72 accidents, resulting in 22 fatalities, 22 grievous injuries, and 39 minor injuries. Consequently, the Severity Index, which measures the number of persons killed per 100 accidents, has also declined from 50 in November 2023 to 36.4 in May 2024. his reduction in severity and total accidents suggests an overall improvement in road safety, although there are fluctuations due to variations in minor injury and non-injury accidents.

For easy representation, the above table has been graphically represented below:

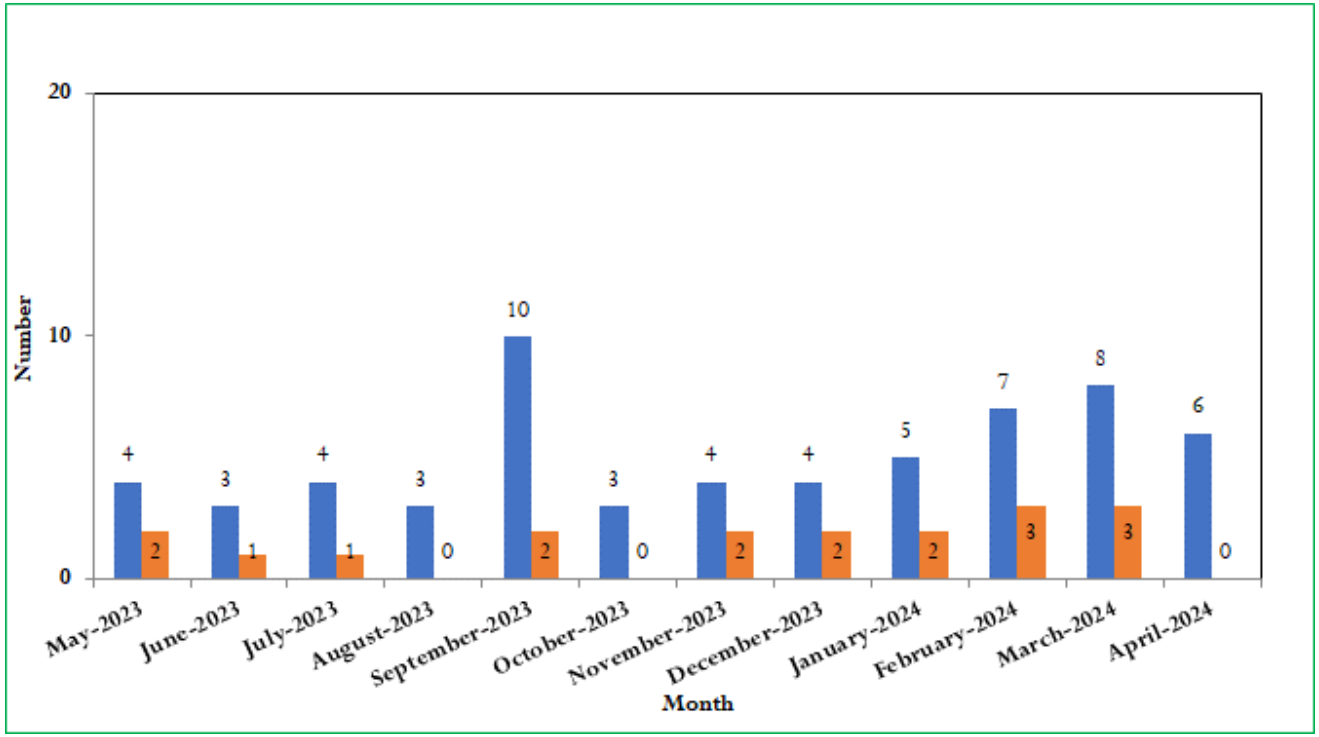


Figure 6-2 Trends of Accidents along the Project Road

Detailed information is not provided regarding the cause, nature, time of day, location, road condition, and type of accidents. This lack of comprehensive data makes it challenging to draw definitive conclusions about the underlying factors contributing to the accidents and the effectiveness of implemented safety measures. More detailed data is needed to create targeted safety improvements and maintain progress in road safety. As a result, drawing accurate or meaningful observations regarding trends, fatalities, and severity comparisons based on this data is not appropriate.

6.4 Summary of Recommendations

It may be noted that during the safety inspection, a few safety concerns that can be attributed to deviation from the applicable manual have been identified and presented in the Report. **However, it is acknowledged that the site has been mostly constructed in accordance with the approved drawings and with respect to the minor issues highlighted in the report, concessionaire has undertaken the rectification work.**

The following points below provide a summary of recommendations based on the site visit and review of submitted documents that shall help in elevating the overall profile of Project Road.

Engineering measures that shall be reviewed for implementation:

- Provision of safety barriers on either side of rigid crash barriers, at the base of overhead signs, and along high embankment sections.
- Provision of Safety Barriers on approaches to FOB piers based on available working width and required containment levels.
- Improve the connection between MBCB and rigid crash barriers, as well as the start/end treatments of MBCB, to enhance road safety.
- Review the provision of highway lighting on approaches of grade-separated structures.
- Rectify solar blinkers and highway lighting functionality to provide effective indications to road users about cautionary locations, especially night-time.
- Enhance the visibility of superstructures and the safety of road users by providing object painting and hazard markers.
- Review the transition arrangement *(from two lanes to four lanes at the start of Project Road)* and enhance the section with the provision of road marking, traffic calming measures like bar marking, and blinkers.

It may be noted that apart from the above-mentioned safety concerns, the overall road safety scenario along the Project Road is satisfactory. Repair and rectification cost has been factored in O&M estimation and the concessionaire has taken the rectification works.

Chapter 6
OPERATION & MAINTENANCE COST

CHAPTER 7. OPERATION AND MAINTENANCE COST

7.1 General

This Chapter presents details on the O&M expenditure to be incurred. The expenses are divided into four heads.

- Routine Maintenance Expenses to maintain the asset to the standards set forth in the Concession Agreement.
- Major/ Periodic Maintenance Expenses
- Operating Expenses

7.2 Estimation of Operation & Maintainance cost

The Routine Maintenance activities related to pavement include pothole repair, crack sealing, shoulder repair, drain maintenance, renewal of road markings, maintenance of cross drainage works etc. A before-hand estimate of repairs to be carried annually, must be determined to calculate the anticipated routine maintenance cost of the Project. Most of the annual routine maintenance activities are estimated based on experience and the past data of the Project as these activities varies Project to Project and there are no hard and fast rules to obtain exact quantity.

Routine maintenance cost for this Project is summarized in next section of Cost Estimates. The list of items considered in routine maintenance are summarized in the table below,

Table 7-1: List of Items Considered in Routine Maintenance Cost Estimate

S. No	Description of Item
1	**HIGHWAY**
	Flexible Pavement
	▪ Potholes ▪ Cracks ▪ Rutting/Depression/Settlement ▪ Ravelling/Stripping ▪ Re-surfacing
	Rigid Pavement

S. No	Description of Item
	▪ Slab Replacement ▪ Crack Sealing ▪ Ravelling/honeycombing, scaling, Polished Surface
	Hard/Earth shoulders, side slopes
	▪ Edge drop at shoulders ▪ Blading/reshaping to restore proper slopes and sides so as to maintain the standard formation width ▪ Rain cuts/gullies in slope ▪ Repairs of Stone Pitching/Turfing
2	**STRUCTURES**
	Superstructure of Bridges
	▪ Cracks ▪ Temporary Measures ▪ Permanent Measures ▪ Spalling / Scaling
	Foundation of Bridges
	▪ Scouring and /or Cavitation
	Piers, abutments, return walls and wing walls of bridges
	▪ Cracks and damages including settlement and tilting
	Joints in bridges
	▪ Loosening and malfunctioning of joints
	Other items relating to bridges
	▪ Gathering of dirt in bearings and joints or clogging of spouts, weep holes and vent-holes ▪ Damage or deterioration in parapets and handrails ▪ Rain-cuts or erosion of banks of the side slopes of approaches ▪ Damage to wearing coat ▪ Damage or deterioration in approach slabs, pitching, apron, toes, floor or guide bunds ▪ Growth of vegetation affecting the structure or obstructing the waterway

S. No	Description of Item
3	**ROAD FURNITURES, SIGNAGES AND PAVEMENT MARKING**
	▪ Repair to road signs -damage to shape or position; Poor visibility or loss of retro-reflectivity ▪ Replacing/installing delineators ▪ Replacing uninstalling delineators & all type of road sign ▪ Repairs MBCB ▪ Replacing of MBCB /New jersey crash barrier ▪ Repairs to Handrails /Pedestrian guard rails /flyover railings etc. ▪ Replace Handrails /Pedestrian guardrails/flyover railings etc. ▪ Fixing of distance measurement stone ▪ Hectometre stones ▪ Kilometre stones ▪ 5th Kilometre stones ▪ Boundary stones ▪ Painting ▪ Hectometre stones ▪ Pavement Marking ▪ Hot applied thermoplastic compound ▪ Painting kerb with synthetic enamel paint
4	**MISCELLANEOUS ITEMS**
	Street Lighting, Electrical systems repair and maintenance etc

The routine maintenance expenses to maintain the asset to the standards set forth in the Concession Agreement are given in the table below.

Table 7-2: Routine maintenance cost of the Project

S. No.	Particulars	Frequency	Cost including GST (Cr.)	Remarks
1	**Routine Maintenance Cost**	**Annual**		
	Highway		0.62	
	Structures		1.38	
	Road Furniture, Signage & Pavement marking		0.53	
	Project Facilities		0.23	
	Total RM cost		**2.75**	

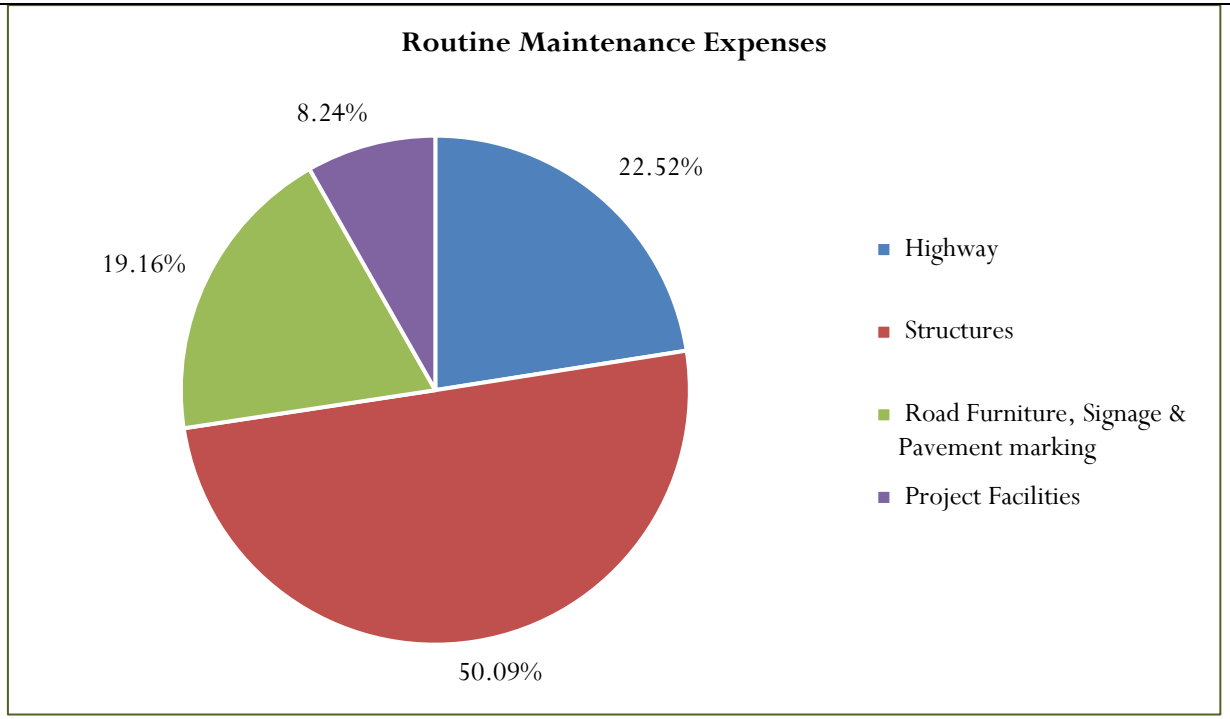


Figure 7-1: Breakup of Routine Maintenance

Table 7-3: Operational Expenditure of the Project for the Base Year FY 25

The calculation of operational expenditure for the base year FY 25 is given below:

S. no.	Description	Manpower	Annual Exp. (in Lakhs)
A.1	SPV staff and salaries	10.75	51.5
A.2	Tolling Operations Services_Outsourced	0	0.0
A.3	Security Services_Outsourced	4	15.9
A.4	Incident Management Services	28	135.0
A.5	RoW and Horticulture Works_ Manpower		67.4
A.6	Electricity and Diesel Charges		92.6
A.7	TMS/HTMS System Expenses		42.7
A.8	Office Operating Expenses		4.9
A.9	Vehicle Running Expenses		13.3
A.10	Professional Fee		37.8
A.11	Community Development		0.0
A.12	Communication Expenses		1.2
A.13	Conveyance Expenses		2.4
A.14	Insurance Expenses		83.1
A.15	IE Fees		60.0
A.16	Contingency	1%	6.1
	OPEX		**614.0**

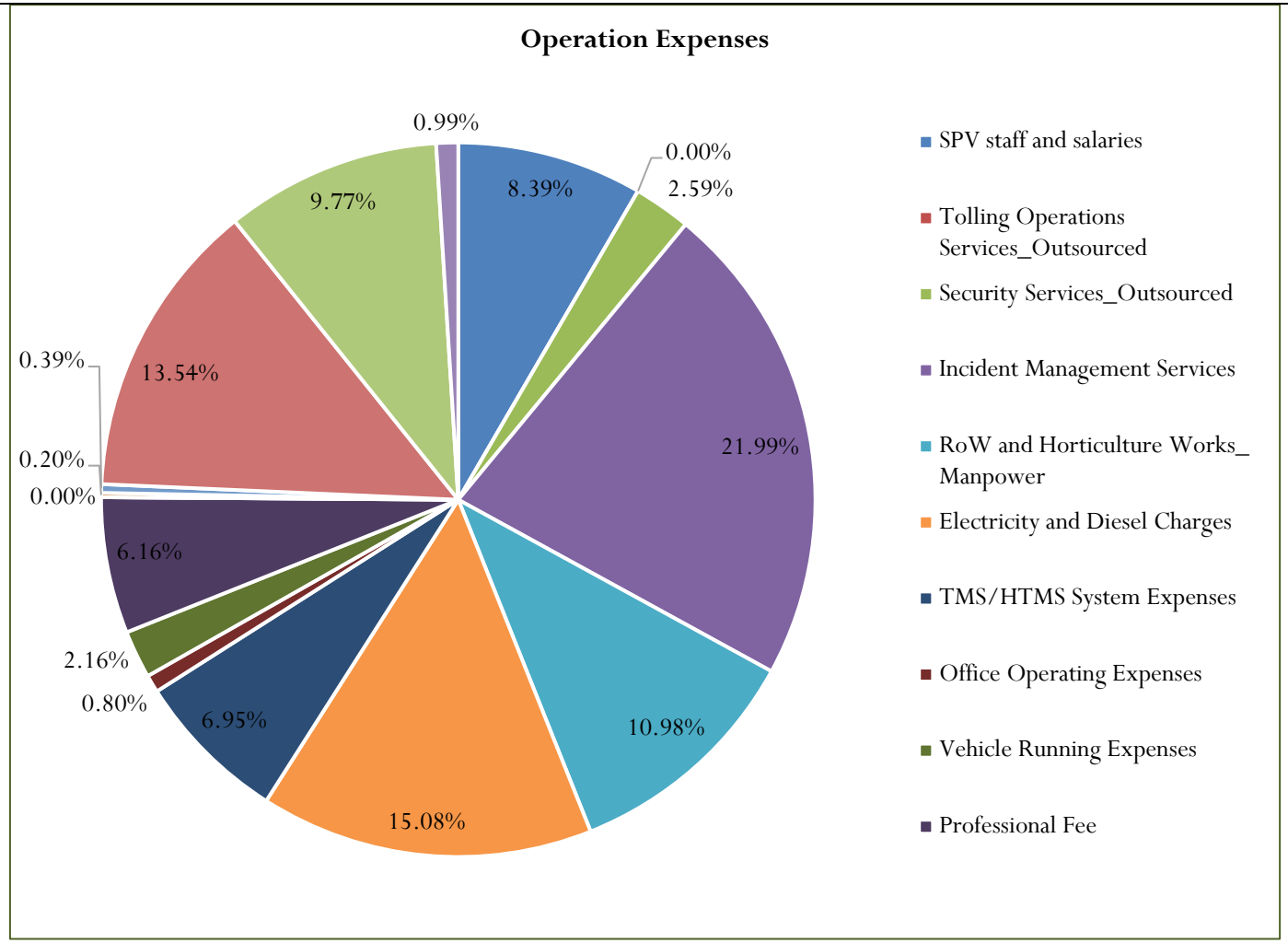


Figure 7-2: Breakup of Operation Cost

7.3 Major Maintenance Estimate

Cube Tech has considered 2 cycles for Major Maintenance as slab replacement in the rigid pavement of main carriageway and microsurfacing in the service road. The estimate for Major Maintenance activities of the Project Stretch is as detailed below:

Table 7-4: Major Maintenance Cost for MM Cycle 1

Major Maintenance - 1st Cycle					
S. No.	**Description**	**Unit**	**Qty**	**Rate**	**Amount**
1	Slab replacement cost (PQC)	Cum	7,065	8,225	5,81,12,561
2	Joint seal defects, spalling and faulting of joints	Rm	2,834	120	3,40,049
3	PQC Taxing	Sqm	4,52,908	100	4,52,90,750
4	Road Marking	Sqm	46,466	520	2,41,62,316
5	Kerb Painting	Sqm	10,880	100	10,87,950
6	Tack coat	Sqm	1,08,198	14	15,14,765
7	Bituminous Concrete	Cum	3,246	10,969	3,56,04,551
8	Microsurfacing	Sqm	1,08,198	150	1,62,29,625
9	Earthen Shoulder	Cum	11,282	400	45,12,960
10	ATMS	Ls	1	1,00,00,000	1,00,00,000
11	Miscellaneous and Contingencies (2%)				39,37,111
			Grand Total		**20,07,92,638**
			Grand Total Including GST (18%)		**23,69,35,313**
			Grand Total (In Cr)		**23.69**

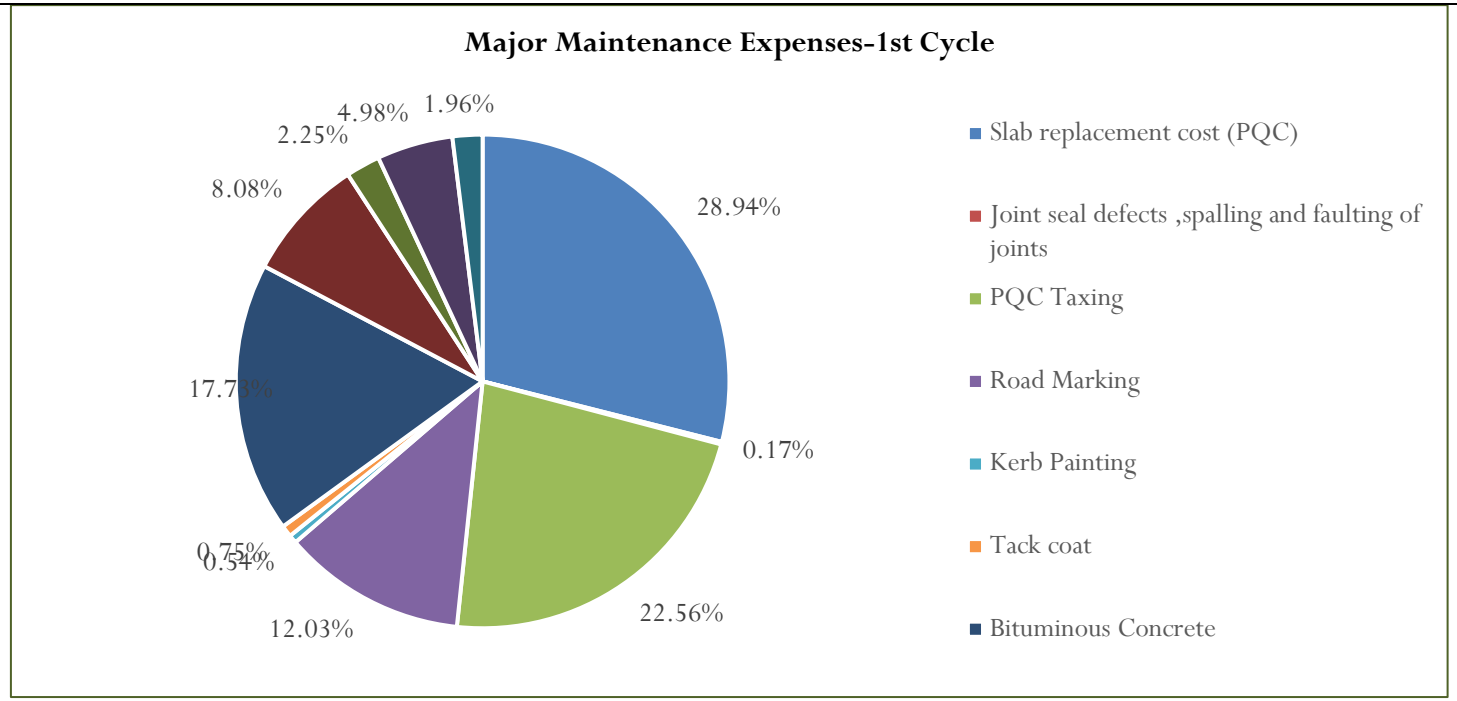


Figure 7-3: Breakup of Major Maintenance Expenses 1st Cycle

Table 7-5: Major Maintenance Cost for MM Cycle 2

Major Maintenance – 2nd Cycle					
S. No.	**Description**	**Unit**	**Qty**	**Rate**	**Amount**
1	Slab replacement cost (PQC)	Cum	7,065	8,225	5,81,12,561
2	Joint seal defects, spalling and faulting of joints	Rm	2,834	120	3,40,049
3	PQC Taxing	Sqm	4,52,908	100	4,52,90,750
4	Road Marking	Sqm	46,466	520	2,41,62,316
5	Kerb Painting	Sqm	10,880	100	10,87,950
6	Tack coat	Sqm	1,08,198	14	15,14,765
7	Bituminous Concrete	Cum	3,246	10,969	3,56,04,551
8	Microsurfacing	Sqm	1,08,198	150	1,62,29,625

Major Maintenance – 2nd Cycle					
S. No.	**Description**	**Unit**	**Qty**	**Rate**	**Amount**
9	Earthen Shoulder	Cum	11,282	400	45,12,960
10	ATMS	Ls	1	1,00,00,000	1,00,00,000
11	Miscellaneous and Contingencies (2%)				39,37,111
			Grand Total		**20,07,92,638**
			Grand Total Including GST (18%)		**23,69,35,313**
			Grand Total (In Cr)		**23.69**

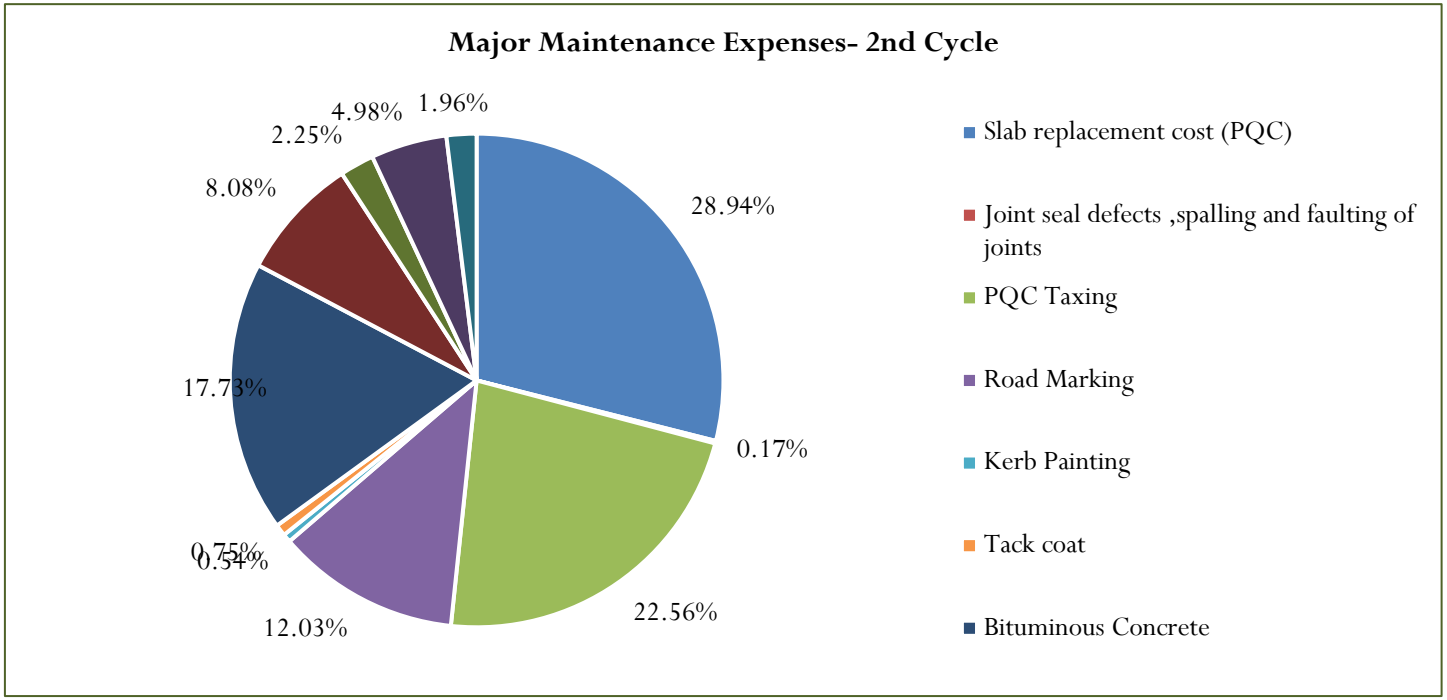


Figure 7-4: Major Maintenance Expenses 2nd Cycle

Major Maintenance expenses during O&M period

Based on the Cube Tech estimates, the total major maintenance expenses considering the escalation is 69.32 crores.

7.4 Projections of O&M Expenses

The O&M expenses for the entire Concession Period is presented in this section .

The following escalations are considered:

Table 7-6:Escalation Factors

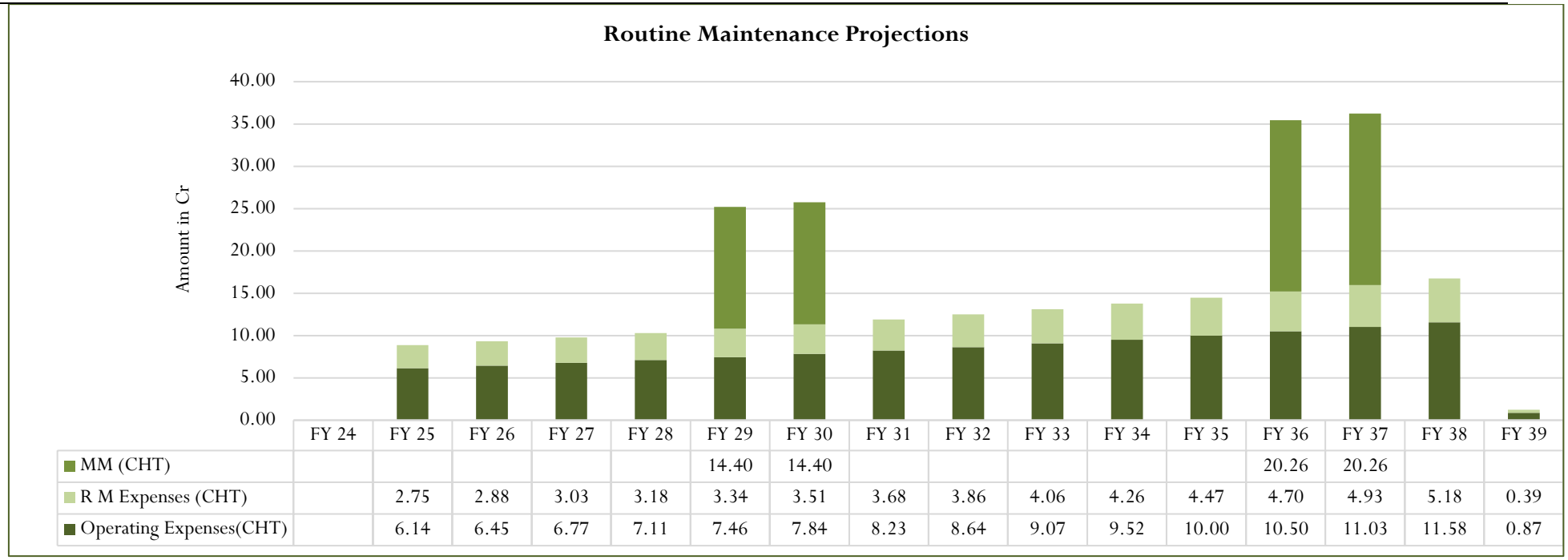
Items	Escalation
Operating Expenses	5.00%
Routine Maintenance	5.00%
Major Maintenance	5.00%

The Projections of total O& M expenses including Major Maintenance for 2 Cycles of the Project Company and CHT is given in the table below

Table 7-7: Projections of total O&M expenses of the Project during O&M period

Particulars	Total Expense (In Cr.)	Base-FY 25	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	FY 32	FY 33	FY 34	FY 35	FY 36	FY 37	FY 38	FY 39
Operating Expenses (CHT)	**121.19**	6.14	6.14	6.45	6.77	7.11	7.46	7.84	8.23	8.64	9.07	9.52	10.00	10.50	11.03	11.58	0.87
R M Expenses (CHT)	**54.22**	2.75	2.75	2.88	3.03	3.18	3.34	3.51	3.68	3.86	4.06	4.26	4.47	4.70	4.93	5.18	0.39
MM (CHT)	**69.32**	23.69					14.40	14.40						20.26	20.26		
O&M and MM (CHT)	**248.20**		8.89	9.33	9.80	10.29	25.20	25.74	11.91	12.50	13.13	13.79	14.47	35.46	36.22	16.76	1.25

The graph for the total cost Projections of expenses during O&M period given by the Cube Highways Technologies is shown in the figure below.



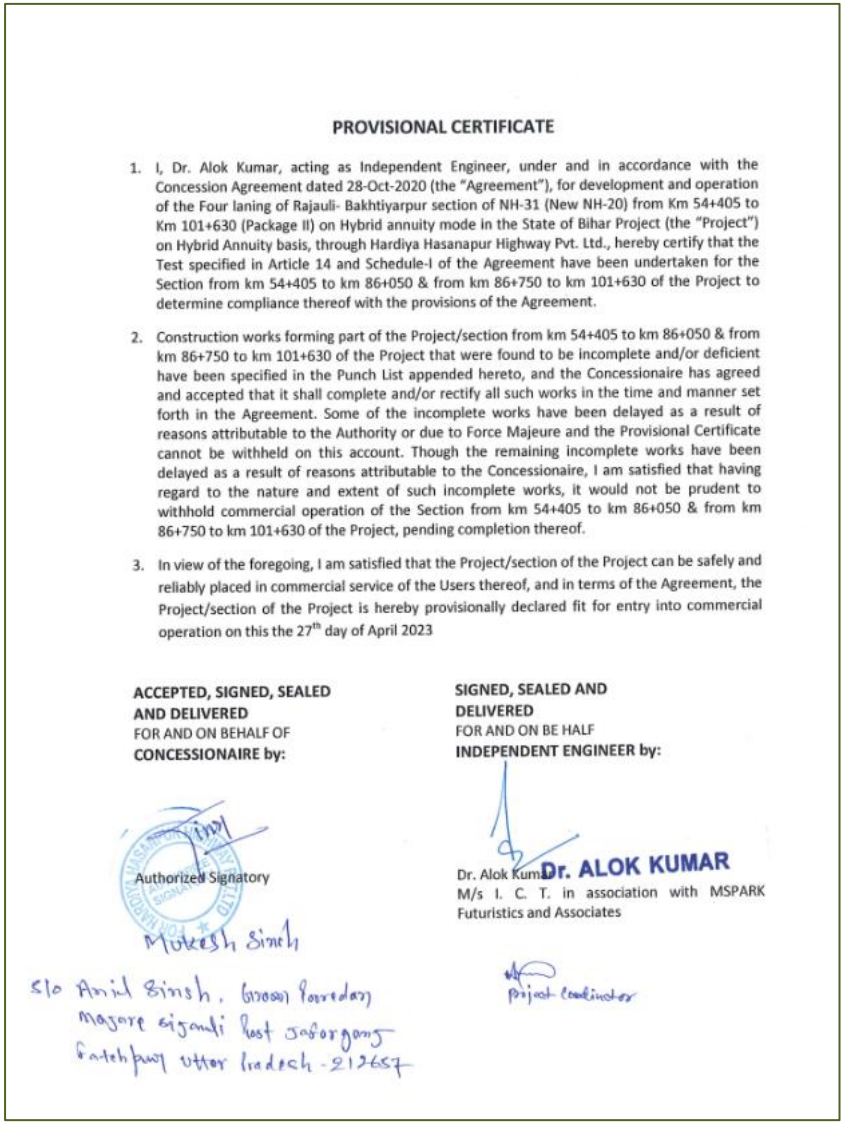
	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	FY 32	FY 33	FY 34	FY 35	FY 36	FY 37	FY 38	FY 39
MM (CHT)						14.40	14.40						20.26	20.26		
R M Expenses (CHT)		2.75	2.88	3.03	3.18	3.34	3.51	3.68	3.86	4.06	4.26	4.47	4.70	4.93	5.18	0.39
Operating Expenses(CHT)		6.14	6.45	6.77	7.11	7.46	7.84	8.23	8.64	9.07	9.52	10.00	10.50	11.03	11.58	0.87

Figure 7-5: O&M, RM and MM Expenses Projections

The total O&M cost including Major Maintenance estimated by the CHT is Rs.244.73 Cr.

ANNEXURES

Annexure I: Completion Certificate



PROVISIONAL CERTIFICATE

1. I, Dr. Alok Kumar, acting as Independent Engineer, under and in accordance with the Concession Agreement dated 28-Oct-2020 (the "Agreement"), for development and operation of the Four laning of Rajauli- Bakhtiyarpur section of NH-31 (New NH-20) from Km 54+405 to Km 101+630 (Package II) on Hybrid annuity mode in the State of Bihar Project (the "Project") on Hybrid Annuity basis, through Hardiya Hasanapur Highway Pvt. Ltd., hereby certify that the Test specified in Article 14 and Schedule-I of the Agreement have been undertaken for the Section from km 54+405 to km 86+050 & from km 86+750 to km 101+630 of the Project to determine compliance thereof with the provisions of the Agreement.

2. Construction works forming part of the Project/section from km 54+405 to km 86+050 & from km 86+750 to km 101+630 of the Project that were found to be incomplete and/or deficient have been specified in the Punch List appended hereto, and the Concessionaire has agreed and accepted that it shall complete and/or rectify all such works in the time and manner set forth in the Agreement. Some of the incomplete works have been delayed as a result of reasons attributable to the Authority or due to Force Majeure and the Provisional Certificate cannot be withheld on this account. Though the remaining incomplete works have been delayed as a result of reasons attributable to the Concessionaire, I am satisfied that having regard to the nature and extent of such incomplete works, it would not be prudent to withhold commercial operation of the Section from km 54+405 to km 86+050 & from km 86+750 to km 101+630 of the Project, pending completion thereof.

3. In view of the foregoing, I am satisfied that the Project/section of the Project can be safely and reliably placed in commercial service of the Users thereof, and in terms of the Agreement, the Project/section of the Project is hereby provisionally declared fit for entry into commercial operation on this the 27th day of April 2023

ACCEPTED, SIGNED, SEALED AND DELIVERED
FOR AND ON BEHALF OF
CONCESSIONAIRE by:

Authorized Signatory

Mukesh Singh
S/o Amit Singh, Gram Pardeshi
Majare Sijauli Post Jafarganj
Fatehpur Uttar Pradesh - 212657

SIGNED, SEALED AND DELIVERED
FOR AND ON BE HALF
INDEPENDENT ENGINEER by:

Dr. Alok Kumar
M/s I. C. T. in association with MSPARK Futuristics and Associates

Dr. ALOK KUMAR

Project Coordinator

Annexure II: List of service road along the Project Road

As per Schedule-B				As per Actual - Flexible Pavement				
S. No.	Chainage From	Chainage To	Length (m)	Chainage From	Chainage To	Side	Length (m)	Remarks
1	58+170	60+250	2080	58+170	60+250	LHS	2080	
				58+170	60+250	RHS	2080	
2	61+126	62+064	938	61+130	62+000	LHS	870	
				61+130	61+590	RHS	460	
3	67+046	67+937	891	67+050	67+930	LHS	880	
				67+050	67+930	RHS	880	
4	69+857	70+644	787	69+850	70+650	RHS	800	
				69+850	70+650	LHS	800	
5	71+851	72+645	794	71+850	72+640	RHS	790	
				71+850	72+640	LHS	790	
6	75+124	75+930	806	75+120	75+930	LHS	810	
				75+120	75+930	RHS	810	
7	76+300	76+800	500	76+300	76+800	LHS	500	
				76+300	76+800	RHS	500	200m Hinderance
8	78+994	79+696	702	79+000	79+700	LHS	700	
				79+000	79+700	RHS	700	
9	80+300	80+800	500	80+250	80+300	LHS	50	
				80+300	80+550	RHS	250	
				80+750	80+800	RHS	50	
10	82+600	83+516	916	82+600	83+500	LHS	900	
				82+600	83+500	RHS	900	
11	83+516	83+900	384			LHS		Not Constructed
						RHS		Not Constructed
12	84+600	84+900	300	84+630	84+750	LHS	120	
				84+820	84+900	LHS	80	

As per Schedule-B				As per Actual - Flexible Pavement				
S. No.	**Chainage From**	**Chainage To**	**Length (m)**	**Chainage From**	**Chainage To**	**Side**	**Length (m)**	**Remarks**
13	85+650	86+110	460	85+650	86+110	LHS	460	
				85+650	86+110	RHS	460	
14	86+260	87+500	1240	86+260	89+150	LHS	2890	
				86+260	89+150	RHS	2890	
15	87+500	88+390	890					
16	90+041	90+974	933	90+250	90+974	LHS	724	
				90+250	90+974	RHS	724	
17	91+600	93+073	1473	91+600	92+000	LHS	400	
				91+600	92+700	RHS	1100	
18	93+073	94+006	933	93+070	94+000	LHS	930	
				93+070	94+000	RHS	930	
19	95+818	96+777	959	95+818	96+900	LHS	1082	
				95+818	95+950	RHS	132	
				96+300	96+777	RHS	477	
20	96+777	97+200	423					Not Constructed
								Not Constructed
								Not Constructed
21	99+973	100+854	881	99+970	100+850	LHS	880	
				99+970	100+850	RHS	880	
		Total Length	**35580**			**Total Length**	**31559**	

Annexure II: List of drains along the Project Road

S. No.	Chainage From	Chainage To	Side	Length	Remarks
1	58+170	60+250	RHS	2080	
2	58+170	60+250	LHS	2080	
3	61+130	61+600	RHS	470	
4	61+130	61+600	LHS	470	
5	67+050	67+937	RHS	887	
6	67+050	67+937	LHS	887	
7	69+850	70+650	RHS	800	
8	69+850	70+650	LHS	800	
9	71+800	71+900	LHS	100	
10	71+900	72+640	RHS	740	
11	72+130	72+640	LHS	510	
12	75+120	75+930	RHS	810	
13	75+120	75+930	LHS	810	
14	76+300	76+400	RHS	100	
15	76+300	76+400	LHS	100	
16	76+500	76+800	RHS	300	
17	76+500	76+600	LHS	100	
18	76+650	76+800	LHS	150	
19	79+000	79+700	RHS	700	
20	79+000	79+700	LHS	700	
21	80+250	80+300	LHS	50	
22	80+350	80+550	RHS	200	
23	80+740	80+800	RHS	60	
24	80+780	80+820	LHS	40	
25	82+600	83+400	RHS	800	
26	82+600	83+500	LHS	900	
27	84+600	84+750	LHS	150	
28	84+850	84+900	LHS	50	

S. No.	Chainage From	Chainage To	Side	Length	Remarks
29	85+650	86+110	RHS	460	
30	85+650	86+110	LHS	460	
31	86+260	88+390	RHS	2130	
32	86+260	88+400	LHS	2140	
33	88+800	89+150	RHS	350	
34	90+250	90+974	RHS	724	
35	90+250	90+974	LHS	724	
36	91+600	92+450	RHS	850	
37	91+600	92+000	LHS	400	100m gap
38	93+000	93+150	LHS	150	
39	93+300	93+650	LHS	350	
40	93+700	93+800	RHS	100	
41	95+818	95+950	RHS	132	
42	95+818	96+620	LHS	802	
43	96+400	96+550	RHS	150	
44	96+650	96+800	RHS	150	
45	97+000	97+050	LHS	50	
46	97+100	97+200	RHS	100	
47	97+150	97+200	LHS	50	
48	99+970	100+850	RHS	880	
49	99+970	100+850	LHS	880	
			Total Length (m)	**27876**	

Annexure III: List of junctions along the Project Road

Major Junctions As per Schedule-B				Major Junctions As per Actual			
S. No.	Design Ch.	Side	Type	S. No.	Design Ch.	Side	Type
1	58+600	BHS	4 Legged	1	58+600	BHS	4 Legged
2	59+578	BHS	4 Legged	2	59+578	BHS	4 Legged
3	61+590	BHS	4 Legged	3	61+590	BHS	4 Legged
4	72+252	BHS	4 Legged	4	72+252	BHS	4 Legged
5	80+740	LHS	3 Legged	5	80+740	LHS	3 Legged
6	83+045	RHS	3 Legged	6	83+045	RHS	3 Legged
7	86+700	BHS	4 Legged	7	86+700	BHS	4 Legged
8	87+948	BHS	4 Legged	8	87+948	BHS	4 Legged
9	90+420	RHS	3 Legged	9	90+420	RHS	3 Legged
10	91+680	LHS	3 Legged	10	91+680	LHS	3 Legged
11	93+500	LHS	3 Legged	11	91+900	RHS	3 Legged
12	99+900	LHS	3 Legged	12	93+500	LHS	3 Legged
13	100+400	RHS	3 Legged	13	99+900	LHS	3 Legged
				14	100+400	RHS	3 Legged

Minor Junctions As per Schedule-B				Minor Junctions As per Actual			
S. No.	Design Ch.	Side	Type	S. No.	Design Ch.	Side	Type
1	54+720	RHS	3 Legged	1	54+720	RHS	3 Legged
2	55+075	RHS	3 Legged	2	55+075	RHS	3 Legged
3	55+160	RHS	3 Legged	3	55+160	RHS	3 Legged
4	55+330	RHS	3 Legged	4	55+330	RHS	3 Legged
5	55+900	RHS	3 Legged	5	55+900	RHS	3 Legged
6	57+140	LHS	3 Legged	6	57+140	LHS	3 Legged
7	59+705	LHS	3 Legged	7	59+705	LHS	3 Legged
8	60+130	LHS	3 Legged	8	60+130	LHS	3 Legged

Minor Junctions As per Schedule-B				Minor Junctions As per Actual			
S. No.	**Design Ch.**	**Side**	**Type**	**S. No.**	**Design Ch.**	**Side**	**Type**
9	60+540	BHS	4 Legged	9	60+540	BHS	4 Legged
10	61+740	RHS	**4** Legged	10	61+740	RHS	4 Legged
11	62+310	BHS	3 Legged	11	62+310	BHS	3 Legged
12	62+880	BHS	3 Legged	12	62+880	BHS	3 Legged
13	63+664	LHS	3 Legged	13	63+550	RHS	3 Legged
14	64+690	LHS	3 Legged	14	64+690	LHS	3 Legged
15	64+735	RHS	3 Legged	15	64+735	RHS	3 Legged
16	65+585	LHS	3 Legged	16	65+585	LHS	3 Legged
17	66+255	LHS	3 Legged	17	66+255	LHS	3 Legged
18	67+040	LHS	3 Legged	18	67+040	LHS	3 Legged
19	67+500	BHS	4 Legged	19	67+500	BHS	4 Legged
20	68+072	RHS	3 Legged	20	68+072	RHS	3 Legged
21	68+714	LHS	3 Legged	21	68+714	LHS	3 Legged
22	69+165	LHS	3 Legged	22	69+165	LHS	3 Legged
23	69+800	LHS	3 Legged	23	69+800	LHS	3 Legged
24	70+220	LHS	3 Legged	24	70+220	LHS	3 Legged
25	70+930	RHS	3 Legged	25	70+930	RHS	3 Legged
26	70+980	LHS	3 Legged	26	70+980	LHS	3 Legged
27	71+855	RHS	3 Legged	27	71+855	RHS	3 Legged
28	73+095	LHS	3 Legged	28	73+095	LHS	3 Legged
29	73+660	RHS	3 Legged	29	73+660	RHS	3 Legged
30	74+310	LHS	3 Legged	30	74+310	LHS	3 Legged
31	74+340	RHS	3 Legged	31	74+340	RHS	3 Legged
32	74+980	RHS	3 Legged	32	74+980	RHS	3 Legged
33	75+520	BHS	4 Legged	33	75+520	BHS	4 Legged
34	76+700	LHS	3 Legged	34	76+700	LHS	3 Legged
35	77+720	BHS	4 Legged	35	77+720	BHS	4 Legged

Minor Junctions As per Schedule-B				Minor Junctions As per Actual			
S. No.	Design Ch.	Side	Type	S. No.	Design Ch.	Side	Type
36	78+030	LHS	3 Legged	36	78+030	LHS	3 Legged
37	78+446	LHS	3 Legged	37	78+446	LHS	3 Legged
38	78+914	LHS	3 Legged	38	78+914	LHS	3 Legged
39	79+285	BHS	3 Legged	39	79+285	BHS	3 Legged
40	80+030	BHS	4 Legged	40	80+030	BHS	4 Legged
41	81+006	RHS	3 Legged	41	81+006	RHS	3 Legged
42	81+480	LHS	3 Legged	42	81+480	LHS	3 Legged
43	81+514	RHS	3 Legged	43	81+514	RHS	3 Legged
44	82+312	RHS	3 Legged	44	82+312	RHS	3 Legged
45	82+333	LHS	3 Legged	45	82+333	LHS	3 Legged
46	84+770	RHS	3 Legged	46	84+770	RHS	3 Legged
47	84+830	LHS	3 Legged	47	84+830	LHS	3 Legged
48	85+285	RHS	3 Legged	48	85+285	RHS	3 Legged
49	85+302	LHS	3 Legged	49	85+302	LHS	3 Legged
50	85+380	RHS	3 Legged	50	85+380	RHS	3 Legged
51	86+580	BHS	4 Legged	51	86+580	BHS	4 Legged
52	86+800	LHS	3 Legged	52	86+800	LHS	3 Legged
53	86+930	LHS	3 Legged	53	86+930	LHS	3 Legged
54	87+685	BHS	4 Legged	54	87+685	BHS	4 Legged
55	88+750	BHS	4 Legged	55	88+750	BHS	4 Legged
56	89+105	BHS	4 Legged	56	89+105	BHS	4 Legged
57	89+630	BHS	4 Legged	57	89+630	BHS	4 Legged
58	90+400	LHS	3 Legged	58	89+800	LHS	3 Legged
59	90+515	LHS	3 Legged	59	90+400	LHS	3 Legged
60	90+855	RHS	3 Legged	60	90+515	LHS	3 Legged
61	91+380	BHS	4 Legged	61	90+855	RHS	3 Legged
62	92+285	RHS	3 Legged	62	91+380	BHS	4 Legged

Minor Junctions As per Schedule-B				Minor Junctions As per Actual			
S. No.	Design Ch.	Side	Type	S. No.	Design Ch.	Side	Type
63	92+370	LHS	3 Legged	63	92+285	RHS	3 Legged
64	92+780	RHS	3 Legged	64	92+370	LHS	3 Legged
65	93+500	LHS	3 Legged	65	92+780	RHS	3 Legged
66	95+048	RHS	3 Legged	66	94+100	BHS	4 Legged
67	95+558	RHS	3 Legged	67	95+048	RHS	3 Legged
68	95+584	LHS	3 Legged	68	95+558	RHS	3 Legged
69	97+350	BHS	4 Legged	69	95+584	LHS	3 Legged
70	98+240	BHS	4 Legged	70	96+250	LHS	3 Legged
71	98+550	BHS	4 Legged	71	97+350	BHS	4 Legged
72	98+960	BHS	4 Legged	72	98+240	BHS	4 Legged
73	101+310	LHS	3 Legged	73	98+550	BHS	4 Legged
74	101+624	LHS	3 Legged	74	98+960	BHS	4 Legged
				75	101+310	LHS	3 Legged
				76	101+624	LHS	3 Legged

Annexure IV: List of MBCB along the Project Road

S. No.	Chainage From	Chainage To	Side	Length (m)
1	58+170	60+250	BHS	4160
2	60+250	60+685	BHS	870
3	60+874	61+126	BHS	504
4	61+126	62+064	BHS	1876
5	62+064	63+000	BHS	1872
6	63+000	65+640	BHS	5280
7	65+640	66+060	BHS	840
8	66+060	66+700	BHS	1280
9	66+700	67+046	BHS	692
10	67+937	68+200	BHS	526
11	68+200	69+857	BHS	3314
12	70+644	71+851	BHS	2414
13	72+645	72+800	BHS	310
14	72+800	73+200	BHS	800
15	73+200	73+800	BHS	1200
16	73+800	74+460	BHS	1320
17	74+460	75+124	BHS	1328
18	75+930	76+300	BHS	740
19	85+460	85+650	BHS	380
20	85+650	86+050	BHS	800
21	86+050	86+110	BHS	120
22	86+260	86+750	BHS	980
23	86+750	87+500	BHS	1500
24	87+500	88+390	BHS	1780
25	88+390	89+798	BHS	2816
26	90+041	90+974	BHS	1866
27	90+974	91+600	BHS	1252

S. No.	Chainage From	Chainage To	Side	Length (m)
28	97+380	99+973	BHS	5186
29	100+854	101+630	BHS	1552
		Total Length		**47558**

Annexure V: List of gantries and VMS along the Project Road

S. No.	Chainage	Side	Item
1	054+410	LHS	Overhead Gantry
2	057+900	LHS	Overhead Gantry
3	060+500	RHS	Overhead Gantry
4	060+880	LHS	Overhead Gantry
5	062+280	RHS	Overhead Gantry
6	062+700	LHS	Cantilever Gantry
7	063+000		VMS
8	063+200	LHS	Cantilever Gantry
9	065+000		VMS
10	065+100	RHS	Cantilever Gantry
11	065+600	RHS	Cantilever Gantry
12	068+040	LHS	Cantilever Gantry
13	068+500	LHS	Cantilever Gantry
14	068+700		VMS
15	069+500	RHS	Cantilever Gantry
16	070+000	RHS	Cantilever Gantry
17	071+580	LHS	Overhead Gantry
18	072+920	RHS	Overhead Gantry
19	082+360	LHS	Overhead Gantry
20	084+170	RHS	Overhead Gantry
21	088+400	LHS	Cantilever Gantry
22	089+250	RHS	Overhead Gantry
23	090+050	LHS	Overhead Gantry
24	099+600	LHS	Overhead Gantry
25	101+100		VMS
26	101+125	RHS	Overhead Gantry

Annexure IV: List of rigid crash barrier along the Project Road

S. No.	Chainage From	Chainage To	Side	Length
1	91+600	93+000	RHS	1400
2	84+600	84+700	RHS	100
3	83+510	83+900	RHS	390
4	80+300	80+800	RHS	500
5	76+300	76+800	RHS	500
6	91+600	93+000	LHS	1400
7	84+600	84+700	LHS	100
8	83+510	83+900	LHS	390
9	80+300	80+800	LHS	500
10	76+300	76+800	LHS	500
11	54+520	58+170	Median	3650
12	60+685	60+874	Median	189
13	67+046	67+937	Median	891
14	69+857	70+644	Median	787
15	71+851	72+645	Median	794
16	75+124	75+930	Median	806
17	76+300	85+460	Median	9160
18	86+110	86+260	Median	150
19	89+798	90+041	Median	243
20	91+600	97+380	Median	5780
21	99+973	100+854	Median	881
			Total Length	**29111**

Annexure V: List of streetlights along the Project Road

S. No.	Chainage		Side	At Site		Type
	From	To		LHS	RHS	
1	76+300	76800	BHS	13	13	Double Arm
2	80+300	80800	BHS	12	12	Double Arm
3	83+516	83900	BHS	9	10	Double Arm
		Merged Road				
4	84+600	84900	BHS	7	8	Double Arm
5	91+600	93070	BHS	62		Double Arm
		Merged Road				
6	96+777	97200	BHS	14		Double Arm
7		Merged Road				
8	59+578	Flyover	BHS	3	3	Double Arm
9	86+700	Flyover	BHS	3	3	Double Arm
10	67+495	LVUP	BHS	3	3	Double Arm
11	70+222	LVUP	BHS	3	3	Double Arm
12	75+520	LVUP	BHS	3	3	Double Arm
13	79+285	LVUP	BHS	3	3	Double Arm
14	58+630	VUP	BHS	3	3	Double Arm
15	61+590	VUP	BHS	3	3	Double Arm
16	72+252	VUP	BHS	3	3	Double Arm
17	83+045	VUP	BHS	3	3	Double Arm
18	87+948	VUP	BHS	3	3	Double Arm
19	88+750	VUP	BHS	3	3	Double Arm
20	90+450	VUP	BHS	3	3	Double Arm
21	93+570	VUP	BHS	3	3	Double Arm
22	96+250	VUP	BHS	3	3	Double Arm
23	100+400	VUP	BHS	3	3	Double Arm
24	86+510	SVUP	BHS	0	0	
25	Toll plaza A1			9		Double Arm

S. No.	Chainage		Side	At Site		Type
	From	To		LHS	RHS	
26	Toll plaza Middle			26		Double Arm
27	Toll plaza A2			12		Double Arm
28	Rest Area		LHS	12		Single Arm
29	Truck Lay bye		BHS	11	13	Single Arm
30	100+900	Service Road Start/End	BHS	2	2	Single Arm
31	97+000	Service Road Start/End	BHS	7	7	Single Arm
32	95+800	Service Road Start/End	BHS	2	2	Single Arm
33	90+050	Service Road Start/End	BHS	1	2	Single Arm
34	89+200	Service Road Start/End	BHS	2	1	Single Arm
35	82+500	Service Road Start/End	BHS	2	2	Single Arm
36	79+800	Service Road Start/End	BHS	2	2	Single Arm
37	79+000	Service Road Start/End	BHS	2	2	Single Arm
38	75+100	Service Road Start/End	BHS	1	2	Single Arm
39	70+650	Service Road Start/End	BHS	2	2	Single Arm
40	67+930	Service Road Start/End	BHS	2	2	Single Arm
41	62+100	Service Road Start/End	BHS	2	2	Single Arm
42	60+400	Service Road Start/End	BHS	2	2	Single Arm
43	60+200	Service Road Start/End	LHS	8	0	Single Arm
44	58+100	Service Road Start/End	BHS	2	2	Single Arm
45	71+800	Service Road Start/End	BHS	2	2	Single Arm
46	72+800	Service Road Start/End	BHS	2	2	Single Arm
47	58+350	Bus Bay	RHS	0	7	Single Arm
48	60+040	Bus Bay	LHS	8	0	Single Arm
49	61+290	Bus Bay	RHS	0	6	Single Arm
50	61+870	Bus Bay	LHS	0	0	Single Arm
51	66+920	Bus Bay	BHS	8	8	Single Arm
52	69+600	Bus Bay	BHS	9	9	Single Arm
53	72+030	Bus Bay	BHS	0	0	Single Arm

S. No.	Chainage		Side	At Site		Type
	From	To		LHS	RHS	
54	74+800	Bus Bay	BHS	8	8	Single Arm
55	78+740	Bus Bay	BHS	8	8	Single Arm
56	82+160	Bus Bay	LHS	8	0	Single Arm
57	82+860	Bus Bay	BHS	8	8	Single Arm
58	87+480	Bus Bay	BHS	0	0	Single Arm
59	90+760	Bus Bay	LHS	0	0	Single Arm
60	91+140	Bus Bay	RHS	2	6	Single Arm
61	92+900	Bus Bay	BHS	0	0	Single Arm
62	95+440	Bus Bay	BHS	0	0	Single Arm
63	99+220	Bus Bay	LHS			Single Arm
64	100+660	Bus Bay	RHS	0	6	Single Arm
65	Toll plaza A1			2		Single Arm
66	Toll plaza Middle			11		Single Arm
67	Toll plaza A2			3		Single Arm

Annexure VI: List of Bus bays with shelter along the Project Road

S. No	Chainage	Quantity (Nos)	Side
1	58+350	1	RHS
2	60+040	1	LHS
3	61+290	1	RHS
4	66+920	2	BHS
5	69+600	2	BHS
6	74+800	2	BHS
7	78+740	2	BHS
8	82+160	1	LHS
9	82+860	2	BHS
10	87+480	2	BHS
11	90+760	1	LHS
12	91+140	1	RHS
13	99+220	1	LHS
14	100+660	1	RHS

Annexure VII: List of ECBs with shelter along the Project Road

S. No.	Chainage
1	55+400
2	57+500
3	60+500
4	62+000
5	65+500
6	67+000
7	69+500
8	71+860
9	74+040
10	76+400
11	78+400
12	80+400
13	82+570
14	85+275
15	89+190
16	91+250
17	93+000
18	95+470
19	97+400
20	99+200

Annexure VIII: Pavement Visual Condition Survey data

Remarks	Condition	From	To	Condition	Remarks
No Distress	Good	54+405	55+000	Good	No Distress
No Distress	Good	55+000	56+000	Good	No Distress
No Distress	Good	56+000	57+000	Good	No Distress
No Distress	Good	57+000	58+000	Good	No Distress
No Distress	Good	58+000	59+000	Good	No Distress
No Distress	Good	59+000	60+000	Good	<5% Settlement, Cracks
No Distress	Good	60+000	61+000	Good	No Distress
No Distress	Good	61+000	62+000	Good	<5% Corner break, Settlement
No Distress	Good	62+000	63+000	Good	No Distress
No Distress	Good	63+000	64+000	Good	No Distress
No Distress	Good	64+000	65+000	Good	No Distress
No Distress	Good	65+000	66+000	Good	No Distress
No Distress	Good	66+000	67+000	Good	No Distress
No Distress	Good	67+000	68+000	Good	<5% Corner break, Settlement
No Distress	Good	68+000	69+000	Good	No Distress
No Distress	Good	69+000	70+000	Good	<5% Joint failure
No Distress	Good	70+000	71+000	Good	No Distress
No Distress	Good	71+000	72+000	Good	No Distress
No Distress	Good	72+000	73+000	Good	<5% longitudinal cracks
No Distress	Good	73+000	74+000	Good	No Distress
No Distress	Good	74+000	75+000	Good	<5% trasverse cracks
No Distress	Good	75+000	76+000	Good	No Distress
No Distress	Good	76+000	77+000	Good	No Distress
No Distress	Good	77+000	78+000	Good	No Distress
No Distress	Good	78+000	79+000	Good	No Distress
No Distress	Good	79+000	80+000	Good	No Distress
No Distress	Good	80+000	81+000	Good	No Distress

Remarks	Condition	From	To	Condition	Remarks
No Distress	Good	81+000	82+000	Good	No Distress
No Distress	Good	82+000	83+000	Good	No Distress
No Distress	Good	83+000	84+000	Good	No Distress
No Distress	Good	84+000	85+000	Good	No Distress
No Distress	Good	85+000	86+000	Good	No Distress
No Distress	Good	86+000	87+000	Good	No Distress
<5% Shoulder panel missing (15m)	Good	87+000	88+000	Good	<5% Shoulder panel missing (15m)
No Distress	Good	88+000	89+000	Good	<5% trasverse cracks
No Distress	Good	89+000	90+000	Good	No Distress
No Distress	Good	90+000	91+000	Good	No Distress
No Distress	Good	91+000	92+000	Good	No Distress
No Distress	Good	92+000	93+000	Good	No Distress
No Distress	Good	93+000	94+000	Good	No Distress
No Distress	Good	94+000	95+000	Good	No Distress
No Distress	Good	95+000	96+000	Good	No Distress
No Distress	Good	96+000	97+000	Good	No Distress
No Distress	Good	97+000	98+000	Good	No Distress
No Distress	Good	98+000	99+000	Good	No Distress
No Distress	Good	99+000	100+000	Good	No Distress
No Distress	Good	100+000	101+000	Good	No Distress
No Distress	Good	101+000	101+630	Good	No Distress

Annexure IX: Pavement Distress Survey

A pavement condition survey gives an indication of the serviceability of the road pavement and is vital in deciding the maintenance activities. Some methods to conduct this survey are the Visual Condition Survey method (manual), Network Survey Vehicle (NSV) method, etc. However, Visual Condition Survey was conducted in this Project.

In a visual condition survey, the technical experienced staff makes a traverse along the project stretch, observing the different types of distresses on the pavement surface, and observations are made on each distress type.

Distresses on Rigid pavements include

- Cracks – Single discrete crack, Longitudinal, Transverse, diagonal and Alligator cracks
- Corner break
- Punchout
- Ravelling
- Scaling
- Polished Surface
- Popouts
- Joint seal defects
- Spalling of joints
- Faulting
- Blow-up or Buckling

Repair and rectification cost of identified distresses have been considered in O&M estimations. Observations made during the visual condition survey are detailed below.

Longitudinal Cracks

Structural cracks like longitudinal cracks develop parallel to the traffic direction and extend through the depth of the pavement bituminous layer, that can be bottom-up or top-down crack.

Longitudinal cracks were observed few locations of the project Stretch. These are routine maintenance work and cost of the same captured in Y-o-Y O&M and concessionaire has taken up the rectification works.

Figure: Longitudinal Cracks

Transverse Cracks

Structural cracks like transverse cracks develop perpendicular to the traffic direction and extend through the depth of pavement bituminous layer.

Transverse cracks were observed at very few locations. These are routine maintenance work and cost of the same captured in Y-o-Y O&M and concessionaire has taken up the rectification works.

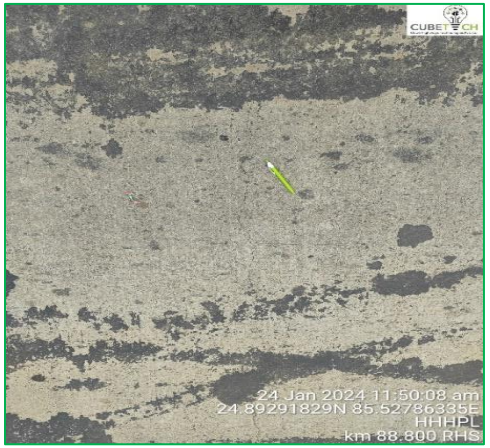


Figure: Transverse Cracks

Corner Break

A portion of the slab is separated by a crack, which intersects the adjacent transverse and longitudinal joints, describing approximately a 45-degree angle with the direction of traffic. The length of the sides is from 0.3 m to half the width of the slab on each side of the corner.

Corner breaks were observed at few locations along the Project. . These are routine maintenance work and cost of the same captured in Y-o-Y O&M and concessionaire has taken up the rectification works.

Figure: Corner Break

Spalling of Joint

Cracking, breaking, chipping, or fraying of slab edges within 0.3 m from the face of the joint.

Spalling of joint was observed along the Project Stretch. These are routine maintenance work and cost of the same captured in Y-o-Y O&M and concessionaire has taken up the rectification works.

Figure: Spalling of Joint

Annexure X: List of damaged signboards along the Project Road

S. No	Chainage (km)	Direction	Location	Remark	Quantity (Nos.)
1	99+150	RHS	Shoulder	Damaged Flag Type Reassurance Sign Board	1
2	98+250	RHS	Shoulder	Damaged Stack Type Advance Direction Sign Board	1
3	83+500	RHS	Separator	Damaged Pass Either Side Sign Board	1
4	77+850	RHS	Shoulder	Damaged Restriction Zone Start Sign Board	1
5	72+800	RHS	Shoulder	Damaged Stack Type Advance Direction Sign Board	1
6	68+900	RHS	Shoulder	Damaged Stack Type Advance Direction Sign Board	1
7	88+450	LHS	Separator	Damaged Pass Either Side Sign Board	1
8	88+450	LHS	Separator	Damaged Two-Way Hazard Marker	1
9	89+500	LHS	Median	Damaged Right Object Hazard Marker	1

Annexure XI: Review of Project Documents and Communications related to Road Safety aspects

The following documents have been reviewed as a part of the Road Safety Assessment.

Table: Review of Project Documents and Communications related to road safety aspects

Document	Broad comments from Road Safety aspects
Concession Agreement (CA) -Signed on 28/10/2020 *(Concessionaire – M/s Hardiya Hasanpur Highway Pvt. Ltd)*	• Clauses and warrants of various facilities along the Project Road, applicable manual and specifications, deviations from specifications manual, etc., are reviewed. • *The Project Road has been developed as per the applicable manuals – IRC: SP:84-2019* • *As per Sch -C, Clause (c) -Traffic signage shall be provided as per IRC:67-2012 and Overhead signage shall be provided as per stie requirements.* • *As per Sch -C, Clause (d) – Street lighting shall be provided in accordance with provisions of Sch-D* • *As per Sch -C, Clause (e) – Pedestrian guard rails shall be provided in accordance with provisions of Sch-D* • *As per Sch -C, Clause (q) – Traffic safety devices; Traffic control devices, road safety devices, roadside and median safety barriers shall be provided/installed as per Sch-D.* It may be noted that, as mentioned above, specific warrants or BOQ of road furniture items have not been provided in the CA. whereas it is mentioned that - all furniture items shall be provided in accordance with the manual where applicable, and the manual includes various warrants for road furniture items.
Appointed date, and PCOD correspondences	**Appointed date:** The appointed date of the Project is 28-04-2021. **PCOD:** As per Letter No. ICT: 863: AK:223; PCOD of Project Road as per Clause 14.2 and 14.3 has been received on 27/04/2023.
Plan & Profile, TCS, COS, and approved drawings	• TCS and Plan & Profile drawings have been received and reviewed with respect to CA provisions. However, as mentioned earlier, location-specific/Black Spots-related geometrical aspects are not studied as part of this assignment.
Accident Data	• No data have been received.

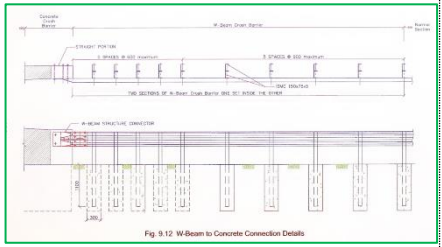
Identified Safety Concerns along the Project Road

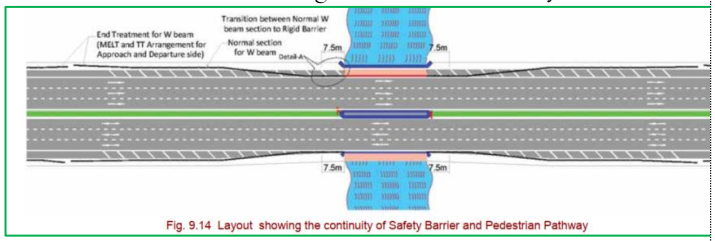
Keeping in view the scope of assignment, safety concerns have been recorded on site and reported in the table below. The remarks and recommendation column includes information on clauses of CA & applicable manual, any observations in the IE report/project documents, and our recommendations against the highlighted safety concern. The

risk and priority of each safety concern are also included as per the following criteria given in line with IRC: SP:88-2019 (Manual on Road Safety Audit). The Concessionaire has taken up the rectification work and cost has been factored in routine O&M Cost.

- Risk categories for identified safety concern: Very High, High, and Medium
- Priority level for recommendations: Essential, Highly Desirable and Desirable

Table: Safety Concerns Observed along the Project Road

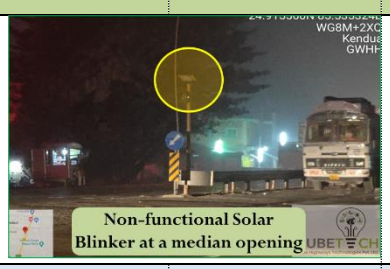
S. No.	Safety concern		Recommendation		Type of concern
	Current Situation	**Risk**	**Recommendation and Remarks**	**Priority**	
1	**Safety Barrier**				
A	**connection between MBCB and Rigid barrier**	**Very High**		**Essential**	**Installation issue**
	transition arrangements between MBCB and the Rigid barrier. Adequate fishplate arrangement between MBCB and the rigid crash barrier has been provided at most of the locations along the project road. However, post spacing in the transition arrangement section are not provided as per the provisions of the applicable manual. In the transition arrangement to the rigid barrier, number and spacing of post vary to provide greater rigidity to the semi-flexible barriers. (5 posts at intervals of 0.9m c/c, and next set of 5 posts at intervals of 0.6m c/c.)		As per applicable manual of CA (Fig.9.14 of IRC: SP:84-2019); The following transition arrangement shall be reviewed to minimise the accident's severity. 		
B	**Unprotected Rigid Crash Barrier**	**Very High**		**Essential**	**Installation issue**
	Upon approaching the bridge section, it has been observed that connecting the MBCB to the bridge railing is a general practice across India. However, this practice deviates from the provisions outlined in the applicable CA manual. Consequently, this arrangement exposes the blunt face of the rigid barrier to high-speed traffic.		MBCB shall be directly connected to the rigid crash barrier instead of connecting it to the railing while leaving a minimum of 2 m access for pedestrians to reach the footpath as recommended		

S. No.	Safety concern		Recommendation		Type of concern
	Current Situation	**Risk**	**Recommendation and Remarks**	**Priority**	
	The image presents the current arrangement of the barriers 		in IRC: SP:84-2019. The image is attached for ready reference.  Fig. 9.14 Layout showing the continuity of Safety Barrier and Pedestrian Pathway Such observations have not been noted in the documents that have been submitted for review and above-mentioned issues have been observed at bridge locations only, Hence, BOQ of the same has not been considered.		
B	**Improper start and end treatment of MBCB**	**High**		**Essential**	**No Issue**
	As shown in the photograph below, the W-beam start/end treatment was observed but it is not per the applicable manual. W-beam is directly terminated into the ground without proper start treatment (MELT) and end (TT) arrangement. This might launch the high-speed errant vehicle into the air and lead to severe accidents.		As per the applicable manual of CA (Fig.9.14 of IRC: SP:84-2019); *MELT and TT arrangement works better than Turned-Down Guardrail type arrangement as the latter tend to launch the high-speed errant vehicle in the air leading to grievous or even fatal accidents. Therefore, it is recommended that any new installations or repair of damaged shall be carried out as per MELT and TT arrangement.* Approved drawings for barrier arrangement have not been provided for review. Additionally, these observations have not been reported in the documents submitted for review. Above mentioned issues have been observed at very few locations, Hence, BOQ of the same has not been considered. However, in view of road user safety, it is suggested to review such observations.		
C	**Damaged Metal beam crash barrier**	**Very High**		**-**	**-**

S. No.	Safety concern		Recommendation		Type of concern
	Current Situation	Risk	Recommendation and Remarks	Priority	
	During site visit, the team has not encountered any damaged MBCB (Except 20m at one location) along the Project Road. However, proactive rectification of damaged furniture is key for the safety of road users.		No issue was observed		
D	**Wrong overlapping of MBCB plates**	**Very High**		**Highly Essential**	**Improper Installation**
	Wrong overlapping (at km 97+400 to km 97+650 (LHS ~250m) was observed during the site visit. From the photographs, successive w-beam plates are installed above the previous plate in the moving direction. In case any errant vehicle hits the w-beam barrier, the plate gets deflected backward, and the successive plate will come out upwards and could enter the vehicle at high speed. This error in the installation of a W-beam barrier will completely refute its purpose and will act like a hazardous item on the road. Wrong Overlapping of MBCB Plates		It is suggested to review such locations.		
E	**Improper Arrangement of MBCB and Kerb**	**-**		**-**	**No Issue**
	No issue was observed.				
F	**MBCB Setback distance**	**-**		**-**	**No Issue**
	Based on visual inspection, MBCB setback distance is observed to be adequate.				
G	**Height of Crash barriers**	**-**		**-**	**No Issue**
	Based on visual inspection, the height of the crash barrier is adequate.				
I	**Welded connection of MBCB Plates**	**-**			**No Issue**
	No issue was observed.				
J	**Wire Rope Barrier Setback distance**	**-**		**-**	**NA**
	NA		NA		
K	**Wire Rope Barriers Distance from face of the kerb**	**-**		**-**	**NA**
	NA		NA		
L	**Start of RCC crash barrier w.r.t. grade separator**	**-**		**-**	**No Issue**

S. No.	Safety concern		Recommendation		Type of concern
	Current Situation	**Risk**	**Recommendation and Remarks**	**Priority**	
	No issue was observed.				
M	**RCC crash barrier at Bridges**	**-**		**-**	**No Issue**
	No issue was observed.				
L	**Antiglare panels on RCC crash barrier**	**Medium**		**High**	**New Installation**
	During the site visit, it was observed that antiglare panels provided on RCC crash barrier are damaged mostly at locations where ribbon development is observed. It can be anticipated that local commuters are crossing the project road at-grade and facilitate the same destroying the anti-glare panels. Few photographs are shown below: Damaged Antiglare Panels		Around 20-25 % of existing anti-glare screens are damaged along the project road. Suggested to review and rectify such locations on priority. Also, pedestrian circulation along ribbon development sections needs to be reviewed and awareness campaigns regarding the importance of road safety shall be carried out at frequent intervals.		
2	**Pedestrian Guard Rail**				
A	**New installation of PGR at built up section**	**-**		**-**	**NA**
	NA				
B	**PGR and rigid barrier connection**	**-**		**-**	**NA**
	NA				
3	**Pedestrian Facilities**	**-**		**-**	**No Issue**
	Pedestrian facilities such as pedestrian cross marking and sign at every median opening has been provided.		No issue was observed.		

S. No.	Safety concern		Recommendation		Type of concern
	Current Situation	Risk	Recommendation and Remarks	Priority	
4	**Median walls in b/w structures**	**-**		**-**	**No Issue**
	No issue was observed.				
5	**Highway Lighting**				
A	**Highway Lighting underside of Grade separated structures**	**-**		**-**	**No Issue**
	Adequate highway lighting is observed below grade separator structures.		No issue was observed.		
B	**Highway Lighting on Top of Grade separated structures**	**High**		**Essential**	**New Installation**
	Upon visual inspection, it has been observed that highway lighting is provided only on the deck of the grade-separated structures. Highway lighting is not provided on the approaches to grade separate structures. Additionally, the provided highway lighting was not functional during our site visit at a few locations along the Project Road. Non-operational highway lighting Highway lighting at grade-separated structures		As per clause 12.5.3, IRC: SP:84-2019, Highway lighting shall be provided at *Grade separated Structures, Interchanges, Flyovers, Underpasses (vehicular/ pedestrian) and Overpasses: Lighting shall be provided as per Para 3.4.6 of the Manual.* As per Clause 3.4.6 of IRC: SP:84-2019; *"The top and underside of the grade-separated structures and interchange area at the ground level up to 50 m beyond the point from the center on all legs of interchange/crossing both at top and bottom shall be provided lighting.*		
6	**Solar Blinker**				
A	**Non-Functional solar blinkers and missing blinker lights**	**High**		**Essential**	**Operational Issue**

S. No.	Safety concern		Recommendation		Type of concern
	Current Situation	Risk	Recommendation and Remarks	Priority	
	Adequate solar blinkers have been observed along the Project Road. However, a few are non-functional (9 Nos). 		Suggested to review and rectify such locations on priority.		
B	**Height of solar blinkers**	-		-	**No Issue**
	Based on visual inspection, it was observed that the height of solar blinker was adequate.		No issue was observed		
C	**LED Traffic Beacons/Solar Blinkers arrangement**	-			**No Issue**
	No issue was observed		No issue was observed		
D	**New Installation of Solar Blinkers**	-		-	**No Issue**
	There is no requirement of additional solar blinkers as per the site condition.		No issue was observed.		
7	**Night-time visibility**	-		-	**No Issue**
	Adequate delineation of the Project Road with retroreflective stickers on the road furniture is provided wherever required.		No issue was observed.		
8	**Sign Board**				

S. No.	Safety concern		Recommendation		Type of concern
	Current Situation	**Risk**	**Recommendation and Remarks**	**Priority**	
A	**Issue with an existing installation of sign boards (Damaged, faded, visibility, etc.,)**	**Very High**		**Highly Essential**	**New Installation**
	As per the visual inspection, all the sign boards provided are as per the applicable manual, however few of them are damaged. Damaged Sign Boards		It is suggested to review all such signboards. The list of various damaged sign boards is attached in Annexure I.		
9	**Object and Kerb Painting**	**Medium**		**Essential**	**New Installation**
	During the site visit, it was observed that kerb painting and object painting of structures were adequate along the Project Road. However, object painting has not been provided on the soffit of underpass locations with heights less than 5.5m. The current scenario of these concerns is depicted below. Object hazard painting on structures		**Object Hazard Marking on Fixed Objects:** *All the entry and exit of the VUP/PUPs, and the face of the wall of VUP/PUP shall be marked with OHM to enhance safety during nighttime.* .		
10	**Safety Measures at critical locations, i.e., Transverse Bar Marking**	**-**		**-**	**No Issue**
	Transverse Bar Marking has been provided at median openings and hazardous approaches.		No issue was observed		
11	**Road Studs**	**-**		**-**	**No Issue**
	Road studs have been provided for most locations along the Project Road.		No issue was observed		
12	**Road Delineator**	**-**		**-**	**No Issue**
	No issue was observed.				
13	**Road Geometry**				
A	**Improper connections of Minor Roads**	**-**		**-**	**No Issue**
	Upon visual inspection, no issue was observed.		No issue was observed		

S. No.	Safety concern		Recommendation		Type of concern
	Current Situation	Risk	Recommendation and Remarks	Priority	
B	**Absence of storage lane at median opening/U-turn locations**	**-**		**-**	**No Issue**
	All existing median openings are equipped with storage lanes on BHS.		No issue was observed		
C	**Un-Authorized Median Openings (UMO)**	**-**		**-**	**No Issue**
	No issues are currently observed. If any UMO is encountered in the future, it will be addressed with priority and closed promptly.				
14	**Landscaping and Tree Plantation**				
A	**Avenue plantation condition**	**-**		**-**	**No Issue**
	During the site visit it was observed that adequate plantation is provided all along the project road.		No issue was observed		
B	**Median Plantation in No Plantation Zone**	**-**		**-**	**No Issue**
	No issue was observed				
15	**Truck Lay Bays/Bus Bays/Wayside Amenities**				
A	**Truck Lay Bye Layout**	**-**		**-**	**No Issue**
	No issue was observed				
B	**Bus Bays and Bus Shelters**	**-**		**-**	**No Issue**
	Bus shelters are equipped with road markings, studs, and highway lighting along the bus bays, covering the declaration start to the acceleration end.		No issue was observed.		
C	**Rest Areas / Wayside Amenities**	**-**		**-**	**Operation Issue**

S. No.	Safety concern		Recommendation		Type of concern
	Current Situation	Risk	Recommendation and Remarks	Priority	
	During the site visit adequate access arrangement to Rest Areas / Wayside Amenities is as per standards.		No issue was observed.		
16	**Other General Issues**				
A	**Water Stagnation**	**-**		**-**	**No Issue**
	Water stagnation was not observed during our site visit. However, a review of drainage plan is essential to eliminate situations of water stagnation in future.		No issue was observed		
B	**Encroachment by temporary shops**	**-**		**-**	**No Issue**
	During the site visit, encroachment is not observed along the project road.				
17	**High Transmission Line Vertical clearance**	**-**		**-**	**No Issue**
	No issue was observed				
18	**Ongoing Construction-Related Issues**	**-**		**-**	**No Issue**
	No ongoing construction activities were observed during the site visit.		No issue was observed		

Balance Work for Four laning of Kiratpur to Nerchowk Section of NH-21 (from km 12.750 to km 26.500, km 126.500 to 158.500 including ACC link road from km 0.000 to 2.003) Greenfield Alignment (excluding Sundernagar Bypass) (Package-2) on HAM Mode in the State of Himachal Pradesh

Technical Due Diligence Report (Private and Confidential)

July 2024

Submitted to:

Gawar Kiratpur Nerchowk Highway Private Limited

Cube Highways Technologies Private Limited

CUBETECH
Cube Highways Technologies Pvt. Ltd.

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ABBREVIATIONS

Abbreviation	Description
ASTM	American Society for testing and Materials
AVC	Automatic Vehicle Classifier
ABP	Allahabad bypass package
BBD	Benkelman Beam Deflection
BC	Bituminous Concrete
BOT	Built, Operate and Transfer
CA	Concession Agreement
CC Drain	Cement Concrete Drains
COD	Commercial Operation Date
CRRI	Central Road Research Institute
CBR	California Bearing Ratio test
DBFOT	Design, Build, Finance, Operate and Transfer
ETC	Electronic Toll Collection
FWD	Falling Weight Deflectometer
GOI	Government of India
GCL	Gawar Construction Limited
HPC	Hume Pipe Culvert
IE	Independent Engineer
IRC	Indian Roads Congress
LA	Land Acquisition
LHS	Left Hand Side
LOA	Letter of Acceptance
MBCB	Metal Beam Crash Barrier
MJB	Major Bridge
MNB	Minor Bridge

Abbreviation	Description
MOST	Ministry of Surface Transport
MPR	Monthly Progress Report
NH	National Highway
NHAI	National Highway Authority of India
NSV	Network Survey Vehicle
O&M	Operation and Maintenance
OHLS	Overhead Lane Signal
OHM	Object Hazard Marker
PCOD	Provisional Commercial Operation Date
POS	Point of Sale
POS	Point of sale
RCC	Reinforced Cement Concrete
RHS	Right Hand Side
ROB	Road/Rail Over Bridge
ROW	Right of Way
RPV	Route Petrol Vehicle
RUB	Road/Rail Under Bridge
SH	State Highway
SPV	Special Purpose Vehicle
SR	Service Road
SSWIM	Slow Speed Weigh in Motion
SWB	Static Weigh Bridge
TOT	Toll Operate Transfer
TC	Toll Collector
Team	Team of Cube Highways Technologies Pvt Ltd.
TMS	Toll Management System
WIM	Weigh in Motion
WMM	Wet Mix Macadam

Chapter 1
INTRODUCTION

CHAPTER 1. INTRODUCTION

1.1 Background

Infrastructure Sector is a key driver for the Indian economy. In 2014, the Government of India have introduced a new investment vehicle which allows investors to participate in the growth story of infrastructure sector, named Infrastructure Investment Trusts (hereinafter referred to as 'InvITs'). InvITs are instruments on pattern of mutual funds and are designed to pool in money from a number of investors to invest in assets that give cash flow over a period of time. The InvITs are regulated by the SEBI (Infrastructure Investment Trusts) Regulations Act, 2014.

In highway sector, InvIT as an instrument provide greater flexibility to investors and is expected to attract patient capitals (for say, 20-30 years) to the market, as these investors are averse to construction risks and are interested in investment in assets which provide long-term stable returns.

InvIT shall have a (i) Trustee, (ii) Sponsor(s) (iii) Investment Manager and (iv) Project Manager, Sponsor and the Project Manager are the same entity. During maintenance period of the Project Stretch, Gawar Construction Limited. (In its capacity as the Project Manager of National Infrastructure Trust) has appointed M/s Cube Highways Technologies Private Limited as Technical Consultant for carrying out technical study and assessment of Opex and Major Maintenance requirement (MMR) for balance concession period. The scope includes review of operation and maintenance system and to prepare maintenance schedule for entire duration of concession period based on a technical analysis. In turn, Cube Highways Technologies undertook the site visits to carry out site inspection. The report is based on findings during this period.

National Infrastructure Trust ("Trust") was settled on September 25, 2023, in Gurugram pursuant to the Trust Deed as a contributory irrevocable trust in accordance with the Indian Trusts Act, 1882. The Trust is an Infrastructure Investment Trust (InvIT) established for making investments in special purpose vehicles as defined under Regulation 2(1) (zy) of the InvIT Regulations, or infrastructure projects or securities of Indian companies engaged in the infrastructure sector, as may be permitted in terms of Regulation 18(5) of the InvIT Regulations. Axis Trustee Services Limited (ATSL) is the Trustee to the Trust. Gawar Investment Manager Private Limited (GIMPL) was incorporated as a private limited company on August 26, 2023, under the Companies Act, 2013. GIMPL is a wholly owned subsidiary of GCL. GIMPL has been appointed as the Investment Manager to the NIT InvIT by Axis Trustee Services Limited; the trustee to NIT InvIT and is responsible for managing the operations of InvIT in accordance with InvIT regulations.

Table 1-1: Projects comprising the Initial Portfolio Assets of National Infrastructure Trust

S. No.	Name of the Project	Length (km)
1.	Gawar Rohna Jhajjar Highway Private Limited	35.45
2.	Gawar Khajuwala BAP Highway Private Limited	212.107

S. No.	Name of the Project	Length (km)
3.	Gawar Narnaul Highway Private Limited	45.3
4.	Gawar Rohna Sonepat Highways Private Limited	40.50
5.	Hardiya Hasanpur Highway Private Limited	47.225
6.	**Gawar Kiratpur Nerchowk Highway Private Limited**	**47.753**
7.	Dewas Ujjain Highway Private Limited	41.42
8.	Gawar Bangalore Highways Private Limited	164.34
9.	Gawar Nainital Highways Private Limited	43.905

1.2 Asset Background

The National Highway Authority of India (NHAI) on behalf of Ministry of Road Transport and Highways (MoRT&H), Government of India, have taken up the development of various National Highway corridors where the intensity of traffic has increased significantly and there is requirement of augmentation of capacity for safe and efficient movement of traffic. In this regard, NHAI has been entrusted to develop projects for selected corridors through Public Private Partnership (PPP) basis on Design, Build, Operate and Transfer (DBOT) pattern.

As part of this endeavour, the Government of India (GOI) had entrusted to the Authority the development, maintenance, and management of National Highway (NH) 21 from km 12.750 to km 26.500, km 126.500 to km 158.500 including ACC link road from km 0.000 to km 2.003 Greenfield Alignment (excluding Sundernagar Bypass) approx. 47.753 km. The Authority had resolved to augment the Balance work for Four laning of Kiratpur to Nerchowk section of NH-21 in the State of Himachal Pradesh by Four-Laning thereof (the "Project") on design, build, operate and transfer (the "DBOT Annuity" or "Hybrid Annuity") basis, which shall be partly financed by the Concessionaire who shall recover its investment and costs through payments to be made by the Authority, in accordance with the terms and conditions as set forth in the Concession Agreement (CA).

The Hybrid Annuity Model (HAM) is a mix of Built, Operate and Transfer (BOT) Annuity and Engineering, Procurement and Construction (EPC) models. As per the design, the Authority will contribute up-to 40% of the Project Cost in five equal instalments of 8% each during the Construction Period of 910 days with the provisions of Clause 23.4 of CA. The remaining payment will be made based on the assets created and the performance of the developer. Here, hybrid annuity means the first 40% payment is made as fixed amount in five equal instalments whereas the remaining 60% is paid as variable annuity amount after the completion of the Project. As per the design, the Authority will contribute 40% of the Bid Project Cost (BPC) and the balance cost is funded by the Concessionaire through debt and equity.

The Authority had adopted a single stage two envelope bidding process and accordingly invited proposals by its Request for Proposals dated 10th January 2020 (the "Request for Proposals" or "RFP") for qualification and short listing of bidders for construction, operation, and maintenance of the above referred Project on Hybrid Annuity basis. The

Authority had prescribed the technical and commercial terms and conditions in the RFP and invited bids comprising technical and financial bids from the bidders for undertaking the Project.

After evaluation of the bids received, the Authority had technically qualified certain bidders including, inter alia, the selected bidder and accepted the financial bid of the selected bidder i.e., Gawar Construction Limited (GCL).

The Authority issued its Letter of Award No. NHAI/11016/9/2019/Balance work K-N/Pkg-2 dated 16th October 2020 (hereinafter called the "LOA") to the selected bidder requiring, inter alia, the execution of this Concession Agreement within 45 (forty-five) days, accordingly, it was executed on 26th November 2020 as per terms of Concession Agreement (CA), of the date of issue thereof.

Accordingly, Special Purpose Vehicle (SPV) Gawar Kiratpur Nerchowk Highway Private Limited ("GKNHPL") has been formed, for implementing the Project the "Concessionaire"). As the Concessionaire of this Project, they will be developing the Project, operate and maintain the facilities after completion of construction.

Under Hybrid Annuity Model (HAM), toll collection on the Project shall be responsibility of NHAI. The Concessionaire will be recovering its costs through annuity payments made during Concession Period payments during Construction as well as in Operations Period), including Construction Period of 910 days from the Appointed Date and Operation Period of 15 years from Commercial Operation Date (COD)/PCOD.

1.3 Report Structure

The report contains eight chapters, including this Chapter on Introduction.

Chapter 2 Project Overview

Chapter 3 Asset Status

Chapter 4 Review of Structures

Chapter 5 Review of the pavement condition survey

Chapter 6 General Safety Concerns along the Project stretch and Improvements

Chapter 7 Operation and Maintenance Cost

Chapter 2
PROJECT OVERVIEW

CHAPTER 2. PROJECT OVERVIEW

2.1 Location

The Project Stretch length is 47.753 km in Himachal Pradesh. The project has two link road one from Noni chowk to Bharari Village and other is ACC link road which connect Barmana to Dehar Village.

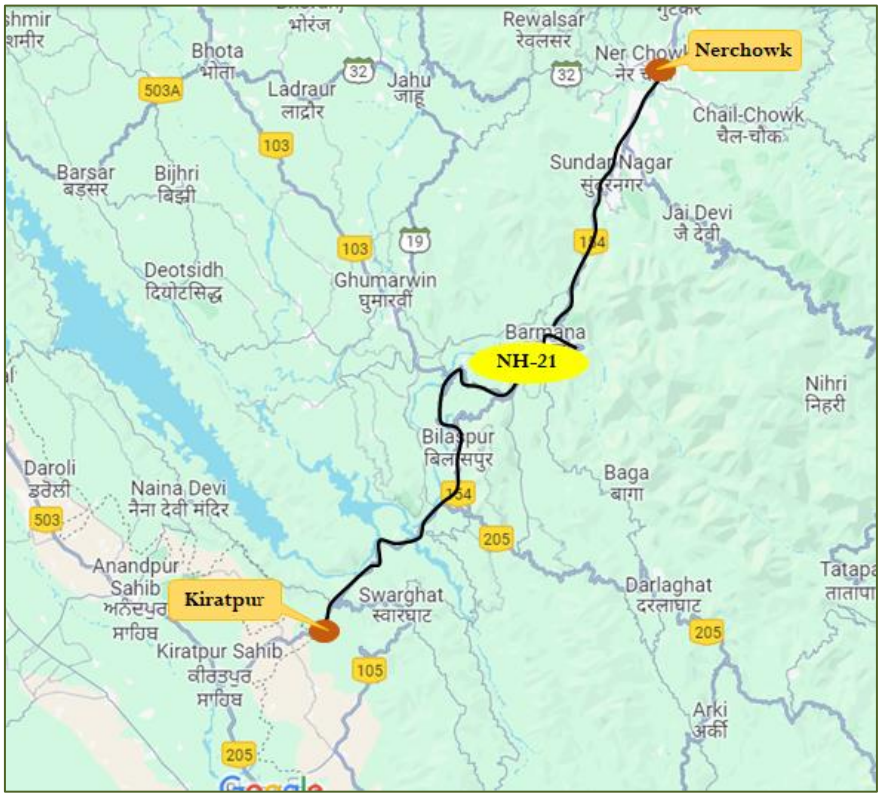

Figure 2-1: Project Alignment

2.2 Salient features

The salient features of the Project are summarised in the table below:

Table 2-1 Project Salient Features

S. No	Scope	Description
1	Name of the Project	Balance Work for Four laning of Kiratpur to Nerchowk Section of NH-21 (from km 12+750 to km 26+500, km 126+500 to 158+500 including ACC link road from km 0+00 to 2+003) Greenfield Alignment (excluding Sundernagar Bypass) (Package-2) on HAM Mode in the State of Himachal Pradesh.
2	Name of Client	National Highways Authority of India
3	Name of Concessionaire	M/s Gawar Kiratpur Nerchowk Highway Private Limited
4	Name of EPC Contractor	M/s Gawar Constructions Ltd.
5	Independent Engineer	M/s ICT Intercontinental Consultants and Technocrats Pvt. Ltd. in association with MSPARK Futuristic &Associates
7	Length of the Project	47.753 km
8	Bid Project Cost	Rs. 2098 crores
9	First year O&M	Rs.5 crores
10	Letter of award	NHAI/11016/9/2019/Balance Work K-N/Pkg-2 dated 16th October 2020
11	Signing of Concession Agreement date	26th November 2020
13	Appointed Date	12th August 2021
14	Construction Period	910 days from Appointed Date
15	Operation Period	15 years from PCOD/COD
16	Final Completion Date	5th September 2023

The Final Completion Certificate was issued on 11th November 2023 w.e.f. 5th september 2023 for a total length 47.753 km.

2.3 Scope of the Project

The scope of the Project (the "Scope of the Project") shall mean and include,

- Construction of the Project on the site set forth in Schedule-A and as specified in Schedule-B together with provision of Project Facilities as specified in Schedule- C, and in conformity with the Specifications and Standards set forth in Schedule- D of the Concession Agreement.
- Operation and Maintenance of the Project in accordance with the provisions of Concession Agreement; and
- Performance and fulfilment of all other obligations of the Concessionaire in accordance with the provisions of Concession Agreement and matters incidental there to or necessary for the performance of any or all the obligations of the Concessionaire under Concession Agreement.

2.4 Physical features of the Project

The Concessionaire shall operate, manage and maintain the project stretch for entire Concession Period, subject to and in accordance with the provisions of this Agreement. The Concessionaire shall visit the Site and assess the durability and strength of Project Assets and make his own assessment for operation, management. and maintenance as per Specifications and Standards and bear and pay all costs, expenses and charges in connection with or incidental to the performance of operation, management and maintenance.

The project includes the following physical features.

Table 2-2: Project Physical Features

S.no	Project Physical Features	As per CA	As per Site	Remarks
1	Total Length of Project Stretch	47.753 km	47.753 km	Including ACC link road starting from ACC cement factory Barmana to km 154+137
2	Total length of Service Road & slip roads	06 km	06 km	
4	Number of Toll Plaza's	01 No	01 No	
5	Number of Tunnels	05 Nos	05 Nos	
6	New Major bridges	22 Nos	22 Nos	
7	New Minor Bridges	15 Nos	15 Nos	
8	ROB	02 Nos	02 Nos	
9	Flyover	01 Nos	01 Nos	
10	Hume Pipe Culverts	30 Nos	30 Nos	
11	Box culverts	115 Nos	115 Nos	
12	Major Intersection	09 Nos	09 Nos	

S.no	Project Physical Features	As per CA	As per Site	Remarks
13	Minor Intersections	09 Nos	09 Nos	
14	Vehicular Underpass	03 Nos	03 Nos	
15	Pedestrian Underpass/Cattle Underpass	02 Nos	02 Nos	
16	Bus Shelters	19 Nos	19 Nos	
17	Truck Lay Byes	01 No	01 Nos	
18	Rest Areas	01 No	01 Nos	

All the above features as per site have been accounted for the estimation of routine maintenance, repair and rehabilitation, major maintenance and operation expenditure.

2.5 Review of Concession Agreement

The Authority had adopted a single stage two envelope bidding process and accordingly invited proposals by its Request for Proposals dated 10th January 2020 (the "Request for Proposals" or "RFP") for qualification and short listing of bidders for construction, operation and maintenance of the above referred Project on Hybrid Annuity basis.

The Authority had prescribed the technical and commercial terms and conditions in the RFP and invited bids comprising technical and financial bids from the bidders for undertaking the Project.

After evaluation of the bids received, the Authority had technically qualified certain bidders including, inter alia, the selected bidder and accepted the financial bid of the selected bidder i.e., M/s Gawar Constructions Ltd. and issued its Letter of Award No. NHAI/11016/9/2019/Balance Work K-N/Pkg-2 dated 16th October 2020 (hereinafter called the "LOA") to the selected bidder requiring, inter alia, the execution of this Concession Agreement within 45 (forty-five) days and on 26th November 2020 it was accepted.

Table 2-3: Review of CA

Article /Clause of CA	Subject	Description in brief	*Remarks*
Article 3	**Concession period**	Concession period includes construction period of 910 days and operational period of 15 years from COD	
	Total Project Cost	Total project cost is 60 % of the Bid Project Cost If there is an increase in WPI, on an average, by more than 3% per annum for the period between the Bid Date and COD, the Total Project Cost shall be increased such that the	

Article /Clause of CA	Subject	Description in brief	*Remarks*
		effect of increase in WPI, more than such 3%, is reflected in the Total Project Cost	
Clause 23.2	**Adjusted bid project cost**	Project cost shall be inflation indexed (through a Price Index Multiple) (PIM), which is the weighted average of Wholesale Price Index (WPI) and Consumer Price Index (CPI) (IW) in the ratio of 70:30 The bid project cost adjusted for variation between the price index occurring between the reference index preceding the bid date and reference index date immediately preceding the appointed date shall be deemed to be the bid project cost at commencement of construction. Bid project cost shall be changed to variation in PIM (price index multiple) on monthly basis till the achievement of commercial operations date (COD).	
Article 16	**Change in scope**	The Authority shall pay to Concessionaire any increase in scope of work approved by Independent Engineer. While in the case of reduction of scope due to reasons attributed by the Authority, cost of such reduced cost is to be accessed by the Independent Engineer, as per the schedule of rates applicable on the Bid Due Date. The civil cost of the reduced Scope shall be multiplied by the 1.05 to arrive at the estimated cost of reduced Scope. The estimated cost of reduced Scope shall then be multiplied by the ratio of Bid Project Cost to Estimated Project Cost to arrive at the Total Cost of Reduced Scope.	
Article 31	**Termination payment**		
	Termination payment in the event of default by Concessionaire during operation	The Authority shall pay to the Concessionaire an amount equal to 65% (sixty-five per cent) of the sum of Annuity Payments remaining unpaid for and in respect of the Concession Period, including interest thereon up to the Transfer Date.	

Article /Clause of CA	Subject	Description in brief	*Remarks*
	Termination payment in the event of default by Authority during operation Period	An amount equal to the sum of Annuity Payments remaining unpaid for and in respect of the Concession Period, including interest thereon up to the Transfer Date.	
Article 35	**Change in law**		
	Increase in cost	If the Concessionaire suffers aggregate financial effect due to change in law, which exceeds by Rs 2.91 crores or 2% of the total annuity payments in any accounting year the Concessionaire may notify Authority and propose amendments to this agreement so as to place the Concessionaire in the same financial position w/o change in law	*Concessionaire is protected*
	Reduction in cost	If the Concessionaire benefits from reduction in costs and the aggregate financial effect due to change in law, exceeds by Rs 2.91 crores or 2% of the total annuity payments in any accounting year the Authority may notify Concessionaire and propose amendments to this agreement so as to place the Concessionaire in the same financial position w/o change in law	
Clause 6.3	Obligations relating to refinancing	The Authority shall permit and enable Concessionaire for refinancing as per prevailing guidelines upon written request. Authority shall respond within 30 days of the receipt of proposal.	*Positive for the developers and lenders*
Article 28	**Force majeure**		
	Time Extension		
	c) After COD	After COD, the Concessionaire shall be entitled to receive Annuity Payments plus interest due and payable under this Agreement. Provided any payment to be made under this clause shall be subject to deduction of outstanding dues of the Authority, if any	

Article /Clause of CA	Subject	Description in brief	*Remarks*
	Cost arising out of force majeure event		
	b) After Appointed Date	Non-Political Event: Cost to be shared by respective parties Indirect Political event: To be shared Direct Political: Cost compensated by Authority to concessionaire	*Concessionaire is protected*
Clause 17.8	Damages for breach of Maintenance Obligation	if the Concessionaire fails to repair or rectify any defect or deficiency set forth in the Maintenance Requirements within the period specified the Authority shall be entitled to recover damages, to be calculated and paid for each day of delay until the breach is cured, at the higher of (a) 2% of the Performance Security, and (b) 0.1% of the cost of such repair or rectification as estimated by the Independent Engineer	*Concessionaire is made more responsible*
Clause 17.16	Advertising on the site	The Concessionaire shall not undertake or permit any form of commercial advertising, display or hoarding at any place on the site	
Article 20	Traffic aid post, medical aid post etc.	Concessionaire shall construct a traffic aid post of 25 sqm, medical aid post and two residential quarters at its own cost and hand them over to authority.	
		The Concessionaire shall provide to the State Police Department or a substitute thereof one Jeep or similar vehicle in good working condition along with chauffeurs for round-the-clock patrolling. The operating costs of such vehicle including the salaries and allowances of the chauffeurs shall be borne by Concessionaire.	

Article /Clause of CA	Subject	Description in brief	*Remarks*
		The Concessionaire shall provide to the State Medical Department or a substitute thereof to be designated by the Authority one ambulance in good working condition along with chauffeurs for round-the-clock ambulance services. the operating costs of such ambulance including the salaries and allowances of the chauffeurs	
		The Concessionaire shall also reimburse to the State Medical Department (or a substitute thereof to be designated by the Authority) the actual expenditure incurred by it in each Accounting Year on the medical equipment, and the pay and allowances of up to 2 medical personnel deployed exclusively for the Medical Aid Posts and ambulance and shall maintain the Medical Aid Post buildings.	
Clause 21.3	Payment to independent engineer	The remuneration, cost and expenses of the Independent Engineer shall be paid by Authority and subject to the limits set Schedule-M, one-half of such remuneration, cost and expense shall be reimbursed by the Concessionaire to the Authority within 15 days of receiving a statement of expenditure from the Authority	

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Chapter 3
ASSET STATUS

CHAPTER 3. ASSET STATUS

3.1 Review of Project Stretch

As per letter ICT:859:APM:6415 the Project has achieved Completion Certificate on 5th September 2023. SPV is addressing the defects/deficiencies as and when arises and pointed out by the Independent Engineers regularly.

As per our visual inspection, the pavement is in good condition, the observations made by our team are presented below.

Figure 3-1: Project start and end location

The team had following general observations during the visit,

- Cleaning of main carriageway was noted during the site visit, ensuring proper maintenance of Pavement.
- During the site inspection, road markings and road studs were found damage at few locations.
- Kerb painting was in good condition along the Project Stretch.
- All highway assets were found in good condition at their respective chainages.

- ROW stones were found missing at few locations.

3.2 Drain

Based on the site inventory, RRM drain and RCC drain are provided along the project stretches measures 8.240 km and 12.542 km on both sides respectively, which includes lined open drain. Drain provided along the project stretch is in good condition.

Figure 3-2: Drains

3.3 Intersections/Junctions

Based on the site observation, there are 18 Major/Minor Junctions were found along the project stretch. All junctions are made of flexible pavement and are beneath MCW connecting the slip road with nearby villages.

Figure 3-3:- Junctions

3.4 Road Furniture

Following are the details of road furniture provided along the project stretch as per site.

Table 3-1: List of project furniture's

Type furniture	Unit	Quantity
Metal beam Crash barrier	km	20.270
Overhead Gantry	Nos	10
Cantilever Gantry	Nos	27
VMS	Nos	02
Streetlights		
Single arm	Nos	57
Double arm	Nos	277
High mast	Nos	5

Metal beam crash barrier

Metal beam safety barriers have been installed along the entire project stretch on median and shoulder side of the main carriageway and are being well-maintained.

Figure 3-4: Safety crash barrier (MBCB) along the project stretch

Overhead & Cantilever Gantry boards and VMS

Overhead Gantry and Cantilever Gantry boards are provided at the Project Stretch. The gantry boards were found in good condition.

Figure 3-5: Overhead & Cantilever Gantry boards and VMS

Highway Lighting

Highway lighting such as single arm, double arm, and high mast lights have been provided along the project stretch, which includes main carriageway, service roads toll plazas etc. As per site observations, streetlights provided along the project stretch are in good condition.

Figure 3-6: Highway lighting

3.5 Project facilities

Following are the details of project facilities along the project stretch,

Table 3-2: List of project facilities

Type facility	Unit	Quantity
Bus shelters	Nos.	19
Truck lay bye	Nos.	01
Emergency call box (ECB)	Nos.	42

3.6 Toll Plaza and Toll Collection Systems

One toll plaza (Baloh Toll Plaza) is present for toll collection. The Electronic Toll Collection System is installed at the toll plaza and is provided by Vaaan Infra Private Limited in the year 2023.

The toll plaza has 10 (5+5) lanes. All lanes are installed with ETC equipment. A view of the toll plaza is shown in figure below.

Figure 3-7: Toll Plaza and Toll Plaza Building.

Figure 3-8: Tunnel.

3.6.1 Lane Equipment

Lane hardware and equipment installed at each toll plaza are the following:

- RFID ETC Transceiver
- Lane Controller with Industrial PC
- AVC Sensors
- Automatic Lane Barrier (ALB)
- Incident Capture Camera

- Overhead Lane Signals
- Traffic Lights
- Toll Booth Equipment

3.6.1.1 RFID ETC Transceiver

- RFID ETC Transceiver reads tags installed on the windshield of vehicles. Handheld RFID readers are provided (1 no. in each direction) in case a tag is not detected by the fixed reader.
- ETC system lanes are present in 10 Lanes.
- RF energy Brand RFID Readers are installed in all lanes.
- ETC System is Running on ICD 2.5.

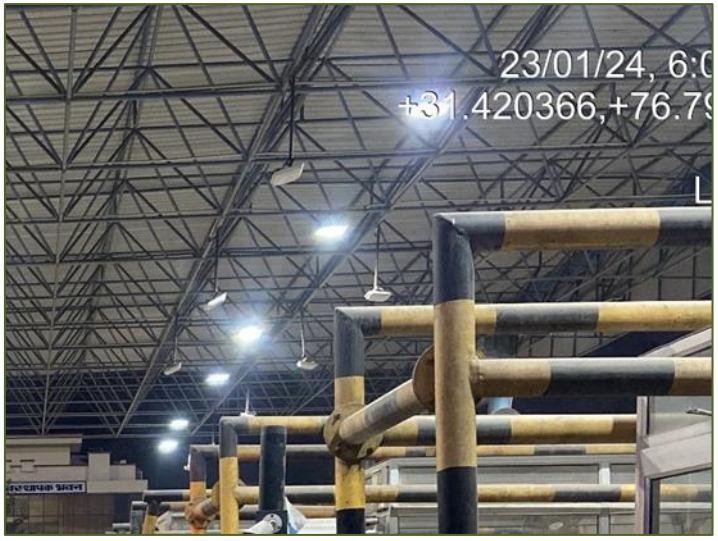


Figure 3-9: RFID Reader.

3.6.1.2 Lane Controller with Industrial PC

- Toll Lane Controller is located within the electronic enclosure placed inside tunnel which is connected to the common server and is capable of independent storage of data.
- TLCs are installed in 10 lanes. Each TLC has the specification of 4GB RAM and 1TB HDD.

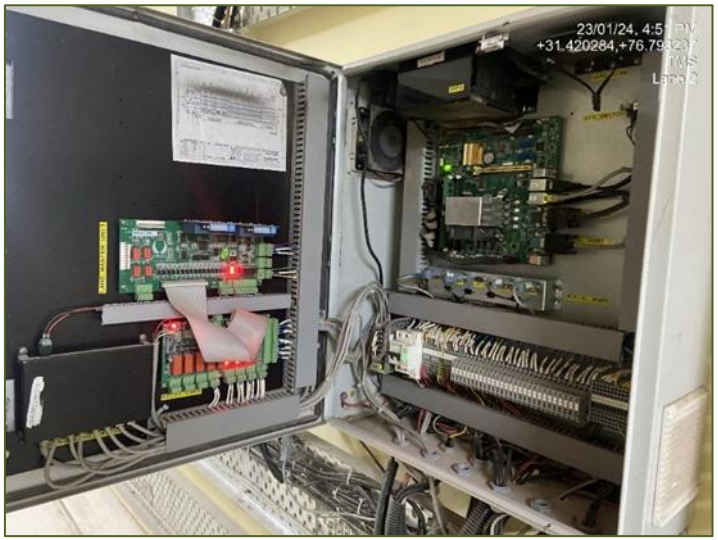


Figure 3-10: Toll Lane Controller inside Tunnel.

3.6.1.3 Automatic Vehicle Classification (AVC) Sensors

The AVC equipment is installed in 10 lanes. The AVC equipment installed is AVC profiler which has IR sensors.

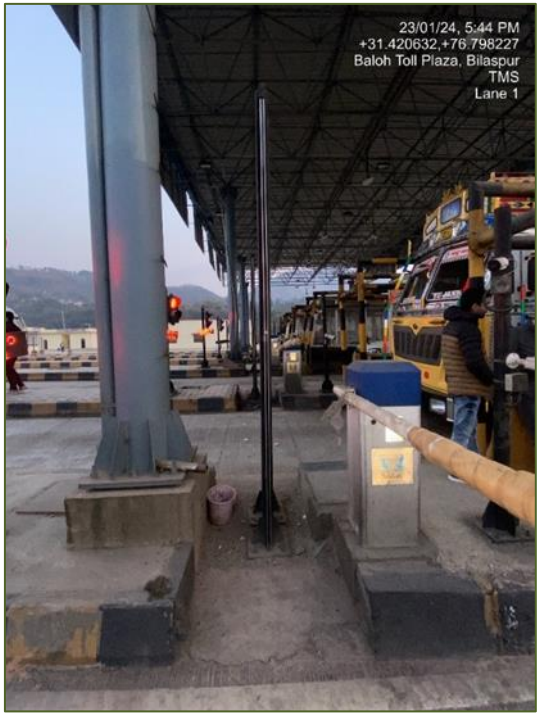


Figure 3-11: AVC Profiler.

3.6.1.4 Automatic Lane Barrier

Boom barriers are installed in 10 lanes and have a working time of 0.6 s.

Figure 3-12: Boom Barrier.

3.6.1.5 Lane Traffic Light (LTL) and User Fare Display (UFD)

Lane Traffic Light (LTL) is used to instruct vehicles to stop or pass through the lane. The LTL is RED when the toll collector is expecting the vehicle at the booth. After the transaction is done, the LTL turns Green to instruct the vehicle to pass through the lane. The User Fare Display is a part of electronic toll collection equipment located at the toll booth. It is a mini variable message sign (VMS) made of Light Emitting Diodes (LED). The user fare display is used to display the toll fare that is due and that must be paid by the motorist and the classification of vehicle selected by the collector.

LTL and UFD are installed in 10 lanes.

Figure 3-13: Traffic Light (TL) and User Fare Display (UFD).

3.6.1.6 Incident Capture Camera (ICS Camera)

The incident capture camera is installed on a pole near to the booth to capture the image of the vehicle from the back side. The AVC triggers the Image capture system.

ICS cameras are installed in 10 lanes.

3.6.1.7 License Plate Image Capture Camera (LPIC)

License Plate Image capture camera is installed on a pole facing incoming vehicle to capture the image of the vehicle number plate.

LPIC Cameras are installed in 10 lanes

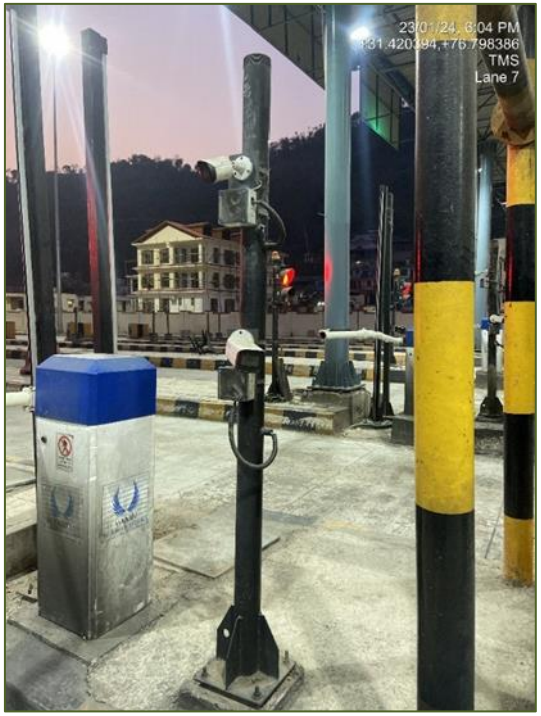


Figure 3-14: LPIC and ICS Cameras

3.6.1.8 Over Head Lane Signal (OHLS)

The Overhead Lane Signal (OHLS) for lane "Open" and "Close" sign consists of a pair of "GREEN" (arrow) and "RED" (cross) lights. The OHLS is located at the vehicle approaching side of the canopy to show the drivers whether the lane is open or closed.

OHLS is installed and operational in 10 lanes.

Figure 3-15: Over Head Lane Signal (OHLS).

3.6.1.9 Toll Booth Equipment

Toll Booth Hardware / Equipment provided are:

- Toll Collector Display (Operator Monitor)
- Customized Keyboard
- Receipt Printer
- Intercom slave unit
- Violation Light and alarm
- Manual Booth Control (MBC)
- Booth Camera

The operator monitor termed as Toll Collector Display (TCD) is located on the toll collector's desk. It is the system's interface to the toll collector, to display the status of transactions and status of the lane peripherals.

The keyboard on the toll terminal is a normal keyboard for Registration of toll operations. Thermal Printers are installed at the toll booths to print tickets. Intercom slave unit facilitates communication with the master unit located in the control room.

The violation system has an alarm switch which is triggered whenever there is a violation such as run-through happening on the lane. When there is an emergency, a foot switch pressed by the booth operator alerts the control room.

Booth cameras are provided on the inside roof corner of the booth to provide surveillance through CCTV screen located in the control room. Manual Booth Controller is used to release exempt vehicles.

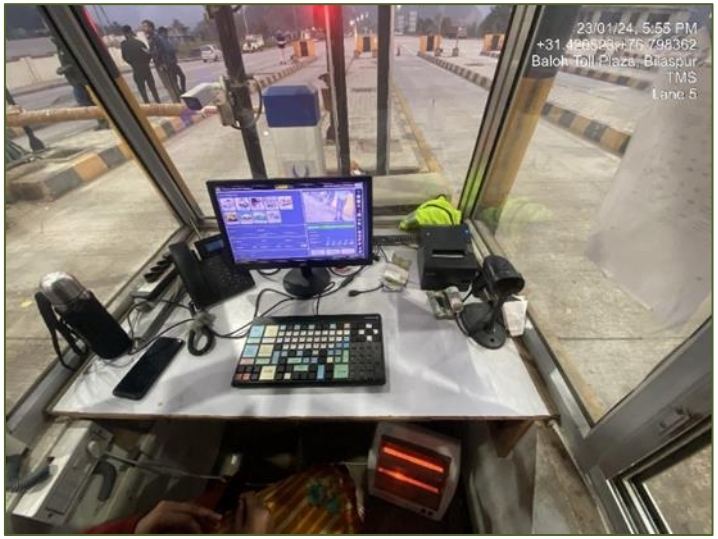


Figure 3-16: Booth Equipment's.

3.6.1.10 Medium Speed Weigh in Motion (MSWIM)

- Medium Speed Weigh in Motion (MSWIM) is installed on entry lanes. Bending plate strain gauge technology is used with hardware and software support to calculate the weight of vehicles running through it up to a speed of 50 km/hr. MSWIM is installed in 10 lanes.
- SWB is installed at both sides of the toll plaza.

Figure 3-17: MSWIM

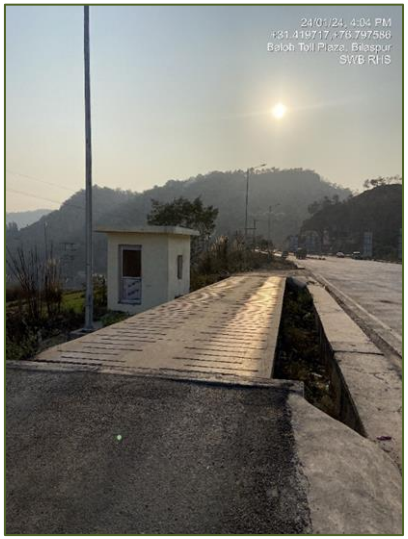


Figure 3-18: Static Weigh Bridge (SWB).

3.6.2 Plaza Equipment

3.6.2.1 TMS Server

- One Server is provided with a switch rack, and 24 channel switches. Firewall and broadband internet connectivity are available.
- The server is HP ProLiant DL380 Gen 10.

Figure 3-19: Server.

3.6.2.2 42" LED screen for CCTV monitoring

One number of 42" inch LED screen for CCTV monitoring is installed at the toll plaza admin block provides a view of all the toll booths, important zones within the plaza where cash transactions take place(server room, control room, cash up)

The toll plaza manager can observe the activities at the toll lanes and toll booth. When the toll collector calls up on the intercom, the manager can comprehend the situation at the lane by a zoomed view of the lane.

3.6.2.3 Workstations in Control Room, POS, and Cash up room

Three Workstations are available in the control room for lane monitoring, administration, and audit with 4 GB RAM and 1 TB HDD.

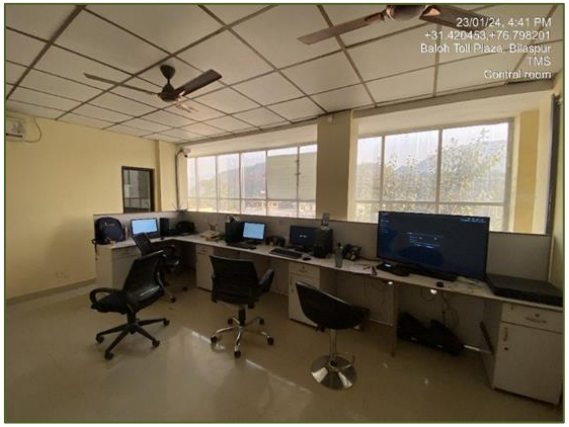


Figure 3-20: Workstations at Control room.

3.6.2.4 UPS

Following observations were made at toll plaza.

- One 6 KVA UPS is present in the Server Room.
- KVA UPS is present in each lane.

Figure 3-21: UPS at Server Room.

Figure 3-22: Lane UPS

3.7 Advanced Traffic Management System (ATMS)

The Advanced Traffic Management System (ATMS) is installed by Superwave Communication and Infrasolution Private Limited in the year 2023 for the project road which is controlled by the ATMS Centre. It comprises of the following:

- Emergency Call Back System (ECB)
- Variable Message Signboards (VMS)
- Automatic Traffic Counter cum Classifier (ATCC)
- Meteorological Data system (MDS)
- Closed Circuit Television (CCTV) system
- **V**ideo Incident Detection System (VIDS)
- Mobile Radio Communication System (MRCS)
- Vehicle Actuated Speed Display (VASD).
- Over Head Driver Feedback System (ODFS).

3.7.1 Emergency Call Back System (ECB)

42 pairs of GSM based Emergency Call Booths are installed in the entire stretch. Only 2 ECBs were integrated in ATMS application. ECB is powered by solar power.

Figure 3-23: ECB

Figure 3-24: Damaged ECB.

3.7.2 Variable Message Signboards (VMS)

Variable message sign boards (VMS) are installed in 3 locations at KM.128+300, KM.157+200 and KM.25+400.

One portable VMS is available at ATMS location.

Figure 3-25: VMS.

Figure 3-26: Portable VMS.

3.7.3 Automatic Traffic Counter cum Classifier (ATCC)

Camera based ATCC is installed in one location at KM.151+350 at center of median facing both sides. ATCC is in working condition.

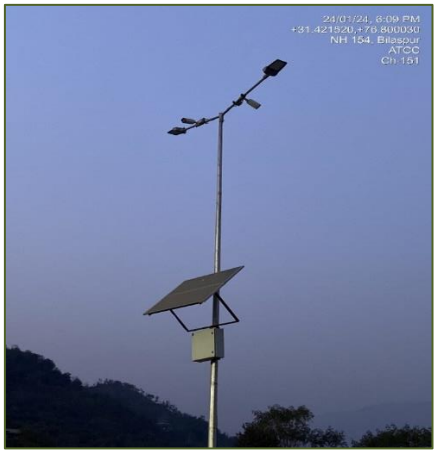


Figure 3-27: Camera Based ATCC.

3.7.4 MET

MET is installed on the top of the control room building at KM.151+735. Meteorological sensors comprise of sensors to measure the atmospheric temperature, humidity, visibility, Road temperature, rain gauge and equipment for measuring wind speed and direction.

Figure 3-28: MET.

3.7.5 CCTV and Surveillance Cameras

Surveillance cameras are installed at 7 locations km.15+300, km.21+300, km.126+600, km.129+770, km.136+400, km.148+400 and km.150+000. All CCTVs are in working condition.

Figure 3-29: CCTV.

3.7.6 Video Incident Detection System (VIDS).

Video Incident Detection System is installed at 4 locations km.129.700, km.129.800, km.154.100, km.154.160 and in working condition.

Figure 3-30: VIDS.

3.7.7 Mobile Radio Communication System (MRCS).

MRCS are installed in two locations at km.136.200 and km.151.735 and are in working condition.

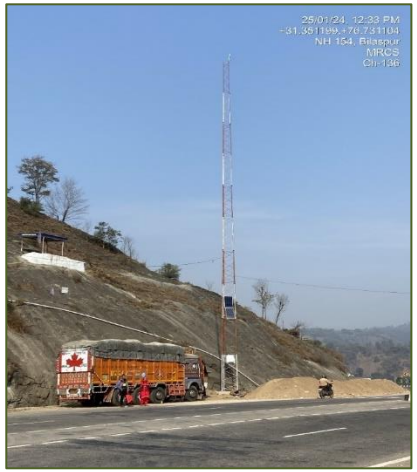


Figure 3-31: MRCS.

3.7.8 Vehicle Actuate Speed Display (VASD).

VASD with ANPR are installed at 2 locations at km.135+600 and km.153+800 and are in working condition.

Figure 3-32: VASD.

3.7.9 Overhead Driver Feedback System (ODFS).

42 pairs of ODFS are installed in the year 2023 by Envoys. Out of all 42 systems, 5 pairs of ODFS are not working. At 40 locations, ODFS equipment is mounted on T-shape gantry while in other 2 locations, L-shape gantry are used. Each ODFS equipment consists of

- Radars.
- 2 Cameras.
- 2 Solar panels.

- 1 LPU.
- One lighting arrestor.

There is a separate control room for ODFS system. It consists of

- One workstation with 16GB RAM and 500GB HDD with windows11 pro OS is installed.
- One server with a server rack is present. Server make is HP ProLiant DL380 Gen10 with 32Gb RAM and 5TB HDD.
- One number of 6KVA UPS is available for ODFS control room.

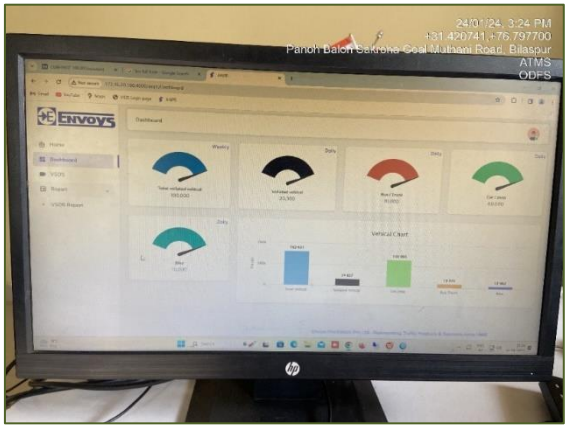


Figure 3-33: ODFS Software.

Figure 3-34: ODFS system.

3.7.10 ATMS Control Room.

3.7.10.1 Server:

- One ATMS Server is provided with a server rack, 24port switch, NVR, media converter etc.
- ATMS server is HP ProLiant DL380 Gen10 with 5TB HDD and 32GB RAM with windows server 2016 standard.

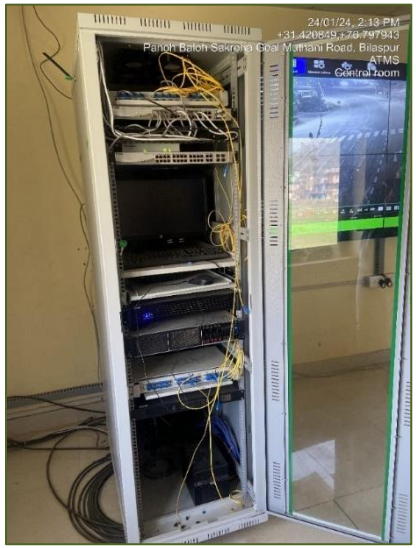


Figure 3-35: ATMS Server.

3.7.10.2 Control room equipment.

- 3X2 Video wall.
- 5 Workstations with 1TB /250GB HDD ,4GB RAM and windows 11 pro OS are installed.
- One network printer.
- 32 channel NVR with two 4TB HDD.
- Two numbers of 28 port switch.
- Two numbers of 24 port LIU.
- Media converters etc.
- ECB exchange with 3 sims.

Figure 3-36: Video Wall.

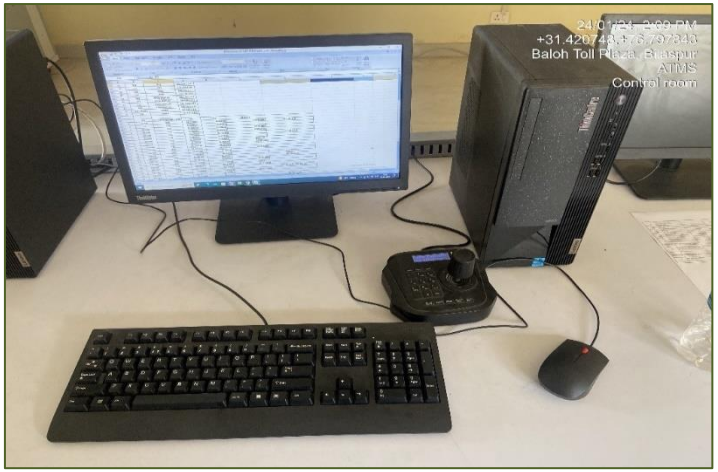


Figure 3-37: Workstations in ATMS control room.

3.7.11 UPS

Two Number of 6KVA UPS are present in the UPS Room.

Figure 3-38: UPS.

Figure 3-39: ODFS Server with Rack.

3.8 Tunnels

There are 5 tunnels available in the entire stretch with a tunnel management system with a separate control room for each tunnel.

3.8.1 Tunnel-1

Tunnel-1 consists of:

- 2 nos. of PTZ camera.
- 15 nos. of IP Bullet Camera.
- 8 nos. of ECB.
- 6 nos. of VMS.
- 6 nos. of workstations.
- 2 nos. of servers.
- One NVR and 55-inch LED screen.
- 2 nos. of Traffic Lane 2-sign Red Cross, Green Arrow.
- 30KVA UPS and 20KVA UPS are available for tunnel lighting.

Figure 3-40: Tunnel-1 Control Room.

Figure 3-41: Tunnel-1.

Figure 3-42: Tunnel-1 ECB.

Figure 3-43: Tunnel-1 camera.

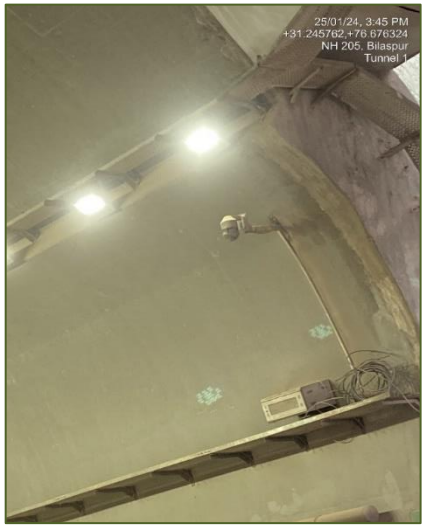


Figure 3-44: Tunnel-1 PTZ Camera.

3.8.2 Tunnel-2

Tunnel-2 consists of:

- 1 No of PTZ camera.
- 4 nos. of IP Bullet Camera.
- 2 nos. of Traffic Lane 2-sign Red Cross, Green Arrow.
- 1 No of Workstation.

Figure 3-45: Tunnel-2.

Figure 3-46: Tunnel-2 Camera.

Figure 3-47: Tunnel-2 Control Room.

3.8.3 Tunnel-3

Tunnel-3 consists of:

- 2 nos. of PTZ camera.
- 4 nos. of IP Bullet Camera.
- One No of UPS.

Figure 3-48: Tunnel-3.

Figure 3-49: Tunnel-3 Control Room.

3.8.4 Tunnel-4

Tunnel-4 consists of:

- 2 nos. of PTZ camera.
- 11 nos. of IP Bullet Camera.
- 6 nos. of ECB.
- 4 nos. of VMS.
- 3 nos. of workstations.
- 1 No of SCADA System.
- 2 nos. of Traffic Lane 2-sign Red Cross, Green Arrow.
- 30KVA UPS is available for tunnel lighting.
- One NVR and 55 inches led screen.

Figure 3-50: Tunnel-4 ECB.

Figure 3-51: Tunnel-4.

3.8.5 Tunnel-5

Tunnel-5 consists of:

- 2 nos. of PTZ camera.
- 4 nos. of IP Bullet Camera.
- 5 nos. of ECB.
- 3 nos. of VMS.
- 3 nos. of workstations.
- 1 nos. of SCADA System.

- 1 nos. of PA system.
- 2 nos. of Traffic Lane 2-sign Red Cross, Green Arrow.
- 20KVA UPS is available for tunnel lighting.
- One NVR and 55 inches led screen.

Figure 3-52: Tunnel-5 Control Room.

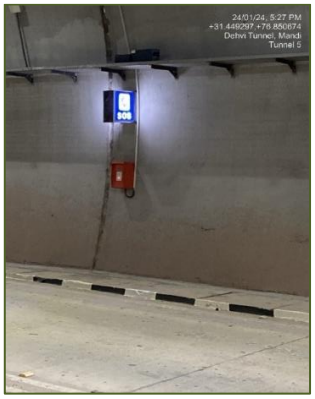


Figure 3-53: Tunnel-5 ECB.

Chapter 4
REVIEW OF STRUCTURES

CHAPTER 4. REVIEW OF STRUCTURES

4.1 Structural investigations

Review of structures inventory and detailed condition survey of structures are the essential requirements for preparation of estimates for Capex and also for O & M cost for highway structures. Keeping in view of importance of this task, review of inventory and conducting visual condition survey were carried out as per procedure and guidelines prescribed in IRC: SP:35 bridge engineers. The details of condition survey of structures were furnished below.

Visual Condition Survey

Salient features for which data is collected as part of conditional survey are in accordance with IRC: SP: 35 Proforma. Main features recorded as part of detailed condition survey are listed below.

- Strip seals of expansion joint were filled with dirt & debris, also some strip seal elastomers were damaged/punctured.
- Visible honeycombs and cracks on the concrete surfaces.
- Quadrant stone pitching was damaged at many locations.
- Drainage spouts were clogged at a few locations.
- Accumulations of dirt and debris were observed on abutment caps at a few locations.
- Overall structures are in sound and satisfactory condition. However, some treatment has been suggested based on our observations and are being done under the routine maintenance works.

4.2 General

Details of various types of structures as per CA as well as site inventory survey are furnished below,

Table 4-1: Summary of structures

S. no.	Type of Structure	As per CA (nos.)	As per Site inventory (nos.)	Remarks
1	Major Bridges	22	22	

S. no.	Type of Structure	As per CA (nos.)	As per Site inventory (nos.)	Remarks
2	Minor Bridges	15	15	
3	Road Over Bridges	00	02	02 nos. were additionally added in COS.
4	Flyover	01	01	
5	Tunnels	05	05	
6	VUP	03	03	
7	SVUP	00	01	01 nos. was additionally added in COS.
8	PUP	02	02	
9	Box/Slab Culverts	115	115	
10	Pipe Culverts	30	30	
	Total	**193**	**196**	

The next section presents the observations on Structures. The visual inspection of all the major structures was conducted by team of Bridge experts to assess the present condition of structures. The detailed condition survey is furnished in subsequent sections of this report.

4.2.1 Major Bridges

There are 22 nos. of Major Bridges on the Project Stretch. **The cost for repair and rectification has been factored in the O&M estimation and the Concessionaire has taken up the rectification works. The Structures are found in sound and satisfactory condition.**

Detailed condition survey, necessary repair and pending maintenance works for all the Major Bridges along the Project Stretch were given below,

Table 4-2: Existing condition and required repairs /maintenance works for Major Bridges

S. no.	Chainage, km	Span Arrangement, m	Total Length, m	Side	Condition of Structure	Proposed repair and pending maintenance works
1	1.085	1 x 45.00 + 1 x 72.00 +1 x 28.53 + 3 x 38.18	260.30		Quadrant stone pitching was damaged.	Damaged quadrant stone pitching shall need to be restored.

S. no.	Chainage, km	Span Arrangement, m	Total Length, m	Side	Condition of Structure	Proposed repair and pending maintenance works
2	15.100	3 x 30.00+ 1 x 22.00 + 1 x 38.00 + 7 x 30.00	360.00	LHS	Cracks were observed on the pier shaft.	Cracks shall need to be sealed with epoxy grouting.
		3 x 30.00 + 1 x 22.00 + 1 x 38.00 + 6 x 30.00	330.00	RHS	1. Cracks were observed on the pier shaft. 2. Honeycombing was observed on the soffit of girders in some locations. 3. Leaching cracks were observed on the soffit of deck slab in the cantilever portion on S1.	1. Cracks shall need to be sealed with epoxy grouting. 2. Remove the loose material around the affected area and honeycombing, voids shall need to be sealed with epoxy mortar. 3. Leaching shall need to be clean and apply sealing agent on that location.
3	15.700	2 x 45.00	90.00	LHS	Strip seals of expansion joint were filled with dirt & debris, also strip seal elastomer were damaged/punctured.	New strip seal elastomer shall need to be fixed for all expansion joints as the existing strip seal is either missing or completely damaged.
		2 x 45.00	90.00	RHS	Strip seals of expansion joints were filled with dirt & debris, also strip seal elastomer were damaged/punctured.	New strip seal elastomer shall need to be fixed for all expansion joints as the existing strip seal is either missing or completely damaged.
4	16.475	3 x 30.00	90.00	LHS	1. Cracks were observed on the pier shaft. 2. Honeycombing was observed on the pier cap in P1. 3. Quadrant stone pitching was damaged.	1. Cracks shall need to be sealed with epoxy grouting. 2. Remove the loose material around the affected area and honeycombing, voids shall need to be sealed with epoxy mortar. 3. Damaged quadrant stone pitching shall need to be restored.

S. no.	Chainage, km	Span Arrangement, m	Total Length, m	Side	Condition of Structure	Proposed repair and pending maintenance works
		3 x 30.00	90.00	RHS	1. Cracks were observed on the pier shaft. 2. Leaching cracks were observed on the soffit of deck slab in the cantilever portion on S1. 3. Quadrant stone pitching was damaged.	1. Cracks shall need to be sealed with epoxy grouting. 2. Leaching shall need to be clean and apply sealing agent on that location. 3. Damaged quadrant stone pitching shall need to be restored.
5	17.476	13 x 30.00	390.00	LHS	Quadrant stone pitching was damaged.	Damaged quadrant stone pitching shall need to be restored.
		13 x 30.00	390.00	RHS	Quadrant stone pitching was damaged.	Damaged quadrant stone pitching shall need to be restored.
6	17.853	2 x 25.00 +2 x 35.00	120.00	LHS	Quadrant stone pitching was damaged.	Damaged quadrant stone pitching shall need to be restored.
		2 x 25.00 +2 x 35.00	120.00	RHS	1. Quadrant stone pitching was damaged. 2. Approach slab settlement was observed on A2 side.	1. Damaged quadrant stone pitching shall need to be restored. 2. Approach slab settlement near the structure shall be rectified with bituminous layer.
7	19.336	2 x 35.00	70.00	LHS	Strip seal expansion joints was filled with dirt & debris, also strip seal elastomer was damaged/punctured.	New strip seal elastomer shall need to be fixed for all expansion joints as the existing strip seal is either missing or completely damaged.
		2 x 35.00	70.00	RHS	Strip seal expansion joints was filled with dirt & debris, also strip seal elastomer were damaged/punctured.	New strip seal elastomer shall need to be fixed for all expansion joints as the existing strip seal is either missing or completely damaged.
8	20.800	5 x 34.00	170.00	LHS	Quadrant stone pitching was damaged.	Damaged quadrant stone pitching shall need to be restored.
		5 x 34.00	170.00	RHS	Quadrant stone pitching was damaged.	Damaged quadrant stone pitching shall need to be restored.

S. no.	Chainage, km	Span Arrangement, m	Total Length, m	Side	Condition of Structure	Proposed repair and pending maintenance works
9	21.485	1 x 21.05 + 2 x 30.00	81.05	LHS	Quadrant stone pitching was damaged.	Damaged quadrant stone pitching shall need to be restored.
		1 x 21.05 + 2 x 30.00	81.05	RHS	1. Quadrant stone pitching was damaged. 2.Deck concrete along the expansion joints was damaged on P1.	1. Damaged quadrant stone pitching shall need to be restored. 2.Damaged concrete shall need to be rectified.
10	23.100	6 x 64.00 + 2x 40.00	464.00	LHS	Strip seal expansion joints were filled with dirt & debris, also some strip seal elastomers were damaged/punctured.	New strip seal elastomer shall need to be fixed for all expansion joints as the existing strip seal is either missing or completely damaged.
		6 x 64.00 + 2x 40.00	464.00	RHS	Strip seal expansion joints were filled with dirt & debris, also some strip seal elastomers were damaged/punctured.	New strip seal elastomer shall need to be fixed for all expansion joints as the existing strip seal is either missing or completely damaged.
11	24.635	4 x 28.50	120.00	LHS	Quadrant stone pitching was damaged.	Damaged quadrant stone pitching shall need to be restored.
		4 x 28.50	120.00	RHS	Quadrant stone pitching was damaged.	Damaged quadrant stone pitching shall need to be restored.
12	26.100	10 x 37.50 + 1 x 14.00	389.25	LHS	Strip seal expansion joints was filled with dirt & debris, also some strip seal elastomers were damaged/punctured.	New strip seal elastomer shall need to be fixed for all expansion joints as the existing strip seal is either missing or completely damaged.
		10 x 37.50 + 1 x 14.00	389.25	RHS	Strip seal expansion joints was filled with dirt & debris, also some strip seal elastomers were damaged/punctured.	New strip seal elastomer shall need to be fixed for all expansion joints as the existing strip seal is either missing or completely damaged.
13	130.165	3 x 40.00 + 6 x 64.00 +1 x 60.83+1 x 67.17	632.00	LHS	Quadrant stone pitching was damaged.	Damaged quadrant stone pitching shall need to be restored.
		3 x 40.00 + 6 x 64.00 +1 x 60.83+1 x 67.17	632.00	RHS	Quadrant stone pitching was damaged.	Damaged quadrant stone pitching shall need to be restored.

S. no.	Chainage, km	Span Arrangement, m	Total Length, m	Side	Condition of Structure	Proposed repair and pending maintenance works
14	131.180	3 x 21.05	63.50	LHS	Quadrant stone pitching was damaged.	Damaged quadrant stone pitching shall need to be restored.
		3 x 21.05	63.50	RHS	Quadrant stone pitching was damaged.	Damaged quadrant stone pitching shall need to be restored.
15	133.160	2 x 20.315 +1 x 21.07	63.20	LHS	Quadrant stone pitching was damaged.	Damaged quadrant stone pitching shall need to be restored.
		2 x 20.315 +1 x 21.07	63.20	RHS	Quadrant stone pitching was damaged.	Damaged quadrant stone pitching shall need to be restored.
16	135.125	6 x 25.633	153.80	LHS	Quadrant stone pitching was damaged.	Damaged quadrant stone pitching shall need to be restored.
		6 x 25.633	153.80	RHS	Quadrant stone pitching was damaged.	Damaged quadrant stone pitching shall need to be restored.
17	141.100	4 x 30.00	120.00	LHS	Very severe cracks were observed on the pier shaft.	Cracks shall need to be sealed with epoxy grouting.
		4 x 30.00	120.00	RHS	Very severe cracks were observed on the pier shaft.	Cracks shall need to be sealed with epoxy grouting.
18	143.779	3 x 34.183	102.55	LHS	Quadrant stone pitching was damaged.	Damaged quadrant stone pitching shall need to be restored.
		3 x 34.183	102.55	RHS	Quadrant stone pitching was damaged.	Damaged quadrant stone pitching shall need to be restored.
19	152.100	4 x 41.25	165.00	LHS	Quadrant stone pitching was damaged	Damaged quadrant stone pitching shall need to be restored.
		1 x 16.25 +3 x 41.25	140.00	RHS	Quadrant stone pitching was damaged.	Damaged quadrant stone pitching shall need to be restored.

S. no.	Chainage, km	Span Arrangement, m	Total Length, m	Side	Condition of Structure	Proposed repair and pending maintenance works
20	152.835	1 x 31.25+2 x 21.05	73.35	LHS	Strip seals of expansion joint were filled with dirt & debris, also some strip seal elastomers were damaged/punctured.	New strip seal elastomer shall need to be fixed for all expansion joints as the existing strip seal is either missing or completely damaged.
		1 x 31.25+2 x 21.05	73.35	RHS	Strip seal expansion joints were filled with dirt & debris, also some strip seal elastomers were damaged/punctured.	New strip seal elastomer shall need to be fixed for all expansion joints as the existing strip seal is either missing or completely damaged.
21	155.670	1 x 17 .00 + 2 x 45.75 + 1 x 23.50	132.75	LHS	Strip seal expansion joint was filled with dirt & debris, also some strip seal elastomers were damaged/punctured.	New strip seal elastomer shall need to be fixed for all expansion joints as the existing strip seal is either missing or completely damaged.
		1 x 17.00 + 2 x 45.75 + 1 x 23.50	132.75	RHS	Strip seal expansion joint was filled with dirt & debris, also some strip seal elastomers were damaged/punctured.	New strip seal elastomer shall need to be fixed for all expansion joints as the existing strip seal is either missing or completely damaged.
22	157.750	1 x 30.00 + 1 x 51.25	81.25	LHS	Quadrant stone pitching was damaged.	Damaged quadrant stone pitching shall need to be restored.
		1 x 30.00 + 1 x 51.25	81.25	RHS	Quadrant stone pitching was damaged.	Damaged quadrant stone pitching shall need to be restored.

Figure 4-1: Condition of Major Bridge

4.2.2 Minor Bridge

There are 15 nos. of Minor Bridges on the Project Stretch. **The cost for repair and rectification has been factored in the O&M estimation and the Concessionaire has taken up the rectification works. The Structures are found in sound and satisfactory condition.**

Detailed condition survey, necessary repair and pending maintenance works for all the Minor Bridges along the Project Stretch were given below,

Table 4-3: Existing condition and required repairs /maintenance works for Minor Bridges

S. no.	Chainage, km	Span Arrangement, m	Total Length, m	Side	Condition of Structure	Proposed repair and pending maintenance works
1	14.712	1 x 13.00	13.00	LHS	Strip seal expansion joints were filled with dirt & debris, also some strip seal elastomers were damaged/punctured.	New strip seal elastomer shall need to be fixed for all expansion joints as the existing strip seal is either missing or completely damaged.
		1 x 13.00	13.00	RHS	Strip seal expansion joints were filled with dirt & debris, also some strip seal elastomers were damaged/punctured.	New strip seal elastomer shall need to be fixed for all expansion joints as the existing strip seal is either missing or completely damaged.
2	18.330	4 x 3.00	12.00	LHS	Structure was in good condition.	
		4 x 3.00	12.00	RHS	Structure was in good condition.	
3	18.972	1 x 15.00	15.00	LHS	Strip seal expansion joints were filled with dirt & debris, also some strip seal elastomers were damaged/punctured.	New strip seal elastomer shall need to be fixed for all expansion joints as the existing strip seal is either missing or completely damaged.
		1 x 15.00	15.00	RHS	Strip seal expansion joints were filled with dirt & debris, also some strip seal elastomers were damaged/punctured.	New strip seal elastomer shall need to be fixed for all expansion joints as the existing strip seal is either missing or completely damaged.
4	20.330	1 x 10.00	10.00	LHS	Stone pitching was disturbed on BHS.	Stone pitching shall need to be rectified.
		1 x 10.00	10.00	RHS	Stone pitching was disturbed on BHS.	Stone pitching shall need to be rectified.
5	24.205	2 x 30.00	60.00	LHS	Quadrant stone pitching was damaged at A2.	Damaged quadrant stone pitching shall need to be restored.

S. no.	Chainage, km	Span Arrangement, m	Total Length, m	Side	Condition of Structure	Proposed repair and pending maintenance works
		2 x 30.00	60.00	RHS	Strip seal expansion joints were filled with dirt & debris, also some strip seal elastomers were damaged/punctured.	New strip seal elastomer shall need to be fixed for all expansion joints as the existing strip seal is either missing or completely damaged.
6.	24.895	1 x 25.00	25.00	LHS	Strip seal expansion joints were filled with dirt & debris, also some strip seal elastomers were damaged/punctured.	New strip seal elastomer shall need to be fixed for all expansion joints as the existing strip seal is either missing or completely damaged.
		1 x 25.00	25.00	RHS	Strip seal expansion joints were filled with dirt & debris, also some strip seal elastomers were damaged/punctured.	New strip seal elastomer shall need to be fixed for all expansion joints as the existing strip seal is either missing or completely damaged.
7	25.053	1 x 13.00	13.00	LHS	Spalling of concrete and reinforcement exposure is present in the soffit of deck slab.	Loose material shall need to be removed and the surface shall be treated with epoxy.
		1 x 13.00	13.00	RHS	1.palling of concrete and reinforcement exposure is present in the soffit of deck slab. 2.Leaching cracks were observed on the soffit of deck slab.	1. Loose material shall need to be removed and the surface shall be treated with epoxy. 2. Leaching shall need to be clean and apply sealing agent on that location.
8	133.790	1 x 21.05	21.05	LHS	1. Strip seal expansion joints were filled with dirt & debris, also some strip seal elastomers were damaged/punctured. 2.Vegetation was observed in vent area.	1. New strip seal elastomer shall need to be fixed for all expansion joints as the existing strip seal is either missing or completely damaged. 2. Vegetation shall need to be removed.
		1 x 21.05	21.05	RHS	Strip seal expansion joints were filled with dirt & debris, also some strip seal elastomers were damaged/punctured.	New strip seal elastomer shall need to be fixed for all expansion joints as the existing strip seal is either missing or completely damaged.
9	135.950	1 x 31.25	31.25	LHS	Strip seal expansion joints were filled with dirt & debris, also some strip seal elastomers were damaged/punctured.	New strip seal elastomer shall need to be fixed for all expansion joints as the existing strip seal is either missing or completely damaged.

S. no.	Chainage, km	Span Arrangement, m	Total Length, m	Side	Condition of Structure	Proposed repair and pending maintenance works
		1 x 31.25	31.25	RHS	Strip seal expansion joints were filled with dirt & debris, also some strip seal elastomers were damaged/punctured.	New strip seal elastomer shall need to be fixed for all expansion joints as the existing strip seal is either missing or completely damaged.
10	138.252	1 x 21.06	21.06	LHS	Strip seal expansion joints were filled with dirt & debris, also some strip seal elastomers were damaged/punctured.	New strip seal elastomer shall need to be fixed for all expansion joints as the existing strip seal is either missing or completely damaged.
		1 x 21.06	21.06	RHS	Strip seal expansion joints were filled with dirt & debris, also some strip seal elastomers were damaged/punctured.	New strip seal elastomer shall need to be fixed for all expansion joints as the existing strip seal is either missing or completely damaged.
11	138.828	3 x 10.42	31.26	LHS	Drainage assemblies were missing at some locations.	Drainage assembly shall need to be provided.
		3 x 10.42	31.26	RHS	Drainage assemblies were missing at some locations.	Drainage assembly shall need to be provided.
12	144.090	1 x 21.67	21.67	LHS	Few drainage spouts were clogged.	Drainage spouts shall be cleaned and make it functional.
		1 x 21.67	21.67	RHS	Few drainage spouts were clogged.	Drainage spouts shall be cleaned and make it functional.
13	146.702	2 x 25.625	51.25	LHS	Few drainage spouts were clogged.	Drainage spouts shall be cleaned and make it functional.
		2 x 25.625	51.25	RHS	Few drainage spouts were clogged.	Drainage spouts shall be cleaned and make it functional.
14	150.050	1 x 31.25	31.25	LHS	Strip seals of expansion joints were filled with dirt & debris, also strip seal elastomer were damaged/punctured.	New strip seal elastomer shall need to be fixed for all expansion joints as the existing strip seal is either missing or completely damaged.
		1 x 31.25	31.25	RHS	Strip seals of expansion joints were filled with dirt & debris, also strip seal elastomer were damaged/punctured.	New strip seal elastomer shall need to be fixed for all expansion joints as the existing strip seal is either missing or completely damaged.

S. no.	Chainage, km	Span Arrangement, m	Total Length, m	Side	Condition of Structure	Proposed repair and pending maintenance works
15	153.635	1 x 16.05	16.05	LHS	Strip seals of expansion joints were filled with dirt & debris, also strip seal elastomer were damaged/punctured.	New strip seal elastomer shall need to be fixed for all expansion joints as the existing strip seal is either missing or completely damaged.
		1 x 16.05	16.05	RHS	Strip seals of expansion joints were filled with dirt & debris, also strip seal elastomer were damaged/punctured.	New strip seal elastomer shall need to be fixed for all expansion joints as the existing strip seal is either missing or completely damaged.

Figure 4-2: Condition of Minor Bridge

4.2.3 Road Over Bridges

There are 02 nos. of Road Over Bridges on the Project Stretch. **The cost for repair and rectification has been factored in the O&M estimation and the Concessionaire has taken up the rectification works. The Structures are found in sound and satisfactory condition.**

Present condition and required repair/ maintenance works for the Road Over Bridges were given below,

Table 4-4: Existing condition and required repairs /maintenance works for Road Over Bridges

S. no.	Chainage, km	Span Arrangement, m	Total Length, m	Side	Condition of Structure	Proposed repair and pending maintenance works
1	22.045	2 x 31.28 + 1 x 52.08	114.64	LHS	1.Misalignment of panels was observed on RE wall and needs to be ascertained whether it is a bulging or initial construction error by periodic observation. 2. Work in progress.	1. Periodic observation is required on RE wall using tell-tale glass, if found any further outward moment in the observations soil nailing may be required for the bulged panels.
		2 x 31.28 + 1 x 52.08	114.64	RHS	1.Misalignment of panels was observed on RE wall and needs to be ascertained whether it is a bulging or initial construction error by periodic observation. 2. Work in progress.	1. Periodic observation is required on RE wall using tell-tale glass, if found any further outward moment in the observations soil nailing may be required for the bulged panels.
2	128.860	2 x 19.08 + 1 x 64.09	102.25	LHS	Strip seals of expansion joint were filled with dirt & debris, also some strip seal elastomers were damaged/punctured.	New strip seal elastomer shall need to be fixed for all expansion joints as the existing strip seal is either missing or completely damaged.
		2 x 19.08 + 1 x 64.09	102.25	RHS	Strip seals of expansion joint were filled with dirt & debris, also some strip seal elastomers were damaged/punctured.	New strip seal elastomer shall need to be fixed for all expansion joints as the existing strip seal is either missing or completely damaged.

Figure 4-3: Condition of Road Over Bridges

4.2.4 Flyover

There are 01 no. of Flyover on the Project stretch. **The cost for repair and rectification has been factored in the O&M estimation and the Concessionaire has taken up the rectification works. The Structures are found in sound and satisfactory condition.**

Present condition and required repair/ maintenance works for the Flyover are given below.

Table 4-5: Existing condition and required repairs /maintenance works for Flyover

S. no.	Chainage, km	Span Arrangement, m	Total Length, m	Side	Condition of Structure	Proposed repair and pending maintenance works
1	142.568	2 x 22.5	45.00	LHS	Drainage spouts are clogged with dirt, debris and horizontal/vertical down take pipes were missing, which resulted rainwater falling on road users.	Drainage spouts shall need to be cleaned, make it functional and horizontal drainage pipe shall need to provide connecting all drainage spouts in each span and further run along the external wall down to ground level drains.

S. no.	Chainage, km	Span Arrangement, m	Total Length, m	Side	Condition of Structure	Proposed repair and pending maintenance works
				RHS	Drainage spouts are clogged with dirt, debris and horizontal/vertical down take pipes were missing, which resulted rainwater falling on road users.	Drainage spouts shall need to be cleaned, make it functional and horizontal drainage pipe shall need to provide connecting all drainage spouts in each span and further run along the external wall down to ground level drains.

Figure 4-4: Condition of Flyover

4.2.5 Tunnels

There are 05 no. of Tunnels on the Project stretch. Present condition and required repair/ maintenance works for the Tunnels are given below.

Table 4-6: Existing condition and required repairs /maintenance works for Tunnels

S. no.	Chainage, km	Total Length, m	Condition of Structure	Proposed repair and pending maintenance works	Remarks
1	12.750 to 14.550	1800.00			Work is under progress
2	15.810 to 16.275	465.00	Structure was in good condition.		
3	23.550 to 24.100	550.00	Structure was in good condition.		
4	148.500 to 149.765	1265.00	Structure was in good condition.		
5	157.660 to 158.400	740.00	Structure was in good condition.		

Figure 4-5: Condition of Tunnels

4.2.6 Underpasses

There are 06 nos. of Underpasses on the Project Stretch. **The cost for repair and rectification has been factored in the O&M estimation and the Concessionaire has taken up the rectification works. The Structures are found in sound and satisfactory condition.**

Present condition and required repair/ maintenance works for the Underpasses are given below.

Table 4-7: Existing condition and required repairs /maintenance works for Underpasses

S. no.	Chainage, km	Span Arrangement, m	Total Length, m	Side	Condition of Structure	Proposed repair and pending maintenance works
1	21.786 (VUP)	1 x 10.50	10.50	LHS	Drainage spouts assembly was missing.	New drainage spout assembly shall need to be provided and necessary horizontal/vertical down take pipe shall need to provide connecting all drainage spouts in each span and further run along the external wall down to ground level drains.
				RHS	Drainage spouts assembly was missing.	New drainage spout assembly shall need to be provided and necessary horizontal/vertical down take pipe shall need to provide connecting all drainage spouts in each span and further run along the external wall down to ground level drains.
2	22.230 (VUP)	1 x 5.50	5.50	LHS	Drainage spouts assembly was missing.	New drainage spout assembly shall need to be provided and necessary horizontal/vertical down take pipe shall need to provide connecting all drainage spouts in each span and further run along the external wall down to ground level drains.
				RHS	Drainage spouts assembly was missing.	New drainage spout assembly shall need to be provided and necessary horizontal/vertical down take pipe shall need to provide connecting all drainage spouts in each span and further run along the external wall down to ground level drains.
3	25.280 (PUP)	1 x 5.50	5.50	LHS	Drainage spouts assembly was missing only 100mm dia hole was made in crash barrier side face.	New drainage spout assembly shall need to be provided and necessary horizontal/vertical down take pipe shall need to provide connecting all drainage spouts in each span and further run along the external wall down to ground level drains.

S. no.	Chainage, km	Span Arrangement, m	Total Length, m	Side	Condition of Structure	Proposed repair and pending maintenance works
				RHS	Drainage spouts assembly was missing only 100mm dia hole was made in crash barrier side face.	New drainage spout assembly shall need to be provided and necessary horizontal/vertical down take pipe shall need to provide connecting all drainage spouts in each span and further run along the external wall down to ground level drains.
4	133.687 (PUP)	1 x 6.00	6.00	LHS	Drainage spouts assembly was missing only 100mm dia hole was made in crash barrier side face.	New drainage spout assembly shall need to be provided and necessary horizontal/vertical down take pipe shall need to provide connecting all drainage spouts in each span and further run along the external wall down to ground level drains.
				RHS	Drainage spouts assembly was missing only 100mm dia hole was made in crash barrier side face.	New drainage spout assembly shall need to be provided and necessary horizontal/vertical down take pipe shall need to provide connecting all drainage spouts in each span and further run along the external wall down to ground level drains.
5	140.000 (VUP)	1 x 5.50	5.50	LHS	Drainage spouts assembly was missing.	New drainage spout assembly shall need to be provided and necessary horizontal/vertical down take pipe shall need to provide connecting all drainage spouts in each span and further run along the external wall down to ground level drains.
				RHS	Drainage spouts assembly was missing.	New drainage spout assembly shall need to be provided and necessary horizontal/vertical down take pipe shall need to provide connecting all drainage spouts in each span and further run along the external wall down to ground level drains.

S. no.	Chainage, km	Span Arrangement, m	Total Length, m	Side	Condition of Structure	Proposed repair and pending maintenance works
6	154.055 (SVUP)	1 x 7.00	7.00	LHS	Honeycombing was observed on the soffit of top slab and haunches.	Remove the loose material around the affected area and honeycombing, voids shall need to be sealed with epoxy mortar.
				RHS	Honeycombing was observed on the soffit of top slab and haunches.	Remove the loose material around the affected area and honeycombing, voids shall need to be sealed with epoxy mortar.

Figure 4-6: Condition of Underpasses

4.2.7 Culverts

There are 145 nos. of Culverts on the Project Stretch out of which 115 nos. were Box Culverts and 30 nos. were Pipe Culverts. **The cost for repair and rectification has been factored in the O&M estimation and the Concessionaire has taken up the rectification works. The Structures are found in sound and satisfactory condition.**

Common defects and / or pending maintenance works observed in condition survey, necessary repair and pending maintenance works for all the Box Culverts and Pipe Culverts along the Project Stretch are given below,

Table 4-8: Existing condition and required repairs /maintenance works for Culverts

S. no.	Type of Culverts	No. of Culverts	Condition of Structure	Proposed repair and pending maintenance works
1	Box/Slab Culverts	115	1. Honeycombing was observed on the parapet walls and soffit of top slab for some of the culverts. 2.Leaching cracks observed on the soffit of top slab at km 150.885. 3.The Parapet wall damaged on RHS at km 157.189. 4. For some of the culverts the hazardous board was missing. 5. Silt and debris accumulation was observed in the vent area and a few culverts were partially buried. 6.Vegetation growth was observed near the vent area.	1. Remove the loose material around the affected area and honeycombing, voids shall need to be sealed with epoxy mortar. 2. Leaching shall need to be clean and apply sealing agent on that location. 3.Parapet wall shall need to be rectified. 4. Hazardous sign board shall need to be installed. 5. Silt and debris accumulation shall be removed from the vent area. 6.Vegetation shall need to be removed.
2	Pipe Culverts	30	1.Dense Vegetation was observed near the vent area for culverts. 2. For most of the culverts pipe vent area was clogged with debris.	1.Vegetation shall be removed. 2. Debris shall be removed from the pipe vents.

Figure 4-7: Condition of Culverts

Chapter 5
CONDITION ASSESSMENT OF EXISTING PAVEMENT

CHAPTER 5. CONDITION ASSESSMENT OF EXISTING PAVEMENT

To evaluate the existing pavement condition of a Project Stretch, investigations are to be carried out on the field to collect data from the field. The collected data is processed and analysed to obtain complete information on the pavement condition.

5.1 Pavement Condition Assessment for Technical Due Diligence

As a part of technical due diligence, the different investigations performed on the Project site are listed below.

- Assessment of Pavement Condition based on Visual Condition Survey

Based on the visual condition survey, the type of distress, its quantity, and severity for each Stretch are obtained. The same is used to evaluate the present condition of pavement, which classifies pavement conditions ranging from 'Distress' to 'Good'. Most of the stretch is falling in the 'Good' condition.

The pavement investigation studies carried out on the Project Stretch from 22nd January to 25th January 2024 as a part of technical due diligence and their outcomes are detailed in the sections below

5.2 Review of Concession Agreement

As per Schedule K of the Concession Agreement, the Concessionaire shall repair and rectify the defects and deficiencies as specified below

Table 5-1: Major maintenance criteria as per CA

S .No	Nature of Defect or Deficiency	Time limit for Repair/Rectification
1	Roughness value exceeding 2750 mm in a stretch of 1km (as measured by a standardized rough meter/bump integrator)	180 Days
2	Cracking in more than 5% of road surface in a stretch of 1 km	30 days
3	Rutting exceeding 10mm in more than 2% of road surface in a stretch of 1km (measured with 3m straight edge)	30days

5.3 Review of Pavement Design Report

- The design of flexible pavement has been carried out in accordance with guidelines of IRC-37-2018.
- The thickness of bituminous-layers is designed for a period of 15 years and rigid pavement is designed for a period of 30 years. Design traffic is 100 MSA and Subgrade

CBR is taken as 15%.

- The pavement for the service road has been designed as per IRC: 37-2018; Design traffic is 10 MSA and Subgrade CBR is taken as 15%.

Table 5-2: Pavement Design Thicknesses of flexible pavement for main carriageway as per Pavement Design Report

Layer	Thickness(mm)
Bituminous Concrete (BC)	40
Dense Bituminous Macadam	85
Wet Mix Macadam	150
Cement Treated Sub-base (CTSB)	200

Table 5-3: Pavement Design Thicknesses of rigid Pavement for main carriageway as per Pavement Design Report

Layer	Thickness(mm)
Pavement Quality Concrete (PQC)	300
Dry Lean Concrete	150
Granular Sub-base (GSB)	150

Table 5-4: Pavement Design Thicknesses for service roads as per Pavement Design Report

Layer	Thickness(mm)
Bituminous Concrete (BC)	30
Wet Mix Macadam	160
Granular Sub-base (GSB)	150

5.4 Key Site Visit Observations

Few observations made during the site visit by the pavement investigation team are as follows,

- Majority of the Pavement condition was observed to be good on RHS of the project stretch.
- Majority of the Pavement condition was observed to be good on LHS of the project stretch.
- Longitudinal and alligator cracks were observed as the predominant distresses in the project stretch.
- Patch work was observed at a few locations along the project stretch.

- Slope protection was observed damaged at few locations.
- Traffic diversion was provided at two locations due to construction of Tunnel 1 and Minor bridge.
- The Concessionaire has taken up the rectification work and cost has been factored in routine O&M Cost

Based on the observations made during the visual condition survey, the pavement condition is categorized into three categories 'Good', 'Fair', and 'Distress'. The visual survey data and summary of the pavement condition of Project Stretch is given below.

Table 5-5: Main Carriageway Pavement Visual Condition Survey Results

Condition	LHS		RHS	
	Length(Km)	Length(%)	Length(Km)	Length(%)
Good	41753	87%	41753	87%
Fair	5000	10%	6000	13%
Distress	1000	2%	0	0%

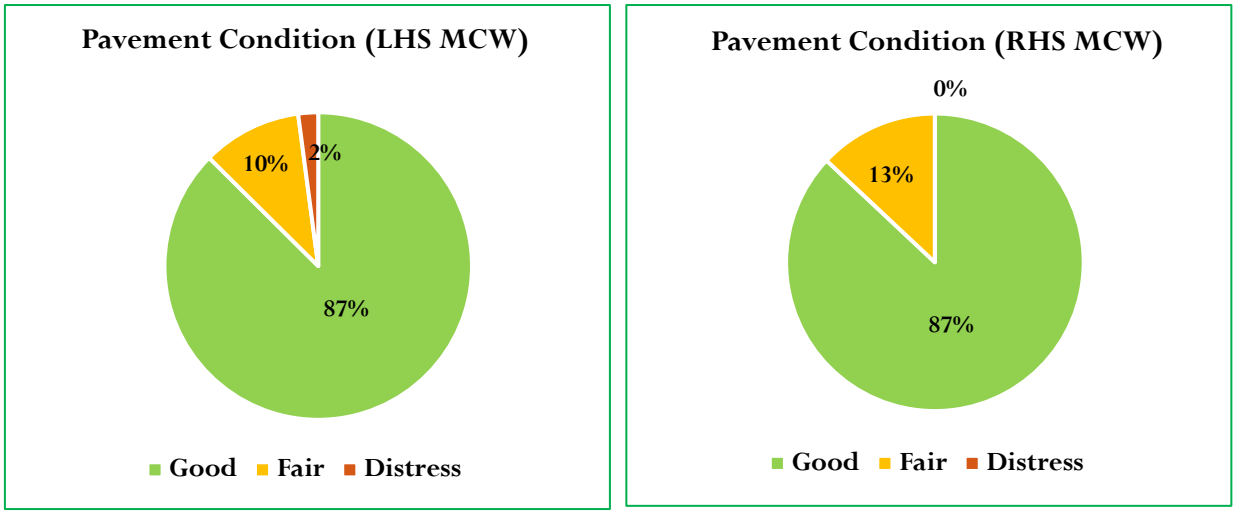


Figure 5-1: Pavement condition based on Visual condition survey Main Carriageway

Table 5-6: Service Road Pavement Visual Condition Survey Results

Condition	LHS		RHS	
	Length (Km)	Length (%)	Length (Km)	Length (%)
Good	3000	100%	3000	100%
Fair	0	0%	0	0%
Distress	0	0%	0	0%

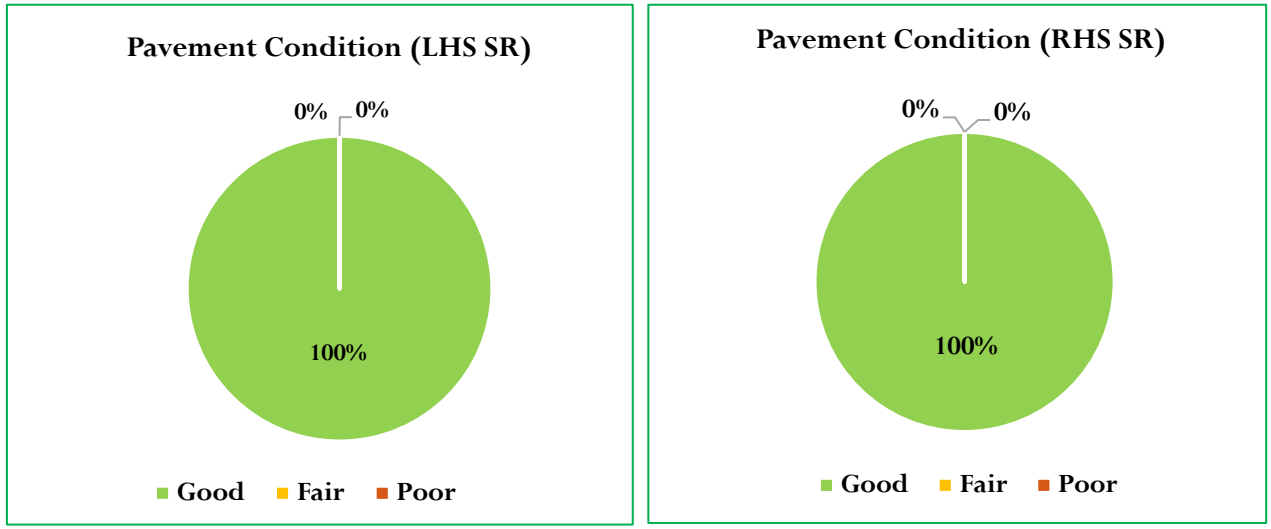


Figure 5-2: Pavement condition based on Visual condition survey Service Road

5.5 Pavement Roughness

Roughness is one of the important parameters for determining the functional characteristics of pavements. According to the American Society for Testing and Materials (ASTM), roughness is defined as "the deviations of a pavement surface from a true planar surface with characteristic dimensions that affect vehicle dynamics, ride quality, dynamic loads, and drainage, for example, longitudinal profile, transverse profile and cross-slope".

The roughness of road surfaces is measured using different equipment/techniques such as rod and level survey, dip stick profiler, profilographs, response type road roughness meters, and profiling devices.

In India, the roughness is measured using the fifth wheel bump integrator (developed by CRRI) and is reported as Unevenness Index (UI) in mm/km. In this report, Roughness is measured using an NSV profilometer on 9th May 2023, and a summary of the results are presented below:

Table 5-7: Summary of the Roughness values using NSV

Roughness Criteria		LHS				RHS			
		Inner (m)	Inner (%)	Outer (m)	Outer (%)	Inner (m)	Inner (%)	Outer (m)	Outer (%)
Good	<1800	45315	100%	40495	100%	45315	100%	40495	100%
Fair	1800-2750	0	0%	0	0%	0	0%	0	0%
Distress	>2750	0	0%	0	0%	0	0%	0	0%

Chapter 6
ROAD SAFETY ASSESSMENT ALONG THE PROJECT STRETCH

CHAPTER 6. ROAD SAFETY ASSESSMENT ALONG THE PROJECT STRETCH

6.1 General

This chapter presents general road safety concerns observed along the Project Road (Kiratpur to Nerchowk) and improvements suggested to address the same.

6.2 Site visit

Road Safety along the highway depends upon the condition of various components of the highway, such as coordination between horizontal and vertical alignment, provision and placement of road furniture, intersection geometry, availability of adequate sight distance, night-time visibility along the highway, etc. It is essential to understand all these aspects of the highway from a point of view of safety of each type of road user. The purpose of this assignment is to understand the road safety worthiness of Project Road and quantify road furniture items that are required as per the provisions of the Concession Agreement (CA). The report also summarizes high-risk safety concerns that persist for a reasonable length along the Project Road that helps improve the safety of road user upon implemented. It may be noted that, few minor observations that are part of regular O&M activities have not been quantified in this report and also geometrical improvements along with blackspots are not reviewed as part of this assignment. The scope has been constrained keeping in view the operational status of the Project Road and the focus is largely on the major safety concerns and deviations from CA provisions in road furniture, if any.

The Safety Team of CUBE Highways Technologies Pvt Ltd. visited the Project Road from 31st Jan 2024 to 2nd Feb 2024.

It may be noted that the Findings and Recommendations in this chapter are based on an independent inspection during a site visit along the Project Road and review of available information / documents. This chapter mainly focuses on high-risk safety concern and work zones related issues along the Project Road, and any major geometrical improvements, or location-specific improvements are not covered. However, based on visual observations and safety requirements identified by the safety team during the site visit, the requirement for additional safety furniture in line with CA provisions has been broadly identified and presented in the report. The chainages mentioned in the report may vary from the ground by approximately 50 to 100 m within acceptable tolerances.

Along with manual observations, the entire Project Road is video graphed using Vehicle Video Recorder Driver's Eye Level Video, a snapshot of output obtained from the app view is shown below:

Figure 6-1: Snapshot-displaying output format of driver's eye level video

As can be seen in above image, the Vehicle Video Recorder records following details along with video:

- Video recording (front view – Driver's Eye Level View)
- Location of Video on the Google Map (along with coordinates of the location)
- Speed of the Recording Vehicle, in km/hour

6.3 Review of Project Documents and Communications related to road safety aspects

The following documents have been reviewed as a part of the Road Safety Assessment.

Table 6-1: Review of Project Documents and Communications related to road safety aspects

Document	Broad comments from Road Safety aspect
Concession Agreement (CA) -Signed on 26/11/2020 *(Concessionaire – M/s. Gawar Kiratpur Nerchowk Highway Pvt. Ltd.)*	Clauses and warrants of various facilities along the Project Road, applicable manual and specifications, deviations from specifications manual, etc., are reviewed. The Project Stretch has been developed as per IRC: SP:84-2009 (applicable manual). All furniture items are to be provided in accordance with warrants and clauses of the applicable manual. The ACC link road (Km 0 to km 2.03) has been developed as per the manual - IRC: SP:73-2007. The tunnels listed in Schedule-B shall be developed as per the manual – IRC: SP:91-2010.
COD correspondences	*As per Letter No.ICT:859: APM:6415;* COD of Project Road as per Article 14 has been received on 05/09/2023.

Document	Broad comments from Road Safety aspect
TCS, Road Furniture drawings and approved final O&M BOQ	• TCS, have been received and reviewed with respect to CA provisions. However, as mentioned earlier, location specific/Black Spots related geometrical aspects are not studied as part of this assignment. • Road signage plan and locations of safety barrier related drawings/information are provided and reviewed. • Approved final O&M BOQ has been received that contains details of road furniture items, structures, type of pavement, drain ATMS etc. However, the Inventory of Vehicle Actuated Speed Display System (VASDS) is not provided in this document.
Accident Data	The Accident data has been presented in the below given section.

6.4 Analysis of Accidents along the Project Road

Historical accident data along the Project Road is available from June 2023 to May 2024. Table below summarizes the yearly accident trends and severity levels of available data observed along the Project Road.

Table 6-2: Yearly Trend of Accident observed on the Project Road from Jan 2023 to May 2024

Year	No. of Accidents					No. of Persons			Severity Index (Number of persons killed per 100 accidents)	Number of Persons Injured per 100 Accidents
	Total Accidents	Fatal	Grievous Injury	Minor Injury	Non-Injury	% Fatal Accidents	Killed	Injured (GI + MI)		
June 2023 to Dec 2023	7	2	2	3	0	29%	2	9	28.6	128.6
Jan 2024 to May 2024	18	4	2	12	0	22%	4	28	22.2	155.6
Total	**25**	**6**	**4**	**15**	**0**	**24%**	**6**	**37**	**24.0**	**148.0**

A total number of accidents along the section of the road and the severity of accidents determine the requirement of prioritization of a section for safety improvements. From the above table, it can be observed that there is a significant increase in the total accidents reported from 7 in 2023 to 18 in 2024. Also, over the years, the number of fatal accidents reported along Project Road has increased. Consequently, the Severity Index, which measures the number of persons killed per 100 accidents, has declined from 28.6 in 2023 to 22.2 in May 2024. This reduction in severity is due to variations in minor injury accidents.

For easy representation, above table has been graphically represented below:

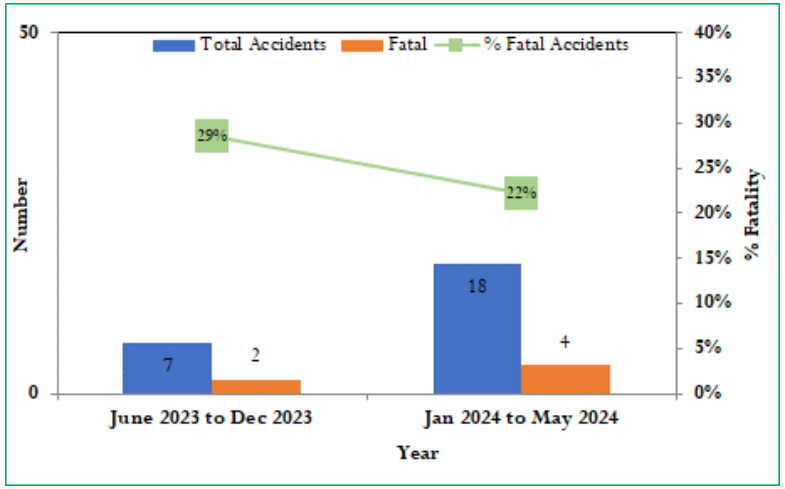


Figure 6-2: Trends of Accidents along the Project Road

6.5 Causes of Accidents along the Project Road

Accident data has been analysed in order to understand the causes of reported accidents along the Project Road. Following table presents distribution of causes of accidents.

Table 6-3: Analysis of Causes of Accidents along the Project Road

Year	Total Accidents	Causes			Total
		Over Speed	Wrong Side Driving	Drowsy Driving	
June 2023 to Dec 2023	7	71%	29%	0%	100%
Jan 2024 to May 2024	18	89%	6%	6%	100%
Total	**25**	**84%**	**12%**	**4%**	100%

It can be observed from the above table, that Over speeding is reported to be the major cause of accidents. Overall, over speeding accounts for 84% of accidents, wrong-side driving 12%, and drowsy driving 4%. The data indicates a significant rise in accidents primarily due to over speeding.

6.6 Nature of Accidents along the Project Road

Analysis has been carried out to understand the reported nature of accidents observed along the Project Road. Following table presents distribution of nature of accidents.

Table 6-4: Analysis of Nature of Accidents along the Project Road

Year	Total Accidents	Nature					Total
		Head on Collision	Rear End Collision	with Stationary	Skidding	Unknown	
June 2023 to Dec 2023	7	86%	0%	0%	0%	14%	100%
Jan 2024 to May 2024	18	11%	50%	33%	6%	0%	100%
Total	**25**	**32%**	**36%**	**24%**	**4%**	**4%**	100%

The table above highlights the nature of accidents reported along Project Road. 36% of these accidents are rear-end collisions, 32% are head-on collisions, and 24% are with stationary objects. The data indicates a shift from head-on collisions to rear-end and stationary object collisions over time, suggesting a change in the patterns of traffic incidents.

6.7 Day–Night Split of Accident along the Project Road

Accident data from June 2023 to May 2024 has been analysed to understand accident distribution w.r.to time of the day.

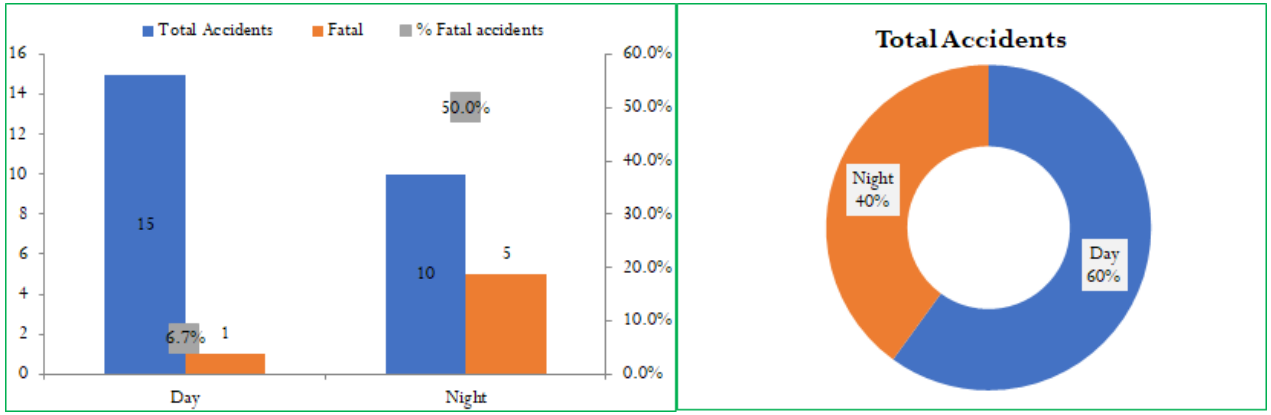


Figure 6-3:Day-Night Split of Accidents along the Project Road

The above figure presents accidents occurring with respect to the time of day on Project Road. Out of 25 total accidents, 15 (approximately 60%) occurred during the day. Additionally, the percentage of fatal accidents is higher at night compared to during the day.

Chapter 7
OPERATION & MAINTENANCE COST

CHAPTER 7. OPERATION AND MAINTENANCE COST

7.1 General

This Chapter presents details on the O&M expenditure to be incurred. The expenses are divided into four heads.

- Routine Maintenance Expenses to maintain the asset to the standards set forth in the Concession Agreement.
- Major/ Periodic Maintenance Expenses
- Operating Expenses

7.2 Estimation of Operation & Maintainance cost

The Routine Maintenance activities related to pavement include pothole repair, crack sealing, shoulder repair, drain maintenance, renewal of road markings, maintenance of cross drainage works etc. A before-hand estimate of repairs to be carried annually, must be determined to calculate the anticipated routine maintenance cost of the Project. Most of the annual routine maintenance activities are estimated based on experience and the past data of the Project as these activities varies Project to Project and there are no hard and fast rules to obtain exact quantity.

Routine maintenance cost for this Project is summarized in next section of Cost Estimates. The list of items considered in routine maintenance are summarized in the table below,

Table 7-1: List of Items Considered in Routine Maintenance Cost Estimate

S. No	Description of Item
1	**HIGHWAY**
	Flexible Pavement
	▪ Potholes ▪ Cracks ▪ Rutting/Depression/Settlement ▪ Ravelling/Stripping ▪ Re-surfacing
	Rigid Pavement

S. No	Description of Item
	▪ Slab Replacement ▪ Crack Sealing ▪ Ravelling/honeycombing, scaling, Polished Surface
	Hard/Earth shoulders, side slopes
	▪ Edge drop at shoulders ▪ Blading/reshaping to restore proper slopes and sides so as to maintain the standard formation width ▪ Rain cuts/gullies in slope ▪ Repairs of Stone Pitching/Turfing
2	**STRUCTURES**
	Superstructure of Bridges
	▪ Cracks ▪ Temporary Measures ▪ Permanent Measures ▪ Spalling / Scaling
	Foundation of Bridges
	▪ Scouring and /or Cavitation
	Piers, abutments, return walls and wing walls of bridges
	▪ Cracks and damages including settlement and tilting
	Joints in bridges
	▪ Loosening and malfunctioning of joints
	Other items relating to bridges
	▪ Gathering of dirt in bearings and joints or clogging of spouts, weep holes and vent-holes ▪ Damage or deterioration in parapets and handrails ▪ Rain-cuts or erosion of banks of the side slopes of approaches ▪ Damage to wearing coat ▪ Damage or deterioration in approach slabs, pitching, apron, toes, floor or guide bunds ▪ Growth of vegetation affecting the structure or obstructing the waterway

S. No	Description of Item
3	**ROAD FURNITURES, SIGNAGES AND PAVEMENT MARKING**
	▪ Repair to road signs -damage to shape or position; Poor visibility or loss of retro-reflectivity ▪ Replacing/installing delineators ▪ Replacing uninstalling delineators & all type of road sign ▪ Repairs MBCB ▪ Replacing of MBCB /New jersey crash barrier ▪ Repairs to Handrails /Pedestrian guard rails /flyover railings etc. ▪ Replace Handrails /Pedestrian guardrails/flyover railings etc. ▪ Fixing of distance measurement stone ▪ Hectometre stones ▪ Kilometre stones ▪ 5th Kilometre stones ▪ Boundary stones ▪ Painting ▪ Hectometre stones ▪ Pavement Marking ▪ Hot applied thermoplastic compound ▪ Painting kerb with synthetic enamel paint
4	**MISCELLANEOUS ITEMS**
	Street Lighting, Electrical systems repair and maintenance etc

The routine maintenance expenses to maintain the asset to the standards set forth in the Concession Agreement are given in the table below.

Table 7-2: Routine maintenance cost of the Project

S. No.	Particulars	Frequency	Cost including GST (Cr.)	Remarks
1	**Routine Maintenance Cost**	**Annual**		
	Highway		0.54	
	Structures		0.25	
	Road Furniture, Signage & Pavement marking		0.52	
	Project Facilities		0.07	

S. No.	Particulars	Frequency	Cost including GST (Cr.)	Remarks
	Total RM cost		**1.38**	

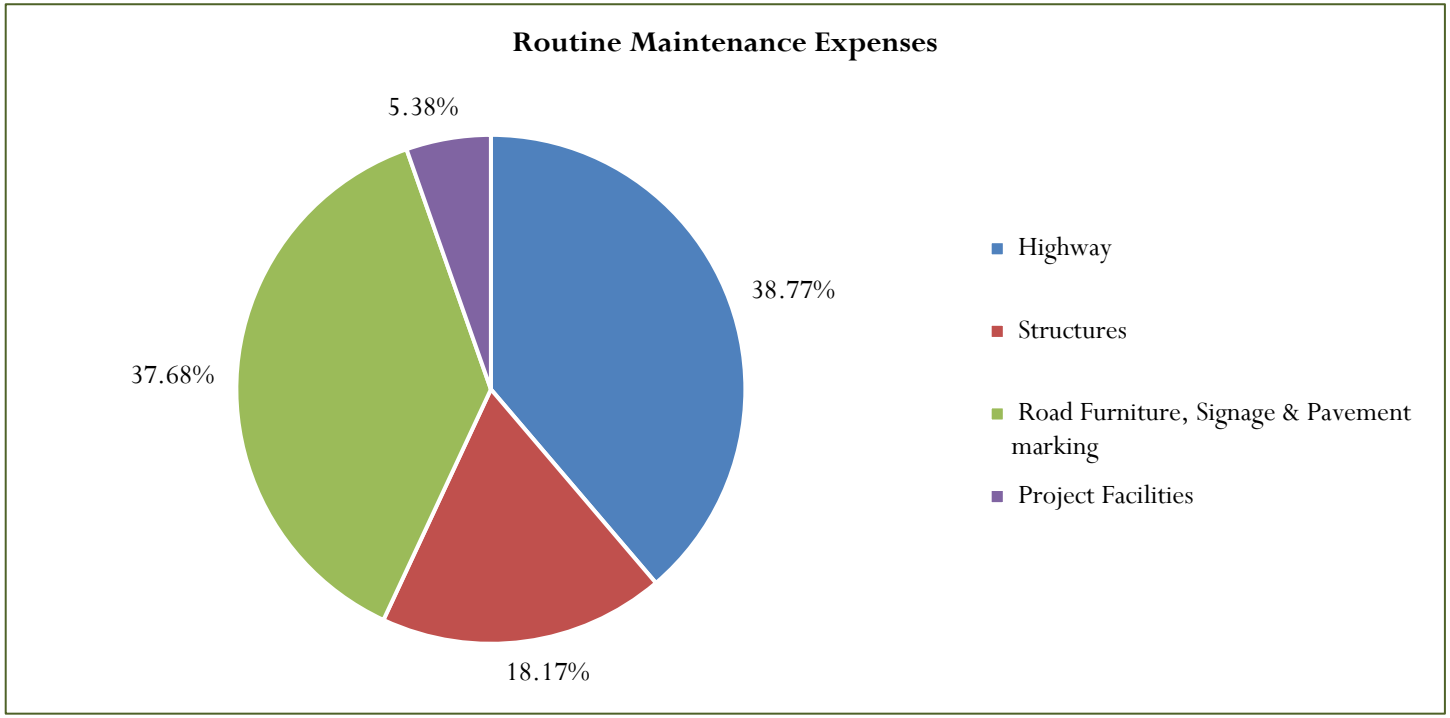


Figure 7-1: Breakup of Routine Maintenance

Table 7-3: Operational Expenditure of the Project for the Base Year FY 25

The calculation of operational expenditure for the base year FY 25 is given below:

S. no.	Description	Manpower	Annual Exp. (in Lakhs)
A.1	SPV staff and salaries	7.1	82.7
A.2	Tolling Operations Services_Outsourced	0	0.0
A.3	Security Services_Outsourced	0	15.5
A.4	Incident Management Services	49	109.2
A.5	RoW and Horticulture Works_ Manpower		66.2
A.6	Electricity and Diesel Charges		85.1
A.7	TMS/HTMS System Expenses		37.5
A.8	Office Operating Expenses		4.9
A.9	Vehicle Running Expenses		20.1
A.10	Professional Fee		36.5
A.11	Community Development		5.0
A.12	Communication Expenses		1.2
A.13	Conveyance Expenses		2.4
A.14	Insurance Expenses		84.0
A.15	IE Fees		60.0
A.16	Contingency	1%	6.1
	OPEX		**616.4**

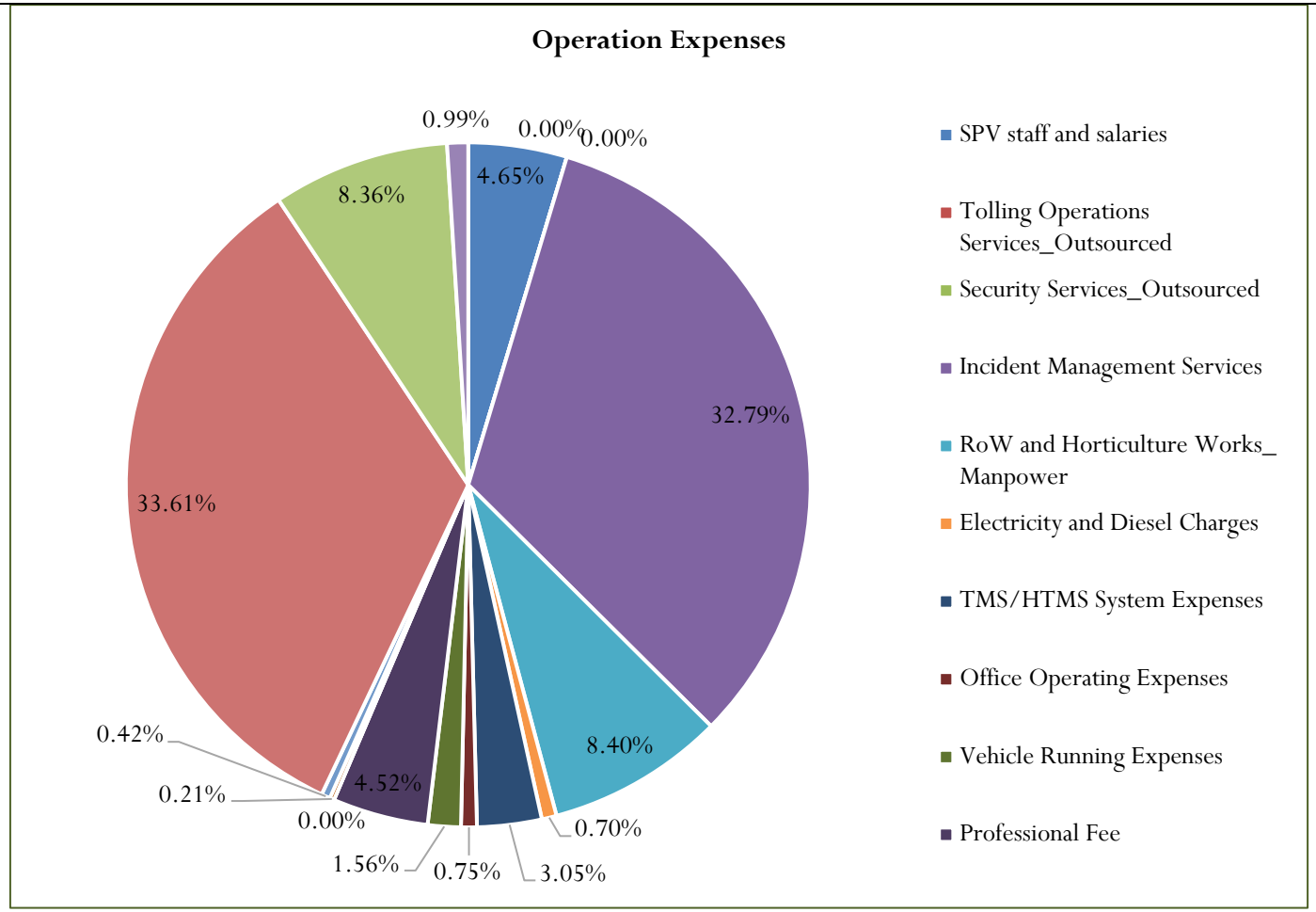


Figure 7-2: Breakup of Operation Cost

7.3 Major Maintenance Estimate

Cube Tech has considered 2 cycles for Major Maintenance. In cycle 1, for main carriageway BC overlay of 40 mm is considered and for service road microsurfacing is considered. In cycle 2, for main carriageway and service road BC overlay of 30 mm is considered.

The estimate for Major Maintenance activities of the Project Stretch is as detailed below:

Table 7-4: Major Maintenance Cost for MM Cycle 1

Major Maintenance - 1st Cycle					
S. No.	**Description**	**Unit**	**Qty**	**Rate**	**Amount**
1	Bituminous Concrete (VG - 40)	Cum	25,788.45	10,237	26,39,96,316
2	Tack Coat	Sqm	6,71,327.58	14	93,98,586
3	Milling	Sqm	26,616.45	90	23,95,480
4	DBM (5%)	Cum	1,330.82	8,926	1,18,78,920
5	Pavement Markings	Sqm	33,427.85	520	1,73,82,483
6	PQC	Cum	462.35	7,366	34,05,655
7	Kerb Painting	Sqm	31,425.00	90	28,28,250
8	Microsurfacing	Sqm	20,700.00	180	37,26,000
9	Earthen Shoulder	Cum	14,569.75	350	50,99,413
10	Slope Protection	Ls	1	3,00,00,000	3,00,00,000
11	Tunnel	Ls	1	2,00,00,000	2,00,00,000
12	ATMS, Tunnel System & ODFS replacement Cost	Ls	1	1,50,00,000	1,50,00,000
13	Reserve for structures repair	Ls	-	-	10,00,00,000
14	Miscellaneous and Contingencies (2%)		-	-	74,02,222
	Grand Total				**49,25,13,324.00**
	Grand Total Including GST (18%)				**58,11,65,722.32**
	Grand Total (In Cr)				**58.12**

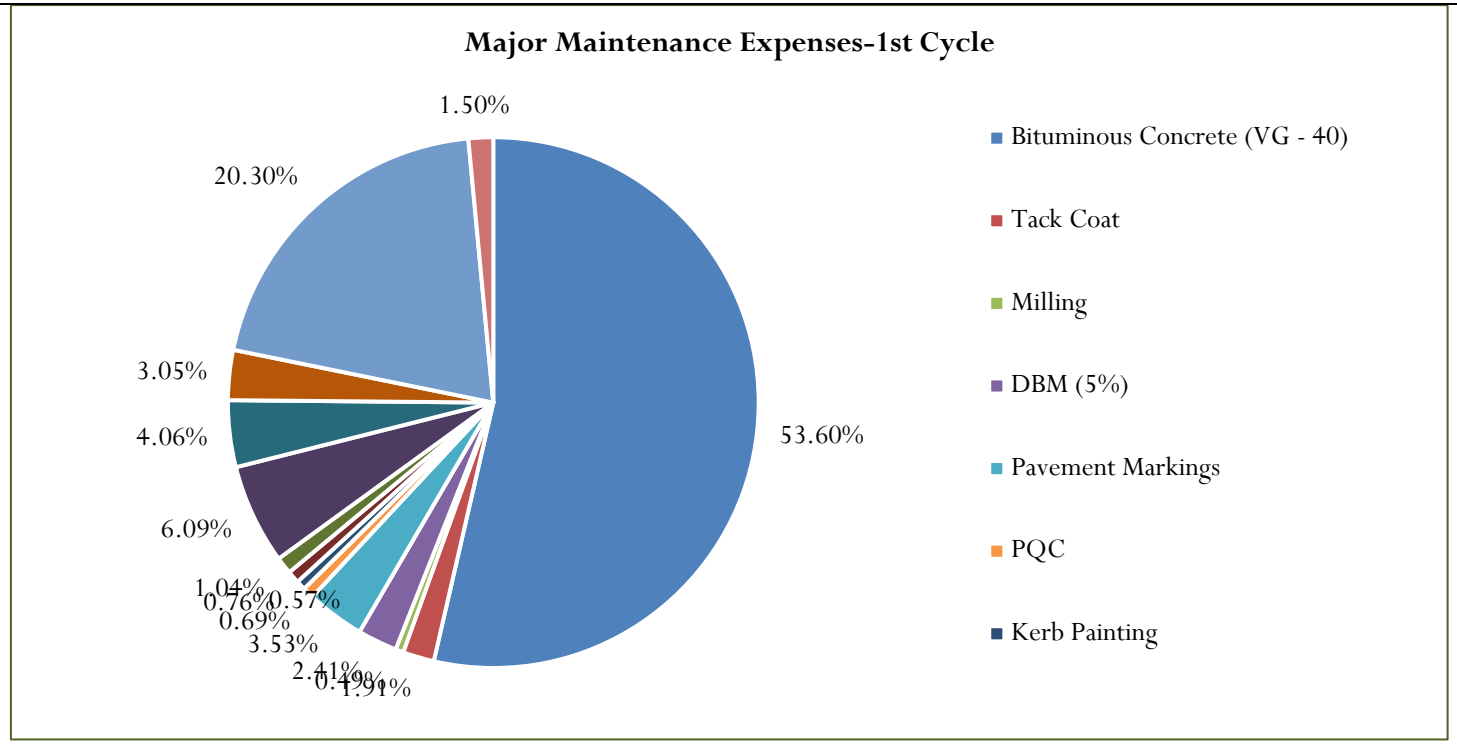


Figure 7-3: Breakup of Major Maintenance Expenses 1st Cycle

Table 7-5: Major Maintenance Cost for MM Cycle 2

Major Maintenance - 2nd Cycle					
S. No.	**Description**	**Unit**	**Qty**	**Rate**	**Amount**
1	Bituminous Concrete (VG - 40)	Cum	19,962.33	10,237	20,43,54,414
2	Tack Coat	Sqm	6,65,411.14	14	93,15,756
3	Pavement Markings	Sqm	33,427.85	520	1,73,82,483
4	PQC	Cum	462.35	7,366	34,05,655
5	Kerb Painting	Sqm	31,425.00	90	28,28,250
6	Earthen Shoulder	Cum	14,569.75	350	50,99,413
7	Slope Protection	Ls	1	2,00,00,000	2,00,00,000

Major Maintenance - 2nd Cycle					
S. No.	**Description**	**Unit**	**Qty**	**Rate**	**Amount**
8	Tunnel	Ls	1	2,00,00,000	2,00,00,000
9	ATMS ,Tunnel System & ODFS replacement Cost	Ls	1	1,50,00,000	1,50,00,000
10	Reserve for structures repair	Ls	1	10,00,00,000	10,00,00,000
11	Miscellaneous and Contingencies (2%)	-	-	-	56,47,719
	Grand Total				**40,30,33,690**
	Grand Total Including GST (18%)				**47,55,79,754**
	Grand Total (In Cr)				**47.56**

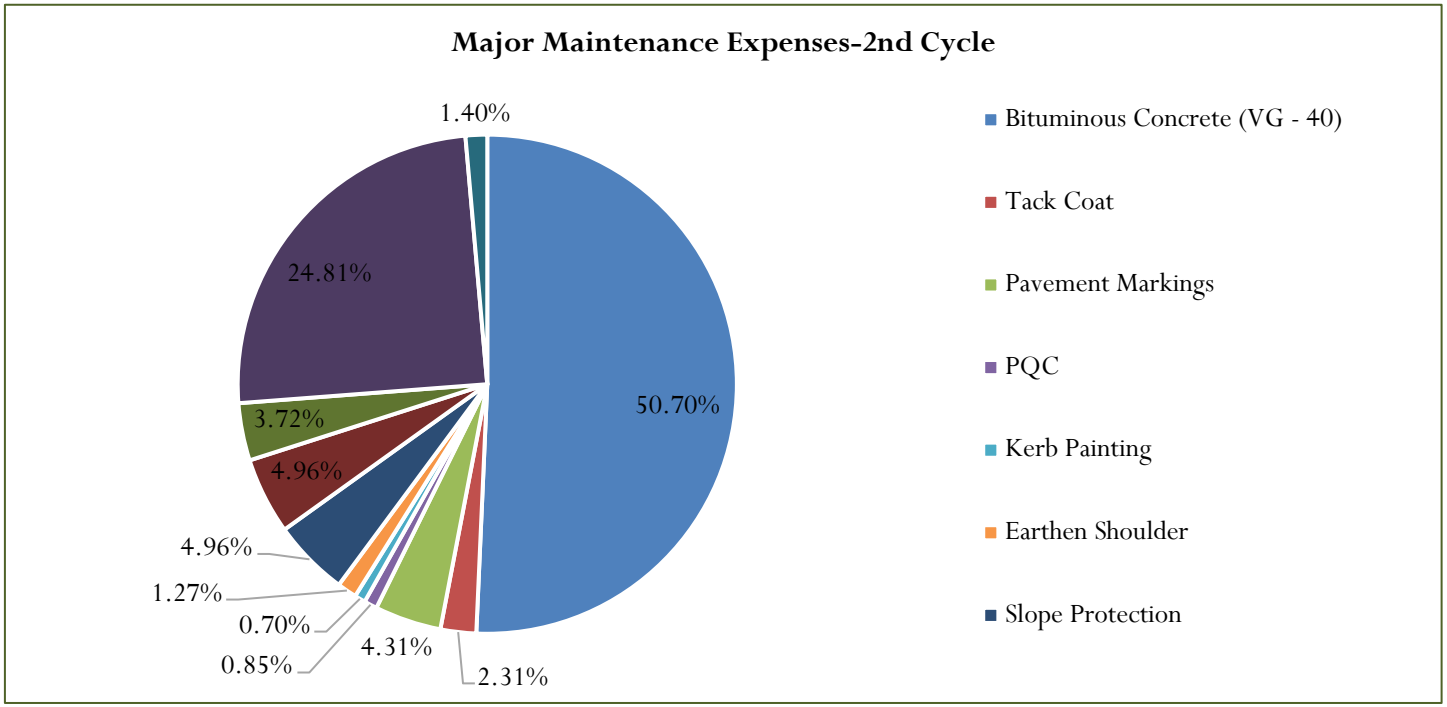


Figure 7-4: Major Maintenance Expenses 2nd Cycle

7.3.1 Major Maintenance expenses during O&M period

As per the Cube Tech estimate, the total Major Maintenance expense including the escalation is Rs.151.98 cr.

7.4 Projections of O&M Expenses

The O&M expenses for the entire Concession Period is presented in this section .

The following escalations are considered:

Table 7-6:Escalation Factors

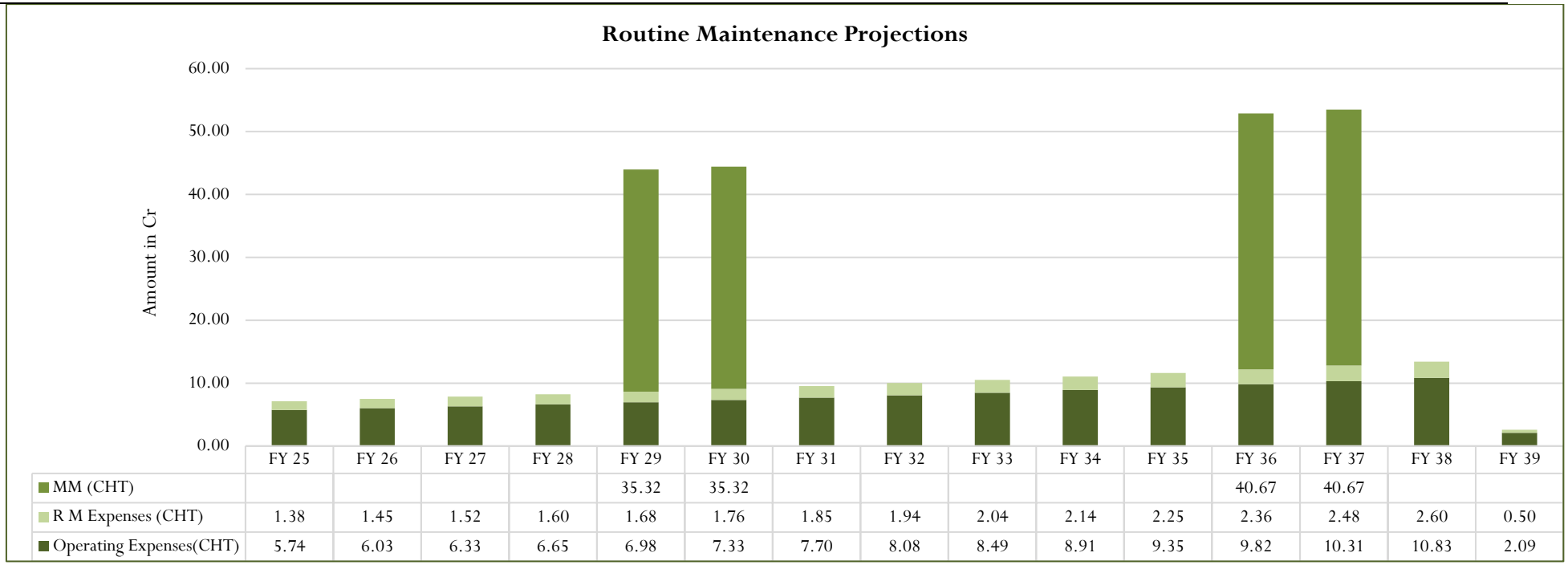
Items	Escalation
Operating Expenses	5.00%
Routine Maintenance	5.00%
Major Maintenance	5.00%

The Projections of total O& M expenses including Major Maintenance for 2 Cycles of the Project Company and CHT is given in the table below

Table 7-7: Projections of total O&M expenses of the Project during O&M period

Particulars	Total Expense (In Cr.)	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	FY 32	FY 33	FY 34	FY 35	FY 36	FY 37	FY 38	FY 39
Operating Expenses(CHT)	**114.64**	5.74	6.03	6.33	6.65	6.98	7.33	7.70	8.08	8.49	8.91	9.35	9.82	10.31	10.83	2.09
R M Expenses (CHT)	**27.57**	1.38	1.45	1.52	1.60	1.68	1.76	1.85	1.94	2.04	2.14	2.25	2.36	2.48	2.60	0.50
MM (CHT)	**151.98**					35.32	35.32						40.67	40.67		
O&M and MM (CHT)	**294.20**	**7.12**	**7.48**	**7.85**	**8.25**	**43.98**	**44.41**	**9.55**	**10.02**	**10.53**	**11.05**	**11.60**	**52.85**	**53.46**	**13.43**	**2.59**

The graph for the total cost Projections of expenses during O&M period given by the Cube Highways Technologies is shown in the figure below.



	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	FY 32	FY 33	FY 34	FY 35	FY 36	FY 37	FY 38	FY 39
MM (CHT)					35.32	35.32						40.67	40.67		
R M Expenses (CHT)	1.38	1.45	1.52	1.60	1.68	1.76	1.85	1.94	2.04	2.14	2.25	2.36	2.48	2.60	0.50
Operating Expenses(CHT)	5.74	6.03	6.33	6.65	6.98	7.33	7.70	8.08	8.49	8.91	9.35	9.82	10.31	10.83	2.09

Figure 7-5: O&M, RM and MM Expenses Projections

The total O&M cost including Major Maintenance estimated by the CHT is Rs.294.20 cr.

ANNEXURES

Annexure I: Completion Certificate

Intercontinental Consultants and Technocrats Pvt. Ltd

in association with

MSPARK Futuristic & Associates
Unit No. 708/709, 7th Floor, Tower C, Noida One, Plot No. 08, Block- B, Sector 62, Noida-Gautam Budh Nagar, Uttar Pradesh – 201309

Independent Engineer Services for Balance Work for Four laning of Kiratpur to Nerchowk Section of NH-21 (from KM 12+750 to km 26+500, km 126+500 to km 158+500 including ACC link road from km 0+00 to km 2+003) Greenfield Alignment (excluding Sundernagar Bypass) (Package-2) in the State of Himachal Pradesh on Hybrid Annuity Mode (HAM)

SCHEDULE-J
(See Clause 14.2 & 14.3)

COMPLETION CERTIFICATE

1. I, Avadhesh Pratap Misra, acting as Independent Engineer, under and in accordance with the Concession Agreement dated 26th November, 2020 (the "Agreement"), for development and operation of Balance Work for Four laning of Kiratpur to Nerchowk section of NH-21 (from KM 12+750 to km 26+500, km 126+500 to km 158+500 including ACC link road from km 0+00 to km 2+003) Greenfield Alignment (excluding Sundernagar Bypass) (Package-2) in the State of Himachal Pradesh Project (the "Project") on design, build, operate and transfer (the "DBOT Annuity or Hybrid Annuity") basis, through M/s Gawar Kiratpur Nerchowk Highways Pvt. Ltd., hereby certify that the Tests specified in Article 14 and Schedule-I of the Agreement have been successfully undertaken to determine compliance of the Project with the provisions of the Agreement, and I am satisfied that the Project can be safely and reliably placed in commercial service of the Users thereof.

2. It is certified that, in terms of the aforesaid Agreement, all works forming part of the Project have been completed except for items mentioned in Punch List-B, and the Project is hereby declared fit for entry into commercial operation on 5th Day of September, 2023

SIGNED, SEALED AND DELIVERED

For and on behalf of
INDEPENDENT ENGINEER by:

Avadhesh Pratap Misra
Independent Engineer
A-8, Green Park,
New Delhi-110016

Innovative, Creative & Technologically Sustainable Infrastructure Solutions

CIN : U74899DL1987PTC026913
Regd. Office : A-8, Green Park, New Delhi-110 016, INDIA
Tel.: +91-11-46883000 Fax :+91-11-26856252
Email : business@ictonline.com Website : http://www.ictonline.com

Site Office: House No. 1, Sector No. 1, Adjoining Main Bus Stand, Bilaspur, Himachal Pradesh - 174001
Email: bilaspur@ictonline.com

Annexure II: Pavement Visual Condition Survey data

Remarks	LHS Condition	From	To	RHS Condition	Remarks
No Distress	Good	0+000	1+000	Good	No Distress
No Distress	Good	1+000	2+003	Good	No Distress
No Distress	Good	12+750	13+000	Good	No Distress
No Distress	Good	13+000	14+000	Good	No Distress
No Distress	Good	14+000	15+000	Good	No Distress
>20% cracks+settlement-500m	Distress	15+000	16+000	Fair	120m patch
<5% cracks+Patch-200m	Fair	16+000	17+000	Good	150m minor cracks, 50m patch
Rutting-20m, Major cracks-50m, Patch-50m	Good	17+000	18+000	Fair	20m rutting, 120m patch
Rutting-200m, Minor cracks-100m, Patch-200m	Fair	18+000	19+000	Fair	120m patch
Rutting-200m, Minor cracks-100m, Patch-200m	Fair	19+000	20+000	Good	80m patch
150m Patch, 150m Major Cracks	Fair	20+000	21+000	Good	30m patch
80m patch	Good	21+000	22+000	Good	10m patch
30m patch	Good	22+000	23+000	Good	20m patch
20m patch	Good	23+000	24+000	Good	No Distress
30m minor cracks, 50m patch	Good	24+000	25+000	Good	20m patch
10m patch	Good	25+000	26+000	Good	10m minor rutting
No Distress	Good	26+000	26+500	Good	40m patch
No Distress	Good	126+500	127+000	Good	No Distress
No Distress	Good	127+000	128+000	Good	10m patch
10 m cracks, 30m patch	Good	128+000	129+000	Fair	100m settlement, patch and cracks in 100m
20 m cracks, 20m patch	Good	129+000	130+000	Good	10m patch
80m cracks, 150m patch	Fair	130+000	131+000	Fair	110m patch
20m patch	Good	131+000	132+000	Good	10m patch

Remarks	LHS Condition	From	To	RHS Condition	Remarks
10m patch	Good	132+000	133+000	Good	10m patch
10m patch	Good	133+000	134+000	Good	No Distress
20m patch	Good	134+000	135+000	Good	No Distress
60m patch	Good	135+000	136+000	Good	10m patch
20m rutting, 30m patch and cracks	Good	136+000	137+000	Good	5m patch
No Distress	Good	137+000	138+000	Good	No Distress
No Distress	Good	138+000	139+000	Good	10m patch
No Distress	Good	139+000	140+000	Good	No Distress
10m patch	Good	140+000	141+000	Good	No Distress
No Distress	Good	141+000	142+000	Good	No Distress
30m patch	Good	142+000	143+000	Good	10m patch
No Distress	Good	143+000	144+000	Good	No Distress
5m patch	Good	144+000	145+000	Good	15m patch
40m patch	Good	145+000	146+000	Good	No Distress
10m patch	Good	146+000	147+000	Good	No Distress
30m patch	Good	147+000	148+000	Fair	110m patch
30m patch	Good	148+000	149+000	Good	20m patch & cracks
20m patch	Good	149+000	150+000	Good	No Distress
70m patch	Good	150+000	151+000	Good	20m patch
No Distress	Good	151+000	152+000	Good	40m patch
10m patch	Good	152+000	153+000	Good	No Distress
20m patch	Good	153+000	154+000	Good	No Distress
20m minor cracks, 60m patch	Good	154+000	155+000	Good	20m patch
10m patch	Good	155+000	156+000	Good	30m patch
5m patch	Good	156+000	157+000	Good	10m patch
20m patch	Good	157+000	158+000	Good	20m patch
No Distress	Good	158+000	158+500	Good	No Distress

Annexure III: Pavement Distress Survey

A pavement condition survey gives an indication of the serviceability of the road pavement and is vital in deciding the maintenance activities. Some methods to conduct this survey are the Visual Condition Survey method (manual), Network Survey Vehicle (NSV) method, etc. However, Visual Condition Survey was conducted in this Project.

In a visual condition survey, the technical experienced staff makes a traverse along the project stretch, observing the different types of distresses on the pavement surface, and observations are made on each distress type.

Distresses on bituminous pavements include

- Cracks – Longitudinal, Transverse, and Alligator cracks
- Raveling
- Rutting
- Bleeding
- Potholes
- Patches

Observations made during the visual condition survey are detailed below. The cost for repair and rectification has been factored in the O&M estimation and the Concessionaire has taken up the rectification works.

Longitudinal Cracks

Structural cracks like longitudinal cracks develop parallel to the traffic direction and extend through the depth of the bituminous pavement layer, which can be bottom-up or top-down crack.

Longitudinal cracks were observed at few locations of the project Stretch.

Figure: Longitudinal Cracks

Transverse Cracks

Structural cracks like transverse cracks develop perpendicular to the traffic direction and extend through the depth of the bituminous pavement layer.

Transverse cracks were not observed at any locations of the project Stretch.

Alligator Cracks

Alligator cracking also referred to as fatigue cracking or crocodile cracking, refers to a pattern of asphalt damage that resembles the scales on an alligator's skin. The cracks form co-joined, irregular "blocks' that are often four-sided, such as rectangles, but they can also have more sides and, on occasion, as few as three sides.

Alligator cracks were observed at few locations of the project Stretch.

Figure: Alligator Cracks

Raveling

Raveling is wearing away of the pavement surface due to loss of bitumen binder and dislodged aggregate particles. This distress indicates that either the bitumen binder has hardened appreciably, or a poor-quality mixture is present. In addition, ravelling may be caused by certain types of traffic, for example, tracked vehicles. Softening of the surface and dislodging of the aggregates due to oil spillage and weathering are also included under ravelling.

Raveling were not observed at any locations of the project Stretch.

Rutting

A rut is a surface depression of pavement in the wheel paths, and pavement uplift may occur along the sides of the rut. Rutting stems from a permanent deformation in any pavement layers or subgrade usually caused by consolidated or lateral movement of the materials due to traffic load.

Low severity Rutting associated with bleeding was observed at few locations of the project Stretch.

Figure: Rutting

Bleeding

A surface having a thin film of excess or free bituminous binder on it, which creates a shiny, glass like reflecting surface tending to become soft in hot weather and slippery in cold and wet weather, eventually developing low skid resistance is referred to as bleeding or fatty bituminous surface.

Bleeding was observed at very few locations of the project Stretch.

Figure: Bleeding

Potholes

Potholes are small (or big, based on severity) bowl-shaped depressions on the pavement surface. In general, potholes are formed in later stages of highly ravelled or cracked pavement surface resulting in bowl-shaped depressions.

Potholes were not observed at any location of the project Stretch.

Patches

The patch is an area of the pavement which have been repaired or replaced by new material to remove a certain defect on the pavement. The patch is considered a defect no matter how well it is performing, and some roughness is associated with this type of distress.

Patches were observed at some locations of the project Stretch along MCW and only on one location along service road.

Figure: Patches

Annexure IV: Identified Safety concerns along the Project Road

Keeping in view the scope of assignment, safety concerns have been recorded on site and reported in the table below. Remarks and recommendation column includes information on clauses of CA & applicable manual, any observations in the IE reports/project documents and our recommendations against the highlighted safety concern. Risk and priority of each safety concern are also included as per the following criteria given in line with IRC: SP:88-2019 (Manual on Road Safety Audit).

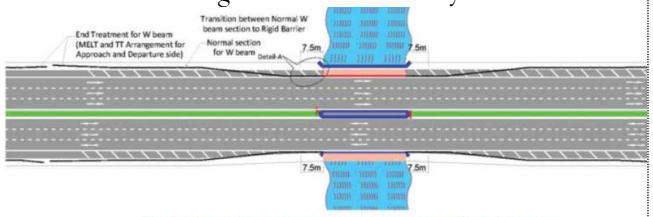
- Risk categories for identified safety concern: Very High, High, and Medium
- Priority level for recommendations: Essential, Highly Desirable and Desirable

Table: Safety concerns observed along the Project Road

S.no.	Safety concern		Recommendation		Type of concern
	Current Situation	Risk	Recommendation and Remarks	Priority	
1	**Safety Barrier**				
A	**Issue with connection between MBCB and Rigid barrier**	**Very High**		**Essential**	**Installation Issue**
	Inadequate transition arrangements between MBCB and the Rigid barrier. Adequate fishplate arrangement between MBCB and the rigid crash barrier has been provided at most of the locations along the project road. However, post spacing in the transition arrangement section are not provided as per the provisions of the applicable manual.		As per applicable manual of CA (Fig.9.12 of IRC: SP:84-2014); the following transition arrangement shall be reviewed to minimize the severity of accident.		

S.no.	Safety concern		Recommendation		Type of concern
	Current Situation	Risk	Recommendation and Remarks	Priority	
	In the transition arrangement to the rigid barrier, number and spacing of post vary to provide greater rigidity to the semi-flexible barriers. (5 posts at intervals of 0.9m c/c, and next set of 5 posts at intervals of 0.6m c/c.) Image presents the current arrangement of the barriers at the transition section.				
B	**Improper MBCB start/end treatment**	**-**	**-**	**-**	**No Issue**
	As per the applicable manual of CA, most of the MBCB start/end treatment arrangements are appropriately designed. Specifically, *the turned-down guardrails have the "W" or Thrie sections reduced from full height to ground level with a gentle slope over 8 to 9 m.* Therefore, there is No deviations from the provisions of CA. However, as per best industry practice, MELT and TT arrangement works better than Turned-Down Guardrail type arrangement as the latter tend to launch the high-speed errant vehicle in the air leading to grievous or even fatal accidents. Therefore, it is recommended that any new installations or repair of damaged shall be carried out as per MELT and TT arrangement.				
C	**Damaged Metal beam crash barrier**	**-**		**-**	**No Issue**
	It appears that all the furniture has been installed recently. During site visit, the team has not encountered any damaged MBCB along the Project Road.				
D	**Wrong overlapping of MBCB plates**	**-**		**-**	**No Issue**
	No issue was observed				
E	**Improper Arrangement of MBCB and Kerb**	**-**		**-**	**No Issue**
	No issue was observed				
F	**MBCB Setback distance**	**-**		**-**	**No Issue**
	Based on visual inspection, MBCB setback distance is adequate				
G	**Height of Crash barriers**	**-**		**-**	**No Issue**
	Based on visual inspection, height of crash barrier is adequate.				
H	**Welded connection of MBCB Plates**	**-**			**No Issue**
	No issue was observed				

S.no.	Safety concern		Recommendation		Type of concern
	Current Situation	Risk	Recommendation and Remarks	Priority	
I	**Wire Rope Barrier Setback distance**	**-**		**-**	**NA**
	NA		NA		
J	**Wire Rope Barriers Distance from face of the kerb**	**-**		**-**	**NA**
	NA		NA		
K	**Start of RCC crash barrier w.r.t. grade separator**	**Very High**	**Highly essential**	**-**	**O&M issue**
	Blunt face of rigid barrier exposed to traffic is observed at service/slip road access portion, i.e., the diverging section of the grade-separated structure. This poses a severe hazard for road users approaching the service road diverging sections.		It is suggested to review these locations and provide appropriate traffic calming measures, such as the provision of Traffic Impact Attenuators, TBM on the MCW diverging section, solar blinkers on the bullnose etc.		
L	**RCC crash barrier at Bridges**	**-**		**-**	**No Issue**
	On approach to bridge section, MBCB is connected to bridge railing and is as per the provisions of applicable manual of CA. However, this arrangement leaves the blunt face of rigid barrier exposed to high speed traffic. The following picture depicts the current conditions along the Project Road.		As per best industry practices, MBCB should be directly connected to the rigid crash barrier instead of connecting it to the railing, while leaving a minimum 2 m access for pedestrians to reach the footpath as recommended in		

S.no.	Safety concern		Recommendation		Type of concern
	Current Situation	Risk	Recommendation and Remarks	Priority	
			IRC:SP:87-2019. Image is attached for ready reference.  Fig. 9.14 Layout showing the continuity of Safety Barrier and Pedestrian Pathway		
2	**Pedestrian Guard Rail**				
A	**New installation of PGR at built up section**	-		-	**No Issue**
	No issues observed				
B	**PGR and rigid barrier connection**	**Medium**		**Desirable**	**Installation error**
	At km 139.500, a steep slope and a ~1m high embankment have been observed about 20 m on either side of the rigid crash barrier. Instead of extending the rigid crash barrier at such locations, PGR (Pedestrian Guardrail) has been installed. However, the gaps between the PGR and the rigid crash barrier present a hazard to road users, especially two-wheelers. In the event of a vehicle deviating out of control, there is a risk of it falling through the gap. The attached pictures depict the current scenario at the location.		It is suggested to review for rigid crash barrier extension at such locations.		

S.no.	Safety concern		Recommendation		Type of concern
	Current Situation	Risk	Recommendation and Remarks	Priority	
3	**Pedestrian Facilities**	**High**		**Desirable**	**New Installation**
	Pedestrian cross markings have been observed at median openings, junctions, and at suitable locations along the Project Road. Additionally, around five-foot overbridges have been provided with adequate lighting, pedestrian guardrails (PGR), signages, etc. However, the columns of FOB on median and shoulder are unprotected.		hazardous objects like FOB columns very close to the travel path without any protection would be unsafe for road users. It is suggested to review all foot overbridge abutments situated on the median and shoulder portion for the provision of a safety barrier depending on the available working width and required containment.		
4	**Median walls in b/w structures**	-		-	-
	No issue was observed				
5	**Highway Lighting**				
A	**Highway Lighting at the underside of the Grade separator**	-			-
	No issue was observed				
B	**Highway Lighting Lux**	-		-	**No Issue**
	Based on visual inspection, highway lightning functionality is adequate and effective.		No issue was observed		
6	**Solar Blinker**				

S.no.	Safety concern		Recommendation		Type of concern
	Current Situation	Risk	Recommendation and Remarks	Priority	
A	**Non-Functional solar blinkers and missing blinker lights**	**Very High**		**Highly essential**	**O&M issue**
	About 17 no. of solar blinkers were non-functional along the Project Road.		All such observations shall be reviewed and rectified on priority. List of the same has been added in Annexure -I		
B	**Height of solar blinkers**	**-**		**-**	**No Issue**
	Based on visual inspection, it was observed that the height of solar blinker was adequate		No issue was observed		
C	**LED Traffic Beacons/Solar Blinkers arrangement**	**-**			**No Issue**
	Currently, solar blinkers are placed as per standards		No issue was observed		
7	**Night-time visibility**	**-**		**-**	**No Issue**
	Retroreflective stickers on the road furniture are adequately provided wherever required. Additionally, provided highway lighting is functional and effective. Upon visual inspection, retro-reflectivity of signboards is observed to be adequate and effective.		No issue was observed		
8	**Sign Board**				
A	**Issue with an existing installation of sign boards (Damaged, faded, visibility, etc.,)**	**-**		**-**	**No Issue**
	As the Project Road has been recently constructed, all the provided road furniture items are effective and adequately provided.		No issue was observed		
B	**New installation of signboard**	**-**		**-**	**-**
	Adequate signboards are observed along the Project Road.				
9	**Object and Kerb Painting**	**-**		**-**	**No Issue**
	Based on visual inspection, the object painting provided is observed to be adequate.				
10	**Safety Measures at critical locations, i.e., Transverse Bar Marking**	**-**		**-**	**No Issue**
	Solar blinkers along with TBM has been noticed at every median opening.		No issue was observed		
11	**Road Studs**	**-**		**-**	**No Issue**
	Road studs have been provided for most of the locations all along the Project Road.		No issue was observed		

S.no.	Safety concern		Recommendation		Type of concern
	Current Situation	Risk	Recommendation and Remarks	Priority	
12	**Road Delineator**	-		-	NA
	Currently, MBCB is equipped with retro reflective stickers and visibility of the same is effective. Hence, there is no need of delineators along the Project Road.				
13	**Road Geometry**				
A	**Improper connections of Minor Roads**	**Very High**		**Essential**	**Further study shall be required**
	During the site visit, it was observed that most of the side road profiles are not in line with standards. There are issues with both vertical and horizontal profile corrections. However, speed breakers and STOP/Give way sign boards have been provided.		As Project Road passes through the hilly terrain, largely best fit design geometry of side roads and access portions for service/slip roads has been provided. However, considering the operation speeds on approaches to minor junctions or slip roads provision of TBM on MCW in the approach section, installation of convex mirrors in the junction area, placement of speed limit signs, low-mast lights, etc may help improve the safety of road users.		
B	**Absence of storage lane at median opening/U-turn locations**	-		-	**Further study shall be required**
	Most of the median openings on BHS are not provided with storage lanes. However, all the median openings are adequately equipped with traffic calming measures, including solar blinkers, TBM, road markings, highway lighting (not for all locations), and signage, etc.		Based on the available land and anticipated future turning movements traffic at each junction, geometry of the junction shall be improved		
C	**Un-Authorized Median Openings (UMO)**	-		-	**No Issue**
	No issues are currently observed. If any UMO is encountered in the future, it will be addressed with priority and closed promptly.				
14	**Landscaping and Tree Plantation**				

S.no.	Safety concern		Recommendation		Type of concern
	Current Situation	Risk	Recommendation and Remarks	Priority	
A	**Avenue plantation condition**	**-**			
	NA		NA		
B	**Median Plantation in No Plantation Zone**	**-**		**-**	**-**
	-				
15	**Truck Lay Bays/Bus Bays/Wayside Amenities**				
A	**Truck Lay Bye Layout**	**-**		**-**	**NA**
	N/A		NA		
B	**Bus Bays and Bus Shelters**	**-**		**-**	**No Issue**
	No issue was observed				
C	**Rest Areas / Wayside Amenities**	**-**		**-**	**No Issue**
	Currently, rest area/wayside amenities have been observed at Toll Plaza and information of the same has been identified on the Project Road in terms signage.				
16	**Other General Issues**				
A	**Water Stagnation**	**-**		**-**	**O&M issue**
	Water stagnation has been observed at random locations of the Project Road especially at hill cut sections.				
B	**Sliding of rocks along hill cut section**	**Very High**		**Highly Essential**	
	 During the site visit, the sliding of rockfall has been observed along very few hill cut sections (breast walls and soil nailing has been observed for most of the hill		Proactive cleaning and regular monitoring (through ATMS) of such section that experiences frequent rock sliding is essential for smooth and safe traffic movement.		

S.no.	Safety concern		Recommendation		Type of concern
	Current Situation	Risk	Recommendation and Remarks	Priority	
	cut section), posing a significant risk to road users. There is no cautionary indication or immediate action taken by IMS. Additionally, the accumulation of rocks leads to water stagnation.				
C	**Tunnel inspection**	**-**		**-**	
	Detailed tunnel inspection has not been carried out as part of the assignment. However, based on visual inspection, entry/exit sections of tunnel, flood lighting provision and functionality status (inside), VMS signage, fire extinguisher with regular intervals, emergency SOP, emergency extra lane, etc. are adequately provided. Few sample pictures of Tunnel are as below: 				
D	**Encroachment by temporary shops**	**-**		**-**	**No Issue**
	No issue was observed				
17	**High Transmission Line Vertical clearance**	**-**		**-**	**No Issue**
	No issue was observed				
18	**Ongoing Construction-Related Issues**	**-**	**-**	**-**	**-**
	NA				

Summary of recommendations

It may be noted that during the safety inspection, few safety concerns which can be attributed to deviation from the applicable manual have been identified and presented in the Report. However, it is acknowledged that the site has been mostly constructed in accordance with the approved drawings. It shall be noted that, the identified safety concerns may deteriorate the safe operation of the project over the years. To rectify these issues cost intensive measures would be required. The cost for repair and rectification has been factored in the O&M estimation and the Concessionaire has taken up the rectification works.

Following points below provides a summary of recommendation based on the site visit and review of submitted documents that shall help in elevating the overall profile of the Project Road.

Engineering measures that can be reviewed for implementation:

- Installation of MBCB on either side of rigid crash barriers, at the base of overhead signs, ATMS components, and along high embankment sections.
- Provision of Safety Barriers on approaches to FOB piers based on available working width and required containment levels.
- Improving the connection between MBCB and rigid crash barriers, to enhance road safety.
- Install the missing OHM to highlight hazards close to the travel path.
- Rectification measures shall be reviewed to avoid water stagnation and location-specific geometry improvements.
- Sliding of rockfall has been observed along very few hill cut sections (breast walls and soil nailing have been observed for most of the hill cut section), posing a significant risk to road users. Regular monitoring and proactive cleaning are essential for smooth and safe traffic operations.
- Review the provision of traffic calming measures along hill-cut sections where inadequate SSD has been observed. This deficiency leads to sudden surprises such as rock falling and water stagnation in these sections.
- Regular inspection and monitoring of tunnels shall be conducted along with emergency drills.
- As Project Road runs through the hilly terrain, a few side roads and access portions for service/slip roads have been designed with constraint geometry. However, considering the operation speeds on approaches to minor junctions or slip roads provision of TBM on MCW in the approach section, installation of convex mirrors in the junction area, placement of speed limit signs, low-mast lights, etc may help improve the safety of road users.

It may be noted that apart from the above-mentioned safety concerns, the overall road safety scenario along the Project Road is satisfactory.

Technical Due Diligence for Four Laning of Dewas Ujjain section of NH-148 NG and Construction of 4-Lane Ujjain Bypass Part-I and Construction of 4-Lane Dewas Bypass Part-II in the State of Madhya Pradesh.

Technical Due Diligence Report (Private and Confidential)

July 2024

Submitted to:

Dewas Ujjain Highway Private Limited

Cube Highways Technologies Private Limited

CUBETECH
Cube Highways Technologies Pvt. Ltd.

Technical Due Diligence for Four Laning of Dewas Ujjain section of NH-148 NG and Construction of 4-Lane Ujjain Bypass Part-I and Construction of 4-Lane Dewas Bypass Part-II in the State of Madhya Pradesh.

Documents Submittal and Contents Amendment Record

S. No.	Revision	Description	Date	Sign
1	R0	Technical Due Diligence Report	July 2024	

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ABBREVIATIONS

Abbreviation	Description
ASTM	American Society for testing and Materials
AVC	Automatic Vehicle Classifier
BBD	Benkelman Beam Deflection
BC	Bituminous Concrete
BOT	Built, Operate and Transfer
CA	Concession Agreement
CC Drain	Cement Concrete Drains
COD	Commercial Operation Date
CRRI	Central Road Research Institute
CBR	California Bearing Ratio test
DBFOT	Design, Build, Finance, Operate and Transfer
DUHPL	**Dewas Ujjain Highway Private Limited**
ETC	Electronic Toll Collection
FWD	Falling Weight Deflectometer
GOI	Government of India
GCL	Gawar Construction Limited
HPC	Hume Pipe Culvert
IE	Independent Engineer
IRC	Indian Roads Congress
LA	Land Acquisition
LHS	Left Hand Side
LOA	Letter of Acceptance
MBCB	Metal Beam Crash Barrier
MJB	Major Bridge
MNB	Minor Bridge

Abbreviation	Description
MOST	Ministry of Surface Transport
MPR	Monthly Progress Report
NH	National Highway
NHAI	National Highway Authority of India
NSV	Network Survey Vehicle
O&M	Operation and Maintenance
OHLS	Overhead Lane Signal
OHM	Object Hazard Marker
PCOD	Provisional Commercial Operation Date
POS	Point of Sale
POS	Point of sale
RCC	Reinforced Cement Concrete
RHS	Right Hand Side
ROB	Road/Rail Over Bridge
ROW	Right of Way
RPV	Route Petrol Vehicle
RUB	Road/Rail Under Bridge
SH	State Highway
SPV	Special Purpose Vehicle
SR	Service Road
SSWIM	Slow Speed Weigh in Motion
SWB	Static Weigh Bridge
TOT	Toll Operate Transfer
TC	Toll Collector
Team	Team of Cube Highways Technologies Pvt Ltd.
TMS	Toll Management System
WIM	Weigh in Motion
WMM	Wet Mix Macadam

Chapter 1
INTRODUCTION

CHAPTER 1. INTRODUCTION

1.1 Background

Infrastructure Sector is a key driver for the Indian economy. In 2014, the Government of India have introduced a new investment vehicle which allows investors to participate in the growth story of infrastructure sector, named Infrastructure Investment Trusts (hereinafter referred to as 'InvITs'). InvITs are instruments on pattern of mutual funds and are designed to pool in money from a number of investors to invest in assets that give cash flow over a period of time. The InvITs are regulated by the SEBI (Infrastructure Investment Trusts) Regulations Act, 2014.

In highway sector, InvIT as an instrument provide greater flexibility to investors and is expected to attract patient capitals (for say, 20-30 years) to the market, as these investors are averse to construction risks and are interested in investment in assets which provide long-term stable returns.

InvIT shall have a (i) Trustee, (ii) Sponsor(s) (iii) Investment Manager and (iv) Project Manager, Sponsor and Project Manager are the same entities.. During maintenance period of the project stretch, Gawar Construction Limited. (In its capacity as the Project Manager of National Infrastructure Trust) has appointed M/s Cube Highways Technologies Private Limited as Technical Consultant for carrying out technical study and assessment of Opex and Major Maintenance requirement (MMR) for balance concession period. The scope includes review of operation and maintenance system and to prepare maintenance schedule for entire duration of concession period based on a technical analysis. In turn, Cube Highways Technologies undertook the site visits to carry out site inspection. The report is based on findings during this period.

National Infrastructure Trust ("Trust") was settled on September 25, 2023, in Gurugram pursuant to the Trust Deed as a contributory irrevocable trust in accordance with the Indian Trusts Act, 1882. The Trust is an Infrastructure Investment Trust (InvIT) established for making investments in special purpose vehicles as defined under Regulation 2(1) (zy) of the InvIT Regulations, or infrastructure projects or securities of Indian companies engaged in the infrastructure sector, as may be permitted in terms of Regulation 18(5) of the InvIT Regulations. Axis Trustee Services Limited (ATSL) is the Trustee to the Trust. Gawar Investment Manager Private Limited (GIMPL) was incorporated as a private limited company on August 26, 2023, under the Companies Act, 2013. GIMPL is a wholly owned subsidiary of Gawar Construction Limited. GIMPL has been appointed as the Investment Manager to the NIT InvIT by Axis Trustee Services Limited (ATSL); the trustee to NIT InvIT and is responsible for managing the operations of InvIT in accordance with InvIT regulations.

Table 1-1: Projects Comprising the Initial Portfolio Assets of National Infrastructure Trust

S. No.	Name of the Project	Length (km)
1.	Gawar Rohna Jhajjar Highway Private Limited	35.45
2.	Gawar Khajuwala BAP Highway Private Limited	212.107

S. No.	Name of the Project	Length (km)
3.	Gawar Narnaul Highway Private Limited	45.3
4.	Gawar Rohna Sonepat Highways Private Limited	40.5
5.	Hardiya Hasanpur Highway Private Limited	47.225
6.	Gawar Kiratpur Nerchowk Highway Private Limited	47.753
7.	**Dewas Ujjain Highway Private Limited**	**41.42**
8.	Gawar Bangalore Highways Private Limited	164.34
9	Gawar Nainital Highways Private Limited	43.905

1.2 Asset Background

The National Highways Authority of India (NHAI) on behalf of Ministry of Road Transport and Highways (MORT&H), Government of India, have taken up the development of various National Highway corridors where the intensity of traffic has increased significantly and there is requirement of augmentation of capacity for safe and efficient movement of traffic. In this regard, NHAI has been entrusted to develop Projects for selected corridors through design, build, operate and transfer (the "DBOT Annuity" or "Hybrid Annuity") basis.

As part of this endeavour, the Government of India had entrusted to the Authority the development, maintenance, and management of National Highway (NH) 148 including the Dewas Ujjain section from km 0.000 to km 19.733, Ujjain Bypass km 19.733 to 26.900 (Part-I) and Dewas Bypass section from km 0.000 to km 14.520 (Part-II) with a total design length of 41.42 km. The Authority had resolved to augment the existing road from of NH -148 NG (hereinafter called the "NH 161") in the State of Madhya Pradesh by four laning thereof (the "Project") on Hybrid Annuity basis, which shall be partly financed by the Concessionaire who shall recover its investment and costs through payments to be made by the Authority, in accordance with the terms and conditions as set forth in the Concession Agreement.

The Hybrid Annuity Model (HAM) is a mix of BOT Annuity and EPC models. As per the design, the Authority will contribute up-to 40% of the Project cost in five equal instalments of 8% each during the construction period of 730 days with the provisions of Clause 23.4 of CA. The remaining payment will be made based on the assets created and the performance of the developer. Here, hybrid annuity means the first 40% payment is made as fixed amount in five equal instalments whereas the remaining 60% is paid as variable annuity amount after the completion of the Project. As per the design, Authority will contribute 40% of the BPC and the balance cost is funded by Concessionaire through debt and equity.

The Authority had adopted a single stage two envelope bidding process and accordingly invited proposals by its Request for Proposals dated 01st January 2020 (the "Request for Proposals" or "RFP") for qualification and short listing of bidders for construction, operation and maintenance of the above referred Project on Hybrid Annuity basis. The Authority had prescribed the technical and commercial terms and conditions in the RFP and invited bids comprising technical and financial bids from the bidders for undertaking the Project.

After evaluation of the bids received, the Authority had technically qualified certain bidders including, inter alia, the selected bidder and accepted the financial bid of the selected bidder i.e., Gawar Construction Limited.

The Authority issued its Letter of Award No. I/1341/2020 dated 29th October 2020 (hereinafter called the "LOA") to the selected bidder requiring, inter alia, the execution of this Concession Agreement within 45 (forty-five) days. However, on 11th December 2020 it was executed on mutually agreed terms, of the date of issue thereof.

Accordingly, SPV M/s Dewas Ujjain Highway Private Limited (hereinafter referred to as "DUHPL") has been formed, for implementing the Project Stretch (the "Concessionaire"). As Concessionaire of this Project, DUHPL will develop the project, operate, and maintain the facilities after completion of construction. Under Hybrid Annuity Model (HAM), toll collection on the Project Stretch shall be responsibility of NHAI. The Concessionaire will be recovering its costs through annuity payments made during concession period of 17 years (annuity payments during construction as well as in operations period), including construction period of 730 days from the appointed date and Operation period of 15 years from COD.

1.3 Report Structure

The report contains eight chapters, including this Chapter on Introduction.

Chapter 2 Project Overview

Chapter 3 Asset Status

Chapter 4 Review of Structures

Chapter 5 Review of the pavement condition survey

Chapter 6 General Safety Concerns along the Project stretch and Improvements

Chapter 7 Operation and Maintenance Cost

Chapter 2
PROJECT OVERVIEW

CHAPTER 2. PROJECT OVERVIEW

2.1 Location

The Project includes Dewas Ujjain section starts from km 0.000 and ends 19.733, Ujjain Bypass starts from km.19.733 and ends at km 26.900 (Part-I) and Dewas Bypass starts at km 0+000 and ends at 14+520 (Part-II). The Start co-ordinate of the Project is Latitude 22°59'24.4896" N and Longitude 76°1'13.17" E. The end co-ordinate of the Project is Latitude 23°6'26.1864" N and Longitude 75°54'22.4604" E. The Project corridor also includes bypass around Ujjain along with minor realignment at three locations and 4 new construction stretches.

Figure 2-1: Project Alignment

2.2 Salient features

The salient features of the Project are summarised in the table below:

Table 2-1 Project Salient Features

S. No	Scope	Description
1.	Name of the Project	Four laning of Dewas Ujjain section of NH-148 NG from Design Ch. 0+000 to 19+733 & Construction of 4-Lane Ujjain Bypass from Design Ch. 19+733 to 26+900 (Part-I) and construction of 4- Lane Dewas Bypass from Design Ch. 0+000 to 14+520 (Part-II) with a total design length of 41.42 km in the State of Madhya Pradesh on HAM mode.
2.	Name of Client	National Highways Authority of India
3.	Name of Concessionaire	M/s Dewas Ujjain Highway Private Limited
4.	Independent Engineer	M/s SATRA Infrastructure Management Services Pvt. Ltd
5.	Length of the Project	41.420 km
6.	Bid Project Cost	Rs. 716 crores
7.	Letter of award	29th October 2020
8.	Signing of Concession Agreement date	11th December 2020
9.	Appointed Date	6th July 2021
10.	Construction Period	730 days from Appointed Date
11.	Operation Period	15 years from PCOD/COD
12.	PCOD	1st October 2023
13.	Completion Certificate Date	16th January 2024

The Project has received COD for entire Project Length of 41.42 km w.e.f. 16th January 2024.

2.3 Scope of the Project

The scope of the Project (the "Scope of the Project") shall mean and include,

- Construction of the Project on the site set forth in Schedule-A and as specified in Schedule-B together with provision of Project Facilities as specified in Schedule- C, and in conformity with the Specifications and Standards set forth in Schedule- D of the Concession Agreement.
- Operation and Maintenance of the Project in accordance with the provisions of Concession Agreement; and

- Performance and fulfilment of all other obligations of the Concessionaire in accordance with the provisions of Concession Agreement and matters incidental there to or necessary for the performance of any or all the obligations of the Concessionaire under Concession Agreement.

2.4 Physical features of the Project

The Concessionaire shall operate, manage and maintain the project stretch for entire Concession Period, subject to and in accordance with the provisions of this Agreement. The Concessionaire shall visit the Site and assess the durability and strength of Project Assets and make his own assessment for operation, management. and maintenance as per Specifications and Standards and bear and pay all costs, expenses and charges in connection with or incidental to the performance of operation, management and maintenance.

The project includes the following physical features.

Table 2-2: Project Physical Features

S. No	Project Physical Features	As per CA	As per Site	As per CA	As per Site	Remarks
		Part I	Part I	Part II	Part II	
1	Total length of Project	26.900 km	26.900 km	14.520 km	14.520 km	
2	Total length of Service Road / Slip Road	11.68 km	12.950 km	5.525 km	7.320 km	Including COS
3	Width of Service/Slip Road	5.75 m	5.75 - 8.50 m	5.75 m	5.75 m	
4	Bypass length	7.167 km	7.167 km	14.520 km	14.520 km	
5	Major Bridges	01 no	01 no	Nil	Nil	
6	Minor Bridges	08 nos	08 nos	03 nos	03 nos	
7	Flyovers	03 nos	03 nos	02 nos	02 nos	
8	ROB	Nil	Nil	01 no	01 no	
9	VUP	02 nos	02 nos	02 nos	02 nos	
10	LVUP	02 nos	02 nos	Nil	Nil	
11	SVUP	Nil	02 nos	Nil	03 nos	Including COS
12	Box Culverts	49 nos	47 nos	21 nos	23 nos	Including COS
13	Major Junctions	03 nos	03 nos	02 nos	02 nos	

S. No	Project Physical Features	As per CA	As per Site	As per CA	As per Site	Remarks
		Part I	Part I	Part II	Part II	
14	Minor Junctions	19 nos	19 nos	08 nos	10 nos	
15	Toll Plaza	1 at 7+200	1 at 7+200	Nil	Nil	
16	Truck Lay byes	Nil	Nil	2 nos	2 nos	
17	Bus Bays/Shelters	16/20	16/22	04/04	04/18	2 nos. Bus shelters are also provided at Truck Lay bye locations

All the above features as per site have been accounted for the estimation of routine maintenance, repair and rehabilitation, major maintenance and operation expenditure.

2.5 Review of Concession Agreement

The Authority had adopted a single stage two envelope bidding process and accordingly invited proposals by its Request for Proposals dated 9th September 2019 (the "Request for Proposals" or "RFP") for qualification and short listing of bidders for construction, operation and maintenance of the above referred Project on Hybrid Annuity basis.

The Authority had prescribed the technical and commercial terms and conditions in the RFP and invited bids comprising technical and financial bids from the bidders for undertaking the Project.

After evaluation of the bids received, the Authority had technically qualified certain bidders including, inter alia, the selected bidder and accepted the financial bid of the selected bidder i.e., M/s Gawar Constructions Ltd. and issued its Letter of Award No. I/1341/2020 dated 29th October 2020 (hereinafter called the "LOA") to the selected bidder requiring, inter alia, the execution of this Concession Agreement within 45 (forty-five) days and on 03rd December 2020 it was accepted.

Table 2-3: Review of CA

Article /Clause of CA	Subject	Description in brief	*Remarks*
Article 3	**Concession period**	Concession period includes construction period of 730 days and operational period of 15 years from COD	
	Total Project Cost	Total project cost is 60 % of the Bid Project Cost If there is an increase in WPI, on an average, by more than 3% per annum for the period between the Bid Date and COD, the Total Project Cost shall be increased such that the effect of increase in WPI, more than such 3%, is reflected in	

Article /Clause of CA	Subject	Description in brief	*Remarks*
		the Total Project Cost	
Article 6 Clause 6.1.2	**Obligation of Authority**	The Authority undertakes rehabilitation and resettlement of persons affected by construction of project and must bear all cost and expenses thereof. Authority is also required to procure forest clearance as a condition precedent to the concession agreement. (Article 4 Clause 4.1.2)	*Positive for Concessionaire as it shall result in increase in pace of execution*
Clause 23.2	**Adjusted bid project cost**	Project cost shall be inflation indexed (through a Price Index Multiple) (PIM), which is the weighted average of Wholesale Price Index (WPI) and Consumer Price Index (CPI) (IW) in the ratio of 70:30 The bid project cost adjusted for variation between the price index occurring between the reference index preceding the bid date and reference index date immediately preceding the appointed date shall be deemed to be the bid project cost at commencement of construction. Bid project cost shall be changed to variation in PIM (price index multiple) on monthly basis till the achievement of commercial operations date (COD).	
14.3.2	**Completion certificate**	Upon completion of the construction works and the independent engineer determining the tests to be successful, it shall forthwith issue to the Concessionaire and the Authority a certificate substantially in the form set forth in Schedule-J (the "Completion Certificate").	
Article 16	**Change in scope**	The Authority shall pay to Concessionaire any increase in scope of work approved by Independent Engineer. While in the case of reduction of scope due to reasons attributed by the Authority, cost of such reduced cost is to be accessed by the Independent Engineer, as per the schedule of rates applicable on the Bid Due Date. The civil cost of the reduced Scope shall be multiplied by the 1.05 to arrive at the estimated cost of reduced Scope. The estimated cost of reduced Scope shall then be multiplied by the ratio of Bid Project Cost to Estimated Project Cost to arrive at the Total	

Article /Clause of CA	Subject	Description in brief	*Remarks*
		Cost of Reduced Scope.	
Article 31	**Termination payment**		
	Termination payment in the event of default by Concessionaire prior to COD	Termination payment is allowed subject to achievement of second milestone for the payment of grant (i.e.,30% of the physical progress). Termination payment shall be paid in the range of 50-80% of the debt due or 5.25-32% of the project cost whichever is less minus insurance cover depending upon achievement of second to fifth milestone for release of construction grant.	Positive for the lenders as it protects their interest to a considerable extent
	Termination payment in the event of default by Concessionaire during operation	The Authority shall pay to the Concessionaire an amount equal to 65% (sixty-five per cent) of the sum of Annuity Payments remaining unpaid for and in respect of the Concession Period, including interest thereon up to the Transfer Date.	
	Termination payment in the event of default by Authority prior to COD	a) Termination payment shall be paid debt due less insurance cover or 1.50% -40.50% of the bid project cost whichever is less minus insurance cover depending upon achievement of second to fifth milestone for release of construction grant. b) 150% (one hundred and fifty per cent) of the Adjusted Equity	
	Termination payment in the event of default by Authority during operation Period	An amount equal to the sum of Annuity Payments remaining unpaid for and in respect of the Concession Period, including interest thereon up to the Transfer Date.	
Article 35	**Change in law**		

Article /Clause of CA	Subject	Description in brief	*Remarks*
	Increase in cost	If the Concessionaire suffers aggregate financial effect due to change in law, which exceeds by Rs 1.22 crores or 2% of the total annuity payments in any accounting year the Concessionaire may notify Authority and propose amendments to this agreement so as to place the Concessionaire in the same financial position w/o change in law	*Concessionaire is protected*
	Reduction in cost	If the Concessionaire benefits from reduction in costs and the aggregate financial effect due to change in law, exceeds by Rs 1.22 crores or 2% of the total annuity payments in any accounting year the Authority may notify Concessionaire and propose amendments to this agreement so as to place the Concessionaire in the same financial position w/o change in law	
Clause 6.3	Obligations relating to refinancing	The Authority shall permit and enable Concessionaire for refinancing as per prevailing guidelines upon written request. Authority shall respond within 30 days of the receipt of proposal.	*Positive for the developers and lenders*
Article 28	**Force majeure**		
	Time Extension		
	a) Before Financial closure (Appointed Date)	Time set forth for achieving financial closure extended by time of force majeure event	
	b) Between Appointed Date and Commercial Operation date (COD)	Time set forth for Project completion extended by time of force majeure event Non-political force majeure: Respective parties to bear the costs. Neither party is required to pay other party	
	c) After COD	After COD, the Concessionaire shall be entitled to receive Annuity Payments plus interest due and payable under this Agreement. Provided any payment to be made under this clause shall be subject to deduction of outstanding dues of the Authority, if any	

Article /Clause of CA	Subject	Description in brief	*Remarks*
	Cost arising out of force majeure event		
	a) Before Appointed date	Cost to be borne by Concessionaire & Authority respectively	
	b) After Appointed Date	Non-Political Event: Cost to be shared by respective parties Indirect Political event: To be shared Direct Political: Cost compensated by Authority to concessionaire	*Concessionaire is protected*
Clause 17.8	Damages for breach of Maintenance Obligation	If the Concessionaire fails to repair or rectify any defect or deficiency set forth in the Maintenance Requirements within the period specified the Authority shall be entitled to recover damages, to be calculated and paid for each day of delay until the breach is cured, at the higher of (a) 2% of the Performance Security, and (b) 0.1% of the cost of such repair or rectification as estimated by the Independent Engineer	*Concessionaire is made more responsible*
Clause 17.16	Advertising on the site	The Concessionaire shall not undertake or permit any form of commercial advertising, display or hoarding at any place on the site	
Article 20	Traffic aid post, medical aid post etc.	Concessionaire shall construct a traffic aid post of 25 sqm, medical aid post and two residential quarters at its own cost and hand them over to authority.	
		The Concessionaire shall provide to the State Police Department or a substitute thereof one Jeep or similar vehicle in good working condition along with chauffeurs for round-the-clock patrolling. The operating costs of such vehicle including the salaries and allowances of the chauffeurs shall be borne by Concessionaire.	

Article /Clause of CA	Subject	Description in brief	*Remarks*
		The Concessionaire shall provide to the State Medical Department or a substitute thereof to be designated by the Authority one ambulance in good working condition along with chauffeurs for round-the-clock ambulance services. the operating costs of such ambulance including the salaries and allowances of the chauffeurs	
		The Concessionaire shall also reimburse to the State Medical Department (or a substitute thereof to be designated by the Authority) the actual expenditure incurred by it in each Accounting Year on the medical equipment, and the pay and allowances of up to 2 medical personnel deployed exclusively for the Medical Aid Posts and ambulance and shall maintain the Medical Aid Post buildings.	
Clause 21.3	Payment to independent engineer	The remuneration, cost and expenses of the Independent Engineer shall be paid by Authority and subject to the limits set Schedule-M, one-half of such remuneration, cost and expense shall be reimbursed by the Concessionaire to the Authority within 15 days of receiving a statement of expenditure from the Authority	
Clause 23.9.1	Treatment to Incomplete works	The Parties acknowledge and agree that in the event COD occurs upon issuance of a Provisional Certificate, the Annuity Payments and O&M Payments as specified shall be made as if all works comprising the Project have been completed. The works remaining incomplete shall be completed by the Concessionaire in accordance with the provisions of this Agreement and thereupon, the Completion Certificate shall be issued forthwith.	*Positive for both Concessionaire and Lender*

Article /Clause of CA	Subject	Description in brief	*Remarks*
Clause 23.9.2		in the event the Authority determines that any incomplete works referred to in clause 23.9.1 are not required to be completed for any reason, it shall be modifying the Scope of this Project in accordance with the provisions of Article 16 and the Completion Cost, Annuity Payments and O&M payments shall be reduced on account of such Change of scope.	*Will affect Annuity Payments in one hand and will decrease O&M expenditure on the other hand*

Chapter 3
ASSET STATUS

CHAPTER 3. ASSET STATUS

3.1 Review of Project Stretch

The Project has received COD for entire length of 41.42 km w.e.f. 16th January 2024. SPV is addressing the defects/deficiencies as and when arises and pointed out by the Independent Engineers regularly. Road surface all along the highway is in good to fair condition, the observations made by our team are presented below.

Figure 3-1: Project start and end location

Existing concession period is up to 01st July 2038. Project stretch is under Operation and Maintenance as per provisions of the existing concession agreement. Existing concessionaire shall operate and maintain the project for operation period, pursuant to and in accordance with the existing concession agreement.

3.2 Service Road

Based on the site inventory, the Service Road along the project stretch measures 20.27 km on both sides, which varies from 5.75m to 8m including COS along Part I & Part II. The pavement type is Flexible for the entire length. House Encroachments has been observed at few locations on Earthen shoulders of Service Road within ROW.

Figure 3-2: Service road

3.3 Drain

Based on the site inventory, the covered lined drain along the project stretch measures 17.597 km on both sides and open median drain of 2.665 km including COS along Part I & Part II. The covered drain and median drain along the project stretch is found in good condition. Earthen drain measuring 86.588 km is also found both side along the project stretch.

Figure 3-3: Drains

3.4 Junctions

Based on the site invemtory, a total of 05 major junctions and 29 minor junctions were found along the project stretch along Part I & Part II.

Figure 3-4:- Junctions

3.5 Road Furniture

Following are the details of road furniture provided along the project stretch as per site including Part I & Part II.

Table 3-1: List of project furniture's

Type of furniture	Unit	Quantity	Remarks
Metal beam Crash barrier	km	9.750	
Pedestrian Guard rail	km	3.220	
New Jersey Crash Barrier	km	1.660	
Toe Wall	km	3.325	
Highway Lighting			
Single arm	No's	109	Including Toll Plaza
Double arm	No's	503	Including Toll Plaza
High mast	No's	06	Including Toll Plaza
Solar Blinkers	No's	35	

Type of furniture	Unit	Quantity	Remarks
Over Head Gantry	No's	04	
Cantilever Sign Boards	No's	05	

Metal beam crash barrier

Safety barriers (MBCB) have been installed along the project stretch, including the toe side and median side of the main carriageway for a length of 9.750 km both sides out of which 4.910 km are single beam double barrier. MBCB along the project highway are well-maintained.

Figure 3-5: Safety crash barrier (MBCB) along the project stretch

Pedestrian Guard rails

Safety barriers (PGR) have been installed along the entire project stretch for a length of 3.220 km both sides.

Figure 3-6: PGR along the project stretch

New Jersey Crash Barrier

New Jersey Crash Barrier have been installed in place of median in the project stretch for a length of 1.660 km both side from km 23.270 to km 24.100 in part I.

Figure 3-7: New Jersey Crash Barrier in median

Traffic sign boards

Although signboards, including cautionary, mandatory, and informational signs, have been provided on the shoulder and median for both directions of traffic along the project stretch with clear visibility . Over all, the sign boards are in good condition.

Figure 3-8: Traffic sign boards

Highway Lighting

Highway lighting like single arm, double arm and high mast lights have been provided at toll plazas, Rest area, Urban areas, Truck lay byes ang Bus bays. The list of Highway lighting is enclosed in **Annexure XI.**

Figure 3-9: Highway lighting

3.6 Project facilities

Following are the details of project facilities along the project stretch including Part I & Part II.

Table 3-2: List of project facilities

Type of Facility	Quantity (Nos)		Remarks
	Part I	Part II	
Bus Bay/Bus Shelters	16/22	04/18	2 nos. Bus shelters are also provided at Truck Lay bye locations.
Truck Lay bye		02	Toilet blocks & Bus shelters are also provided.

Bus bays/shelters

Bus bays along with bus shelters are provided at 20 locations along the Project stretch and only Bus shelters are provided at 20 locations. All are found in good conditions.

Figure 3-10: Bus bays/shelters

Truck Lay Bye

Truck Lay bye has been provided along the project stretch with toilet blocks at 2 locations. However, Bus shelters are also provided at the same location.

Figure 3-11: Truck Lay bye

3.7 Toll Plaza Equipment Status

3.7.1 Toll Plaza and Toll Collection System

One toll plaza (Palkhanda Toll Plaza) is provided in the entire stretch at km.7+200. The Toll Collection System installed at the toll plaza is provided by Vaaan Infra Private Limited in the year 2023.

The toll plaza has 8 (4+4) lanes with two additional reversible lanes. All lanes are functional. View of the toll plazas are shown in figure.

Figure 3-12: Palkhanda Toll Plaza

Figure 3-13: Plaza Building

3.7.2 Lane Equipment

Lane hardware and equipment installed at each toll plaza are the following:

1. RFID ETC Transceiver
2. Lane Controller with Industrial PC
3. AVC Sensors
4. Automatic Lane Barrier (ALB)
5. Incident Capture Camera
6. Overhead Lane Signals
7. Traffic Lights
8. Toll Booth Equipment

3.7.2.1 RFID ETC Transceiver

- RFID ETC Transceiver reads tags installed on the windshield of vehicles and mounted over the Canopy. Handheld RFID readers are provided (1 no. in each direction) in case a tag is not detected by the fixed reader.
- ETC lanes are present in 10 (8 + 2 reversible) Lanes.
- Mantra Softech Brand RFID readers are installed.
- ETC System is Running on ICD 2.5.

Figure 3-14: RFID ETC Transceiver installed on pole

3.7.2.2 Lane Controller with Industrial PC

Toll Lane Controller (TLC) is located within the Electronic Enclosure placed inside each toll boothwhich is connected to the common server and is capable of independent storage of data.

Figure 3-15: Lane Controller at Toll Booth

3.7.2.3 Automatic Vehicle Classification (AVC) Sensors

The AVC equipment is installed in 10 lanes. Vehicle Profiler type is used for AVC which comprises of a pair of IR sensor poles.

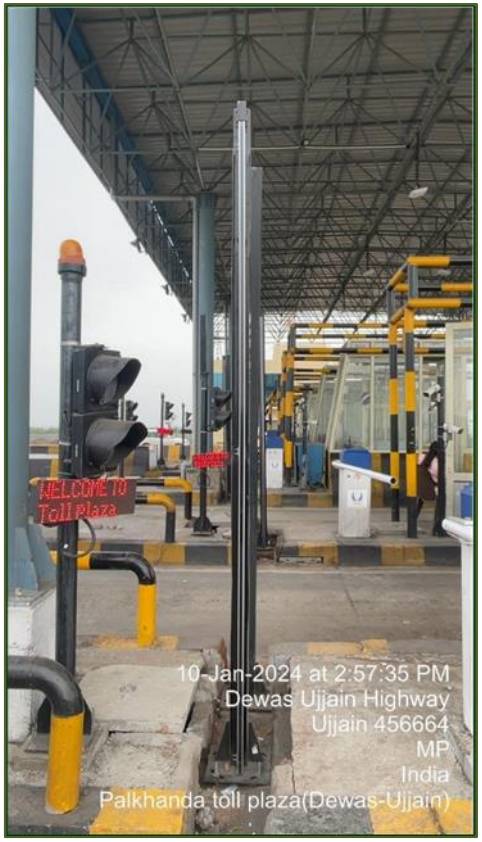


Figure 3-16: Vehicle Profiler

3.7.2.4 Automatic Lane Barrier

Boom barriers installed in 10 lanes are in working condition. Automatic Lane Barrier is used to allow only authorized vehicles to pass throughthe lane. A torque motor powers the barrier for raising and lowering theboom.

Figure 3-17: Automatic Lane Barrier

3.7.2.5 Lane Traffic Light (LTL) and User Fare Display (UFD)

Lane Traffic Light (LTL) is used to instruct vehicles to stop or pass through the lane. TheLTL is RED when the toll collector is expecting the vehicle at the booth. After the transaction is done; the LTL turns Green to instruct the vehicle to pass through the lane. The User Fare Display is a part of electronic toll collection equipment located at the toll booth. It is a mini variable message sign (VMS) made of Light Emitting Diodes (LED). Theuser fare display is used to display the toll fare that is due and that must be paid by the motorist and the classification of vehicle selected by the collector.

TL and UFD are installed in 10 lanes.

Figure 3-18: Lane Traffic Light (LTL)

3.7.2.6 Incident Capture Camera (ICS Camera)

The incident capture camera is installed on the pole near to the booth to capture the image of thevehicle from the back side.

ICS camera is installed in 10 lanes.

3.7.2.7 License Plate Image Capture Camera (LPIC)

License Plate Image capture camera is installed on a pole facing incoming vehicle tocapture the image of the vehicle number plate. LPIC camera is installed in 10 lanes

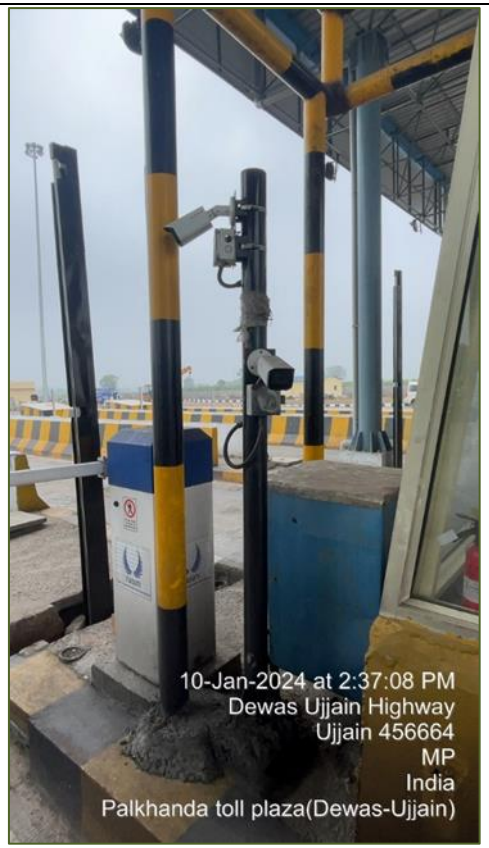


Figure 3-19: LPIC and AVC Cameras

3.7.2.8 Over Head Lane Signal (OHLS)

The **Overhead Lane Signal (OHLS)** for lane "Open" and "Close" sign consists of a pair of"GREEN" (arrow) and "RED" (cross) lights. The OHLS is located at the vehicle approaching side of the canopy to show the drivers whether the lane is open or closed.

OHLS are installed in 10 lanes.

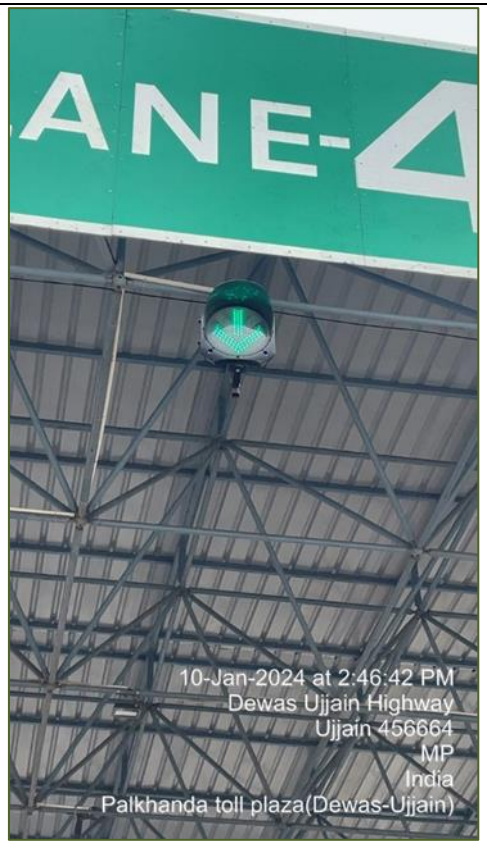


Figure 3-20: Over Head Lane Signal (OHLS)

3.7.2.9 Toll Booth Equipment

Toll Booth Hardware / Equipment provided are:

- Toll Collector Display (Operator Monitor)
- Customized Industrial Keyboard
- Receipt Printer

- Intercom Slave unit
- Violation Light and alarm
- Manual Booth Control (MBC)
- Booth Camera

The operator monitor termed as Toll Collector Display (TCD) is located on the toll collector's desk. It is the system's interface to the toll collector, to display the status of transactions and status of the lane peripherals.

The keyboard on the toll terminal is a programmable keyboard for Registration of toll operations and is customized for different vehicle types and type of ticket.

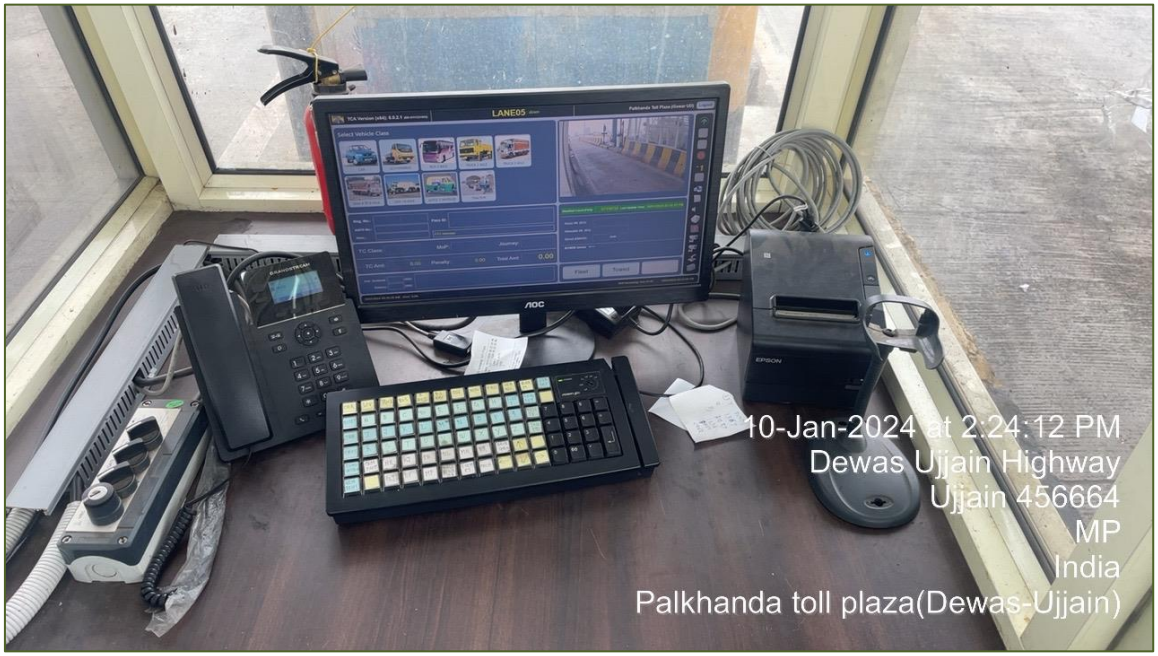


Figure 3-21: Booth Equipment

Thermal Printers are installed at the toll booths to print tickets. Intercom slave unit facilitates communication with the master unit located in the control room.

Violation system has an alarm switch which is triggered whenever there is a violation suchas run-through happening on the lane. When there is an emergency, a foot switch pressed by the booth operator alerts the control room.

Booth Cameras are provided on the inside roof corner of the booth to provide surveillance through CCTV screen located in the control room. Manual Booth Controller is used to release exempt vehicles.

Booth equipment is installed in 10 lanes.

3.7.2.10 Medium Speed Weigh in Motion (MSWIM) and Static Weigh Bridge (SWB)

Medium Speed Weigh in Motion (MSWIM) is installed on entry lanes. Bending plate strain gauge technology is used with hardware andsoftware support to calculate weight of vehicles running through it up to a speed of 50 km/hr. MSWIM is installed in 10 lanes.. MSWIM is installed by Appalto electronics private limited in the year 2023.

SWB is installed at both sides of the toll plaza

Figure 3-22: Medium Speed Weigh in Motion (MSWIM)

Figure 3-23: Static Weigh Bridge

3.7.2.11 Plaza Equipment

A. TMS Server

Plaza Server is with switch rack,32 channel PoE switch. Firewall and broadband internet connectivity are available.

The server is HP ProLiant DL380 Gen 10 with the specification of 8GB RAM and 6TB Hard Disk.

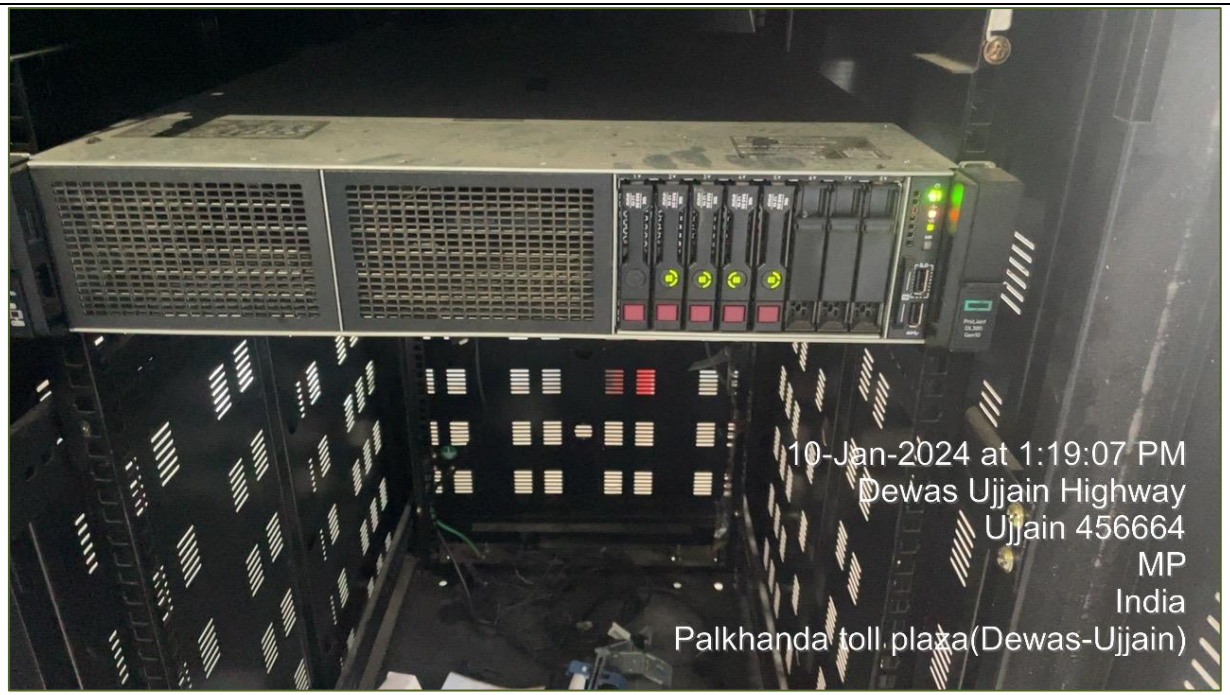


Figure 3-24: Server

Figure 3-25: Server with rack.

B. 55" LED screen for CCTV Monitoring

55" LED screen for CCTV monitoring installed at the toll plaza admin block provides a viewof all the toll booths, important zones within the plaza where cash transactions take place(server room, control room, cash up).

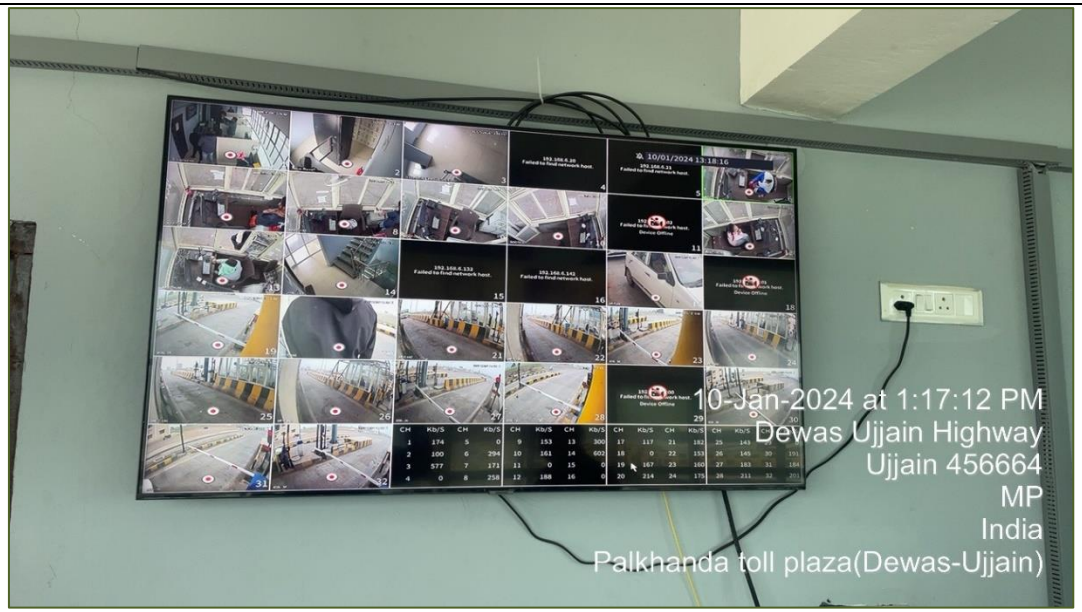


Figure 9-14 LED Screen

C. Workstations in Control Room, PoS and Cash up room

Workstations are available in the control room for lane monitoring, administration, audit, cash room and PoS with 8 GB RAM and 1 TB HDD.

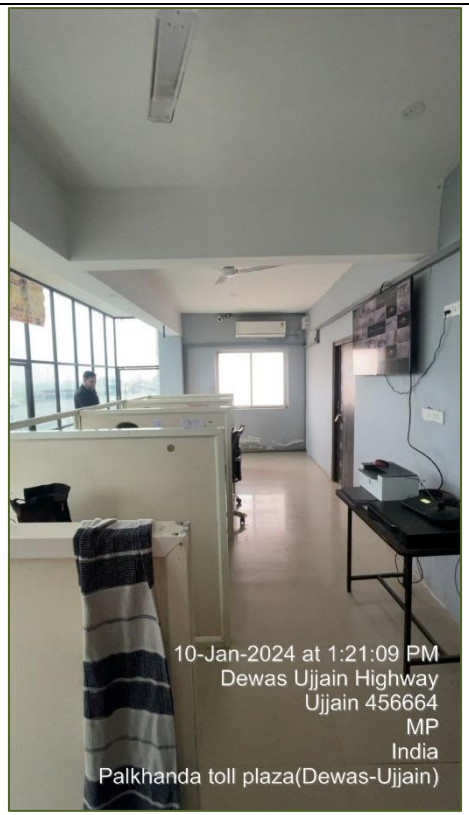


Figure 3-26: Control Room.

D. UPS

Following observations were made at toll plaza.

2KVA UPS is present in each lane and one 6KVA UPS is present and used for server and control room.

Figure 3-27: UPS Room.

3.7.3 Recommendations for Toll Collection System.

Adequacy - The software and hardware as a part of Toll Collection and Management System (TMS) was commissioned in September 2023 and was found sufficient to handle the ETC operations according to the latest guidelines.

WIM and SWB need to be checked and maintained at regular intervals for proper functioning

Chapter 4
REVIEW OF STRUCTURES

CHAPTER 4. REVIEW OF STRUCTURES

4.1 Structural investigations

Review of structures inventory and detailed condition survey of structures are the essential requirements for preparation of estimates for Capex and for O & M cost for highway structures. Keeping in view of importance of this task, review of inventory and conducting visual condition survey were carried out as per procedure and guidelines prescribed in IRC: SP:35 bridge engineers. The details of condition survey of structures were furnished below.

4.1.1 Visual Condition Survey

Salient features for which data is collected as part of conditional survey are in accordance with IRC: SP: 35 Proforma. Main features recorded as part of detailed condition survey are listed below.

- Expansion joints filled with silt and debris in the expansion gap.
- Visible honeycombs on the concrete surfaces.
- Leaching observed on the soffit of deck slab.
- Left out rebars in the construction joints and wall lifts.
- Protection works missing in the structures.
- Overall structures are in sound and satisfactory condition. However, some treatment has been suggested based on our observations and are being done under the routine maintenance works.

4.2 General

Details of various types of structures as per site inventory survey are furnished below,

Table 4-1: List of structures along Part I & Part II

S. No.	Type of Structure	As per Schedule- B (Part-I)	As per site inspection (Part-I)	As per Schedule-B (Part-II)	As per site inspection (Part-II)	Remarks
1	Major Bridges	01	01	0	0	

S. No.	Type of Structure	As per Schedule- B (Part-I)	As per site inspection (Part-I)	As per Schedule-B (Part-II)	As per site inspection (Part-II)	Remarks
2	Minor Bridges	08	08	03	03	
3	Flyovers	03	03	02	02	
4	ROB	00	00	01	01	
5	VUP	02	02	02	02	
6	LVUP	02	02	00	00	
7	SVUP	00	02	00	03	COS structures
8	BOX/PIPE Culverts	49	47	21	23	
	Total	65	65	29	34	Including COS

The condition survey of all structures was conducted by a team of bridge experts through visual inspection from 9th January 2024 to 12st January 2024. The detailed condition of all structures with necessary repair and rehabilitation measures is provided in subsequent sections.

4.3 Major Bridges:

There is one major bridge on the project stretch. The cost for repair and rectification has been factored in the O&M estimation and the Concessionaire has taken up the rectification works. Structures are found in sound and satisfactory condition. Detailed condition of major bridge based on our condition survey and necessary repair and pending maintenance works are given below,

PART-I

Table 4-2: Existing condition and required repairs /maintenance works for major bridges

S. No.	Chainage, km	Span Arrangement, m	Total Length, m	Side	Condition of Structure	Proposed repair and pending maintenance works
1	25.553	4 x 25.00	100.00	LHS	1. It was noticed during the site inspection there was a shortfall in the length of the return wall, due to which the quadrant pitching encroached into the linear waterway. 2. Honeycombing was observed on the return wall final lift on A1 & A2.	1. Toe wall shall be constructed to retain the fill inside the ROW. 2. Loose material shall be removed around the affected area and the surface shall be repaired with high strength epoxy mortar.
		4 x 25.00	100.00	RHS	1. It was noticed during the site inspection	1. Toe wall shall be constructed to retain the

S. No.	Chainage, km	Span Arrangement, m	Total Length, m	Side	Condition of Structure	Proposed repair and pending maintenance works
					there was a shortfall in the length of the return wall, due to which the quadrant pitching encroached into the linear waterway. 2.Honeycombing was observed on the return wall final lift on A1 & A2. 3.Minor settlement was observed in the approach slab at A1.	fill inside the ROW. 2. Loose material shall be removed around the affected area and the surface shall be repaired with a high strength epoxy mortar. 3.Approach slab settlement shall be rectified with the bituminous over lay.

Figure 4-1: Condition of Major Bridges

4.4 Minor Bridges:

There are eleven minor bridges on the project stretch. The cost for repair and rectification has been factored in the O&M estimation and the Concessionaire has taken up the rectification works. Structures are found in sound and satisfactory condition. Detailed condition of bridges based on our condition survey and necessary repair and pending maintenance works are given below,

PART-II

Table 4-3: Existing condition and required repairs /maintenance works for minor bridges

S. No.	Chainage, km	Span Arrangement, m	Total Length, m	Side	Condition of Structure	Proposed repair and pending maintenance works	Remarks
1	2.387	3 x 11.00	33.00	LHS	1. Left out bars were observed on the return wall at A1. 2. Protection works were missing.	1.Left out bars shall need to be cut 20mm deep and need to be filled with epoxy mortar. 2. Protection works shall be completed as per approved as built drawings.	
		3 x 11.00	33.00	RHS	1. Left out bars were observed on return wall at A2. 2. Honeycombing was observed in the return wall at A1. 3. Protection works were missing.	1. Left out bars shall need to be cut 20mm deep and need to be filled with epoxy mortar. 2. Remove the loose material around the affected area and the surface shall be repaired with a high strength epoxy mortar. 3. Protection works shall need to be provided as per approved as built drawings.	
2	2.680	1 x 12.00	12.00	LHS	1. RCC hand railing was not constructed on foot path carriage way. 2. Quadrant pitching was not provided on the A1 and A2 sides. 3. Protection works were missing.	1. RCC hand railing shall need to be constructed. 2. Quadrant pitching shall need to be provided. 3. Protection works shall need to be provided as per the approved as built drawing.	
		1 x 12.00	12.00	RHS	1. Quadrant pitching was eroded on the A2 side. 2. Protection works were missing.	1. Quadrant pitching shall need to be reinstated. 2. Protection works shall be completed as per the approved as built drawing.	
3	5.235	1 x 12.00	12.00	LHS MCW + SR	1. Quadrant pitching was not provided on the A1 and A2 sides. 2. Honeycombing was observed in return wall at A1. 3. Protection works were missing.	1. Quadrant pitching shall need to be provided. 2. Remove the loose material around the affected area and the surface shall be repaired with a high strength epoxy	

S. No.	Chainage, km	Span Arrangement, m	Total Length, m	Side	Condition of Structure	Proposed repair and pending maintenance works	Remarks
						mortar. 3. Protection works shall be completed as per the approved as built drawing.	
		1 x 12.00	12.00	RHS MCW + SR	1. Quadrant pitching was not provided on the A1 and A2 sides. 2. Honeycombing was observed in the return wall at A2 side. 3. Left out rebars were observed on the return wall at A1 and A2 sides. 4. Protection works were missing.	1. Quadrant pitching shall need to be provided. 2. Remove the loose material around the affected area and the surface shall be repaired with a high strength epoxy mortar. 3. Left out rebars shall need to be cut 20mm deep and need to be filled with epoxy mortar. 4. Protection works shall be completed as per the approved as built drawing.	
4	9.855	1 x 12.00	12.00	LHS	1. Left out rebars were observed on the return wall at A1 and A2 sides. 2. Vegetation was found near the vent area. 3. Protection works were missing.	1. Left out rebars shall need to be cut 20mm deep and need to be filled with epoxy mortar. 2. Vegetation shall need to be removed and cleared. 3. Protection works shall be completed as per the approved as built drawing.	
		1 x 12.00	12.00	RHS	1.Left out rebars were observed on return wall at A1 & A2. 3. Protection works were missing.	1.Left out rebars shall need to be cut 20mm deep and need to be filled with epoxy mortar. 3. Protection works shall be completed as per the approved as built drawing.	
5	14.902	2 x 25.00	50.00	LHS	1. Strip seal expansion joint were filled with dirt & debris. 2. Left out rebars were observed on the return wall at A1 and A2 side. 3. Honeycombing was observed on the return wall at A1 side.	1. Dirt and debris shall need to be removed from all the expansion joints. 2. Left out rebars shall need to be cut 20mm deep and need to be filled with epoxy mortar. 3. Remove the loose material around	

S. No.	Chainage, km	Span Arrangement, m	Total Length, m	Side	Condition of Structure	Proposed repair and pending maintenance works	Remarks
						the affected area and the surface shall be repaired with a high strength epoxy mortar.	
		2 x 25.00	50.00	RHS	2. Left out rebars were observed on the return wall at A1 and A2 sides. 3. Honeycombing and gaps observed between the construction joints of the return wall on A1 and A2 sides.	2. Left out rebars shall need to be cut 20mm deep and need to be filled with epoxy mortar. 3. Remove the loose material around the affected area and the surface and gaps shall be repaired with a high strength epoxy mortar.	
6	16.810	1 x 10.00	10.00	LHS	1.Accumulation of silt and debris was observed inside the vent area. 2.Left out rebars were observed on return wall at A1. 3. Protection works were missing.	1.Slit and debris accumulated shall need to be removed and cleared. 2.Left out rebars shall need to be cut 20mm deep and need to be filled with epoxy mortar. 3. Protection works shall be completed as per the approved as built drawing.	
		1 x 10.00	10.00	RHS	1. Protection works were missing.	1. Protection works shall be completed as per the approved as built drawing.	
7	19.722	1 x 10.00	10.00	LHS	1. Quadrant pitching was partially disturbed on A1 and A2 side. 2. Flexible apron was missing.	1.Quadrant pitching shall need to be rectified. 2. Flexible apron shall need to be provided.	
		1 x 10.00	10.00	RHS	1. Quadrant pitching was missing on A2 side.	1.Quadrant pitching shall need to be provided.	
8	21.367	2 x 25.00	50.00	LHS	1. Honeycombing and gaps were observed at the construction joints in the return walls.	1. Remove the loose material around the affected area, the surface and gaps shall be repaired with a high strength epoxy mortar.	Existing old Bridge
		2 x 25.00	50.00	RHS	1. Honeycombing was observed near the expansion joint on the outer side face of deck slab on A1 and A2 sides.	1. Remove the loose material around the affected area and the surface shall be repaired with a high strength epoxy	

S. No.	Chainage, km	Span Arrangement, m	Total Length, m	Side	Condition of Structure	Proposed repair and pending maintenance works	Remarks
						mortar.	

PART-II

Table 4-4: Existing condition and required repairs /maintenance works for minor bridges

S. no.	Chainage, km	Span Arrangement, m	Total Length, m	Side	Condition of Structure	Proposed repair and pending maintenance works	Remarks
1	5.844	1 x 35.00	35.00	LHS	1. Quadrant pitching was observed partially disturbed at A1 and A2 sides. 2. Flexible apron was missing.	1. Quadrant pitching shall need to be rectified. 2. Flexible apron shall need to be provided.	
		1 x 35.00	35.00	RHS	1. Quadrant pitching was observed partially disturbed at A1 & A2. 2. Protection works were missing.	1.Quadrant pitching shall need to be rectified. 2. Protection works shall need to be provided as per	
2	6.707	1 x 20.00	20.00	LHS	1. Left out rebars were observed on return wall at A1 & A2.	1. Left out rebars shall need to be cut 20mm deep and need to be filled with epoxy mortar.	
		1 x 20.00	20.00	RHS	1. Left out rebars were observed on return wall at A1 & A2.	1. Left out rebars shall need to be cut 20mm deep and need to be filled with epoxy mortar.	
3	10.280	1 x 20.00	20.00	LHS	1. Left out rebars were observed on return wall and wall lifts at A1 and A2 side. 2. Protection works were missing.	1. Left out rebars shall need to be cut 20mm deep and need to be filled with epoxy mortar. 2. Protection works shall need to be provided.	
		1 x 20.00	20.00	RHS	1. Left out rebars were observed on return wall and wall lifts at A1 and A2 side. 2. Protection works were missing.	1. Left out rebars shall need to be cut 20mm deep and need to be filled with epoxy mortar. 2. Protection works shall need to be	

S. no.	Chainage, km	Span Arrangement, m	Total Length, m	Side	Condition of Structure	Proposed repair and pending maintenance works	Remarks
						provided.	

Figure 4-2: Condition of Minor Bridges

4.5 Flyover

There are five flyovers on the project stretch. The cost for repair and rectification has been factored in the O&M estimation and the Concessionaire has taken up the rectification works. Structures are found in sound and satisfactory condition. Present condition and required repair/ maintenance works for the flyovers are given below:

PART-I

Table 4-5: Existing condition and required repairs /maintenance works for flyovers

S. no.	Chainage, km	Span Arrangement, m	Total Length, m	Side	Condition of Structure	Proposed repair and pending maintenance works	Remarks
1	0.004	2 x 15.00 + 1 x 40.00	70.00	LHS	1. Structure is in good condition.		Uni - Directional

S. no.	Chainage, km	Span Arrangement, m	Total Length, m	Side	Condition of Structure	Proposed repair and pending maintenance works	Remarks
2	17.727	2 x 15.00	30.00	LHS			
		2 x 15.00	30.00	RHS	1.Leaching was observed on soffit of deck slab in the span A1-P1.	1. Epoxy pressure grouting shall be done for affected areas in order to seal the voids and densify the concrete.	
3	23.750	2 x 15.00 + 1 x 30.00	60.00	RHS	1. Minor leaching was observed on Soffit of deck slab of span P2-A2 and on soffit of pier cap at P3.	1. Epoxy pressure grouting shall be done for affected areas in order to seal the voids and densify the concrete.	Uni - Directional

PART-II

Table 4-6: Existing condition and required repairs /maintenance works for flyovers

S. no.	Chainage, km	Span Arrangement, m	Total Length, m	Side	Condition of Structure	Proposed repair and pending maintenance works	Remarks
1	0.363	2 x 20.00 + 1 x 35.00	75.00	LHS	1. PVC longitudinal and vertical down take pipes were missing for the drainage spouts below the deck soffit.	1. PVC longitudinal and vertical down take pipes shall need to be provided.	Uni - Directional
2	14.132	2 x 27.50+ 1 x 36.57	91.57	RHS	1. Strip seal expansion joints were filled with dirt & debris.	1. Dirt and debris shall need to be removed from all the expansion joints.	Uni - Directional

Figure 4-3: Condition of Flyovers

4.6 Road Over Bridges:

There is one ROB on the Project Stretch. The cost for repair and rectification has been factored in the O&M estimation and the Concessionaire has taken up the rectification works. Structures are found in sound and satisfactory condition. Present condition and required repair/ maintenance works for the ROB are given below.

PART-II

Table 4-7: Existing condition and required repairs /maintenance works for ROB

S. no.	Chainage, km	Span Arrangement, m	Total Length, m	Side	Condition of Structure	Proposed repair and pending maintenance works
1	11.696	1 x 50.00	55.00	LHS	1. Honeycombing was observed on the return wall at A1side.	1. Remove the loose material around the affected area and the surface and gaps shall be repaired with a high strength epoxy mortar.
		1 x 50.00	55.00	RHS	1. Honeycombing was observed on the return wall at A2 side.	1. Remove the loose material around the affected area and the surface and gaps shall be repaired with a high strength epoxy mortar.

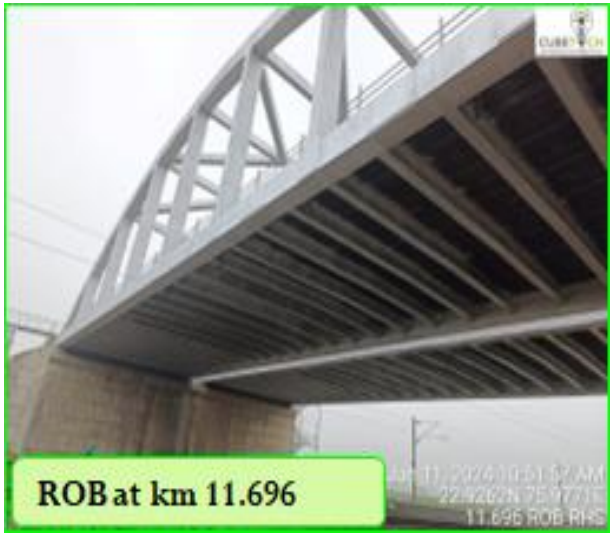


Figure 4-4: Condition of ROB

4.7 VUP

There are four VUP's on the project stretch. The cost for repair and rectification has been factored in the O&M estimation and the Concessionaire has taken up the rectification works. Structures are found in sound and satisfactory condition. Present condition and required repair/ maintenance works for the underpasses are given below.

PART-01

Table 4-8: Existing condition and required repairs /maintenance works for VUP

S. no.	Chainage, km	Span Arrangement, m	Total Length, m	Side	Condition of Structure	Proposed repair and pending maintenance works	Remarks
1	5.690	1 x 20.00	20.00	LHS	1. Leaching was observed on the soffit of deck slab. 2. PVC longitudinal and down take pipes were missing for the drainage spouts below the soffit of deck slab.	1. Epoxy pressure grouting shall be done for affected areas in order to seal the voids and densify the concrete. 2. PVC longitudinal and vertical down take pipes shall need to be provided for safe discharge of water.	
		1 x 20.00	20.00	RHS	1. Honeycombing and left-over construction material was observed at side face of dirt wall at A2 side. 2. PVC longitudinal and down take pipes were missing for the drainage spouts below the soffit of deck slab.	1. Loose material and left-over construction material shall be removed, and the affected area shall need to be repaired with high strength epoxy mortar. 2. PVC longitudinal and vertical down take pipes shall need to be provided for safe discharge of water.	
2	20.394	1 x 12.00	12.00	LHS	1. Structure is in good condition.		
		1 x 12.00	12.00	RHS	1. Structure is in good condition.		

PART-02

Table 4-9: Existing condition and required repairs /maintenance works for VUP

S. no.	Chainage, km	Span Arrangement, m	Total Length, m	Side	Condition of Structure	Proposed repair and pending maintenance works	Remarks
1	1.720	1 x 20.00	20.00	LHS			
		1 x 20.00	20.00	RHS	1. Honeycombing was observed at the side face of dirt wall at A2 side. 2. Leaching was observed on soffit of deck slab.	1. Loose material shall be removed around the affected area and the surface shall be repaired with a high strength epoxy mortar. 2. Epoxy pressure grouting shall be done for affected areas in order to seal the voids and densify the concrete.	
2	7.084	1 x 20.00	20.00	LHS	1. Honeycombing was observed at the side face of dirt wall at A2. 2. Strip seal expansion joint were filled with dirt and debris.	1. Loose material shall be removed around the affected area and the surface shall be repaired with a high strength epoxy mortar. 2. Dirt and debris shall need to be removed from all the expansion joints.	
		1 x 20.00	20.00	RHS			

Figure 4-5: Condition of VUPs

4.8 LVUP

There are two LVUP's on the project stretch. The cost for repair and rectification has been factored in the O&M estimation and the Concessionaire has taken up the rectification works. Structures are found in sound and satisfactory condition. Present condition and required repair/ maintenance works for the underpasses are given below.

PART-I

Table 4-10: Existing condition and required repairs /maintenance works for LVUP

S. no.	Chainage, km	Span Arrangement, m	Total Length, m	Side	Condition of Structure	Proposed repair and pending maintenance works	Remarks
1	3.113	1 x 12.00	12.00	RHS	1. Honeycombing was observed on the soffit of top slab. 2. Perforated pipe was missing behind the abutment walls as shown in the approved drawings.	1. Loose material shall be removed around the affected area and the surface shall be repaired with high strength epoxy mortar.	Uni-Directional

S. no.	Chainage, km	Span Arrangement, m	Total Length, m	Side	Condition of Structure	Proposed repair and pending maintenance works	Remarks
2.	11.245	1 x 12.00	12.00	LHS	1. Leftover construction material was observed on top haunch at A2 side. 2. Perforated pipe was missing behind the abutment walls as shown in the approved drawings.	1. Left over construction material shall be removed and surface to be filled with epoxy mortar.	Bi-Directional
		1 x 12.00	12.00	RHS	1. Perforated pipe was missing behind the abutment walls as shown in the approved drawings.		

Figure 4-6: Condition of LVUPs

4.9 SVUP

There are five SVUP's on the project stretch. The cost for repair and rectification has been factored in the O&M estimation and the Concessionaire has taken up the rectification works. Structures are found in sound and satisfactory condition. Present condition and required repair/ maintenance works for the underpasses are given below.

PART-01

Table 4-11: Existing condition and required repairs /maintenance works for SVUP

S. no.	Chainage, km	Span Arrangement, m	Total Length, m	Side	Condition of Structure	Proposed repair and pending maintenance works	Remarks
1	23.520	1 x 7.00	7.00	LHS	1. Quadrant pitching was not provided on the A1 and A2 sides.	1. Quadrant pitching shall need to be provided.	COS
		1 x 7.00	7.00	RHS	1. Quadrant pitching was not provided on the A1 and A2 sides.	1. Quadrant pitching shall need to be provided.	
2	24.000	1 x 7.00	7.00	LHS	1. Structure completed, miscellaneous work in progress.		COS
		1 x 7.00	7.00	RHS	1. Structure completed, miscellaneous work in progress.		

PART-02

Table 4-12: Existing condition and required repairs /maintenance works for SVUP

S. no.	Chainage, km	Span Arrangement, m	Total Length, m	Side	Condition of Structure	Proposed repair and pending maintenance works	Remarks
1	9.989	1 x 7.00	7.00	LHS	1. Honeycombing was found on wing wall at A2 side. 2. Perforated pipe was missing behind the abutment walls as shown in the approved drawings.	1. Loose material shall be removed around the affected area and the surface shall be repaired with high strength epoxy mortar.	
		1 x 7.00	7.00	RHS	1. Perforated pipe was missing behind the abutment walls as shown in the approved drawings.		
2	11.217	1 x 7.00	7.00	LHS	1. Perforated pipe was missing behind the abutment walls as shown in the approved drawings.		
		1 x 7.00	7.00	RHS	1. Perforated pipe was missing behind the abutment walls as shown in the approved drawings.		
3	11.730	1 x 7.00	7.00	LHS	1.Structure completed miscellaneous work in progress.		

S. no.	Chainage, km	Span Arrangement, m	Total Length, m	Side	Condition of Structure	Proposed repair and pending maintenance works	Remarks
		1 x 7.00	7.00	RHS	1.Structure completed miscellaneous work in progress.		

Figure 4-7: Condition of LVUPs

4.10 Box Culverts:

There are seventy culverts on the project stretch out of which sixty-nine are box culverts and one is pipe culvert including Part I & Part II along the project stretch. The cost for repair and rectification has been factored in the O&M estimation and the Concessionaire has taken up the rectification works. Structures are found in sound and satisfactory condition.

Common defects and / or pending maintenance works observed in condition survey, necessary repair and pending maintenance works for all the culverts along the project stretch are given below,

Table 4-13: Existing condition and required repairs /maintenance works for Culverts (Inlcuding Part I & Part II)

S. no.	Type of Culverts	No. of Culverts	Condition of Structure	Proposed repair and pending maintenance works

S. no.	Type of Culverts	No. of Culverts	Condition of Structure	Proposed repair and pending maintenance works
1	Box Culverts	69	1. Quadrant pitching was not provided in some of the culverts. 2. For a few culverts honeycombing and reinforcement exposed was observed on abutments and retaining walls. 3. Stagnated water observed at some of the culverts. 4. Protection works are incomplete.	1. Quadrant pitching shall be provided. 2. Honey combing and exposed reinforcement locations shall be rectified with epoxy grouting. 3. Both the U/s and D/s shall be re-graded for free flow of water. 4. Protection works shall need to be completed.
2	Pipe Culverts	01	1.Culvert was completely buried under stagnated water.	1. Both U/s and D/s shall be re-graded for free flow of water.

Figure 4-8:.Condition of Culverts

Chapter 5
CONDITION ASSESSMENT OF EXISTING PAVEMENT CONDITION

CHAPTER 5. CONDITION ASSESSMENT OF EXISTING PAVEMENT CONDITION

To evaluate the existing pavement condition of a Project Stretch, investigations are to be carried out on the field to collect data from the field. The collected data is processed and analysed to obtain complete information on the pavement condition.

5.1 Pavement Condition Assessment for Technical Due Diligence

As a part of technical due diligence, the different investigations performed on the Project site are listed below.

- Assessment of Pavement Condition based on Visual Condition Survey

Based on the visual condition survey, the type of distress, its quantity, and severity for each Stretch are obtained. The same is used to evaluate the present condition of pavement, which classifies pavement conditions ranging from 'Distress' to 'Good'.

The pavement investigation studies carried out on the Project Stretch from 9th January to 11th January 2024 as a part of technical due diligence and their outcomes are detailed in the sections below.

5.2 Pavement Review of Concession Agreement

As per Schedule K of the Concession Agreement, the Concessionaire shall repair and rectify the defects and deficiencies as specified below

Table 5-1: Major Maintenance criteria as per CA

S. No.	Nature of Defect or Deficiency	Time limit for Repair/Rectification
1	Roughness value exceeding 2750 mm in a stretch of 1km (as measured by a standardized rough meter/bump integrator)	180 Days
2	Cracking in more than 5% of road surface in a stretch of 1 km	30 days
3	Rutting exceeding 10mm in more than 2% of road surface in a stretch of 1km (measured with 3m straight edge)	30days

5.3 Review of Pavement Design Report

- The design of flexible pavement has been carried out in accordance with guidelines of IRC-37-2018.
- The thickness of bituminous-layers is designed for a period of 15 years. Design traffic is 75 MSA and Subgrade CBR is taken as 9%.
- The pavement for the service road has been designed as per IRC: 37-2018; Design traffic is 10 MSA and Subgrade CBR is taken as 15%.

Table 5-2: Pavement Design Thicknesses for main carriageway as per Pavement Design Report

Layer	Thickness(mm)
Bituminous Concrete (BC)	50
Dense Bituminous Macadam	75
Wet Mix Macadam	150
Cement Treated Sub-base (CTSB)	200

Table 5-3: Pavement Design Thicknesses for service roads as per Pavement Design Report

Layer	Thickness(mm)
Bituminous Concrete (SDBC)	30
Dense Bituminous Macadam	50
Wet Mix Macadam	200
Granular Sub-base (GSB)	150

5.4 Key Site Visit Observations

Few observations made during the site visit by the pavement investigation team are as follows,

- The majority of the pavement condition was observed to be fair to good on the right-hand side (RHS) of the project stretch.
- The majority of the pavement condition was observed to be in good condition on the left-hand side (LHS) of the project stretch.
- Bleeding was observed as the predominant distress in the project stretch.
- Most heavily loaded trucks choose the inner lane as their travel path.

- The pavement condition was observed to be in good condition for all the service roads.

Based on the observations made during the visual condition survey, the pavement condition is categorized into three categories 'Good', 'Fair', and Distress'. The visual survey data and summary of the pavement condition of Project Stretch is given below.

Table 5-4: Main Carriageway Pavement Visual Condition Survey Results

Condition	LHS		RHS	
	Length (Km)	Length (%)	Length (Km)	Length (%)
Good	35420	86%	31420	76%
Fair	6000	14%	10000	24%
Distress	0	0%	0	0%

As shown in table above all sections are found from good to fair condition. Observations made during the visual condition survey are presented in Annexure III

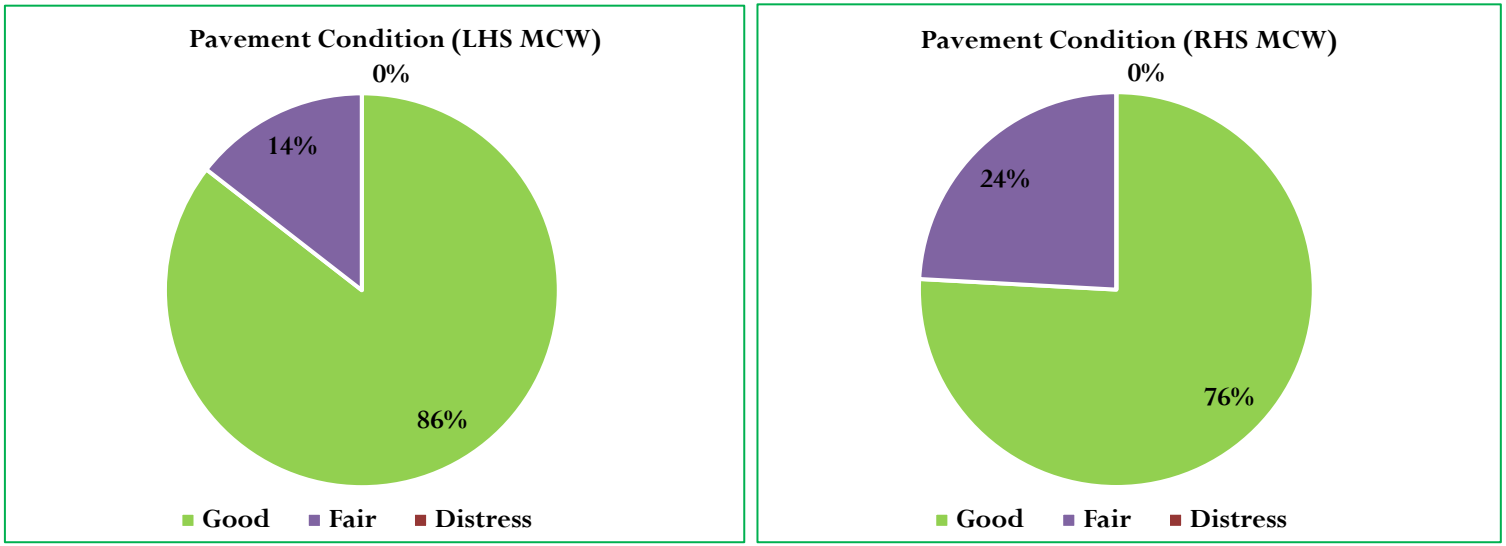


Figure 5-1: Pavement condition based on Visual condition survey

5.5 Evaluation of Roughness Data

Roughness is one of the important parameters for determining the functional characteristics of pavements. According to the American Society for Testing and Materials (ASTM), roughness is defined as "the deviations of a pavement surface from a true planar surface with characteristic dimensions that affect vehicle dynamics, ride quality, dynamic loads, and drainage, for example, longitudinal profile, transverse profile and cross-slope".

The roughness of road surfaces is measured using different equipment/techniques such as rod and level survey, dip stick profiler, profilo graphs, response type road roughness meters, and profiling devices.

In India, the roughness is measured using the fifth wheel bump integrator (developed by CRRI) and is reported as Unevenness Index (UI) in mm/km. In this report, Roughness is measured using an NSV profilometer, and a summary of the results are presented below:

Table 5-5: Summary of the Roughness values using NSV

Roughness Criteria		LHS				RHS			
		Inner (m)	Inner (%)	Outer (m)	Outer (%)	Inner (m)	Inner (%)	Outer (m)	Outer (%)
Good	<1800	NSV data not shared							
Fair	1800-2750								
Poor	>2750								

Chapter 6
ROAD SAFETY ASSESSMENT ALONG THE PROJECT STRETCH

CHAPTER 6. ROAD SAFETY ASSESSMENT ALONG THE PROJECT STRETCH

6.1 General

This chapter presents general road safety concerns observed along the Project Road (Dewas to Ujjain) and improvements suggested to address the same.

6.2 Site Visit

Road Safety along the highway depends upon the condition of various components of the highway, such as coordination between horizontal and vertical alignment, provision and placement of road furniture, intersection geometry, availability of adequate sight distance, night-time visibility along the highway, etc. It is essential to understand all these aspects of the highway from a point of view of safety of each type of road user. The purpose of this assignment is to understand the road safety worthiness of Project Road and quantify road furniture items that are required as per the provisions of the Concession Agreement (CA). The report also summarizes high-risk safety concerns that persist for a reasonable length along the Project Road that helps improve the safety of road user upon implemented. It may be noted that, few minor observations that are part of regular O&M activities have not been quantified in this report and also geometrical improvements along with blackspots are not reviewed as part of this assignment. The scope has been constrained keeping in view the operational status of the Project Road and the focus is largely on the major safety concerns and deviations from CA provisions in road furniture, if any.

The Safety Team of CUBE Highways Technologies Pvt Ltd. visited the Project Road from 9th to 11th Jan 2024.

It may be noted that the Findings and Recommendations in this chapter are based on an independent inspection during a site visit along the Project Road and review of available information / documents. This chapter mainly focuses on high-risk safety concern and work zones related issues along the Project Road, and any major geometrical improvements, or location-specific improvements are not covered. However, based on visual observations and safety requirements identified by the safety team during the site visit, the requirement for additional safety furniture in line with CA provisions has been broadly identified and presented in the report.

Along with manual observations, the entire Project Road is video graphed using Vehicle Video Recorder Driver's Eye Level Video, a snapshot of output obtained from the app view is shown below:

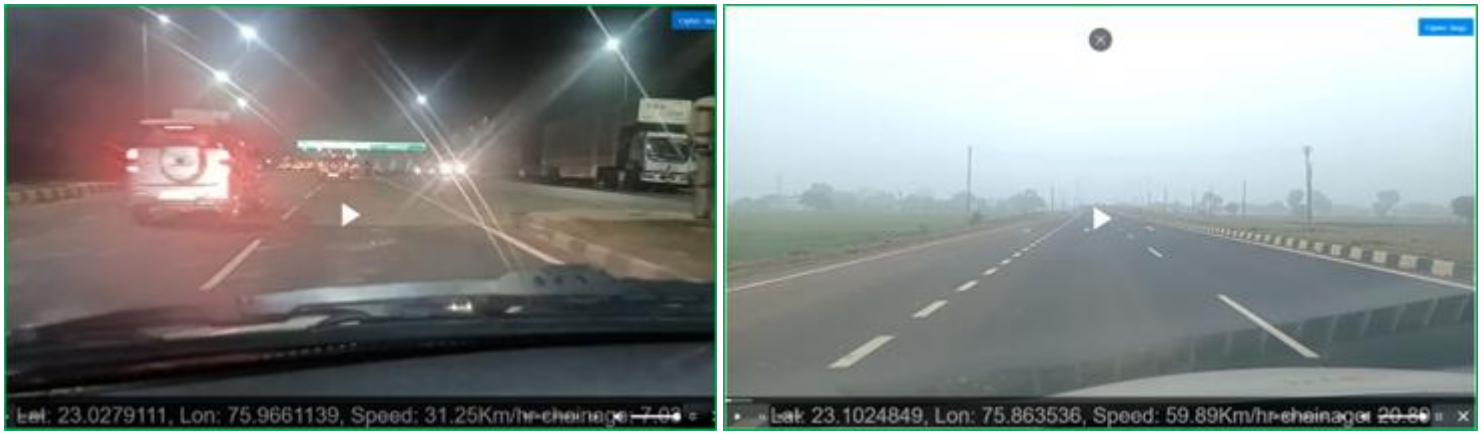


Figure 6-1: Snapshot-displaying output format of driver's eye level video

As can be seen in above image, the Vehicle Video Recorder records following details along with video:

- Video recording (front view – Driver's Eye Level View)
- Location of Video on the Google Map (along with coordinates of the location)
- Speed of the Recording Vehicle, in km/hour

6.3 Review of Project Documents and Communications related to Road Safety aspects

The following documents have been reviewed as a part of the Road Safety Assessment.

Table 6-1: Summary of the Roughness values using NSV

Document	Broad comments from Road Safety aspects
Concession Agreement (CA) - Signed on 29/10/2020 *(Concessionaire – M/s Dewas Ujjain Highway Pvt. Ltd)*	Clauses and warrants of various facilities along the Project Road, applicable manual and specifications, deviations from specifications manual, etc., are reviewed. The Project Road has been developed as per the applicable manual – IRC: SP:84-2014. It may be noted that, specific warrants or BOQ of road furniture items has not been provided in the CA. whereas it is mentioned as - all furniture items shall be provided in accordance with the manual where applicable, and the manual includes various warrants for road furniture items.

Document	Broad comments from Road Safety aspects
Appointed date, and COD correspondences	**Appointed date:** As per e-file 3918, the appointed date of the Project is declared as 06-07-2021. **COD:** As per Letter No. LMMIPPL/Auth/NHAI/Dewas-Ujjain/2024-25 COD of Project Road as per Clause 14.4.2has been received on 16th January 2024
Plan & Profile, TCS, COS, and approved drawings	• TCS, Plan & Profile, PGR drawings have been received and reviewed with respect to CA provisions. However, as mentioned earlier, location specific/Black Spots related geometrical aspects are not studied as part of this assignment. • Road signage plan and locations of safety barrier related drawings/information were not available. **Comments on approved MBCB drawings:** • Transition arrangement between different safety barriers, i.e., the connection between MBCB and rigid barrier is not shown in the approved drawing. • MBCB start/end treatment observed on ground are in line with approved typical MBCB drawings. However, it may be noted that this is arrangement is not in line with MELT arrangement applicable as per IRC: SP:84-2014.
Accident Data	• Accident data for previous three months (October to December 2023) has been reported and the same has been summarized in further sections of the report

6.4 Accident Data Analysis

Accident data was received for the last three months – October to December 2023 (as Project Road has been operational for only three months).

Table 6-2: Summary of the Roughness values using NSV

S. No.	Month of accidents	Type of Accident			Major cause of accidents
		Fatal	Grievous	Minor	
1	Oct-23	0	0	15	Over speed cause is attributed to all the recorded accidents
2	Nov-23	0	0	8	Negligence on the part of driver/ rough driving is attributed to all the recorded accidents.
3	Dec-23	1	1	5	
Total accidents -30		**1**	**1**	**28**	

- In the table provided, it is evident that approximately 30 accidents occurred during the last three months, i.e. from October to December 2023.These incidents predominantly involved minor injuries, with one fatal and one grievous accident reported in the month of December 2023. Over speed and negligence on the part of driver/rough driving is attributed to all the recorded road accidents.
- 10 out of 30 accidents occurred at 7+200 i.e. at Toll Plaza, due to over-speeding and negligent driving.

Chapter 7
OPERATION & MAINTENANCE COST

CHAPTER 7. OPERATION AND MAINTENANCE COST

7.1 General

This Chapter presents details on the O&M expenditure to be incurred. The expenses are divided into four heads.

- Routine Maintenance Expenses to maintain the asset to the standards set forth in the Concession Agreement.
- Major/ Periodic Maintenance Expenses
- Operating Expenses

7.2 Estimation of Operation & Maintainance cost

The Routine Maintenance activities related to pavement include pothole repair, crack sealing, shoulder repair, drain maintenance, renewal of road markings, maintenance of cross drainage works etc. A before-hand estimate of repairs to be carried annually, must be determined to calculate the anticipated routine maintenance cost of the Project. Most of the annual routine maintenance activities are estimated based on experience and the past data of the Project as these activities varies Project to Project and there are no hard and fast rules to obtain exact quantity.

Routine maintenance cost for this Project is summarized in next section of Cost Estimates. The list of items considered in routine maintenance are summarized in the table below,

Table 7-1: List of Items Considered in Routine Maintenance Cost Estimate

S. No	Description of Item
1	**HIGHWAY**
	Flexible Pavement
	▪ Potholes ▪ Cracks ▪ Rutting/Depression/Settlement ▪ Ravelling/Stripping ▪ Re-surfacing
	Rigid Pavement

S. No	Description of Item
	▪ Slab Replacement ▪ Crack Sealing ▪ Ravelling/honeycombing, scaling, Polished Surface
	Hard/Earth shoulders, side slopes
	▪ Edge drop at shoulders ▪ Blading/reshaping to restore proper slopes and sides so as to maintain the standard formation width ▪ Rain cuts/gullies in slope ▪ Repairs of Stone Pitching/Turfing
2	**STRUCTURES**
	Superstructure of Bridges
	▪ Cracks ▪ Temporary Measures ▪ Permanent Measures ▪ Spalling / Scaling
	Foundation of Bridges
	▪ Scouring and /or Cavitation
	Piers, abutments, return walls and wing walls of bridges
	▪ Cracks and damages including settlement and tilting
	Joints in bridges
	▪ Loosening and malfunctioning of joints
	Other items relating to bridges
	▪ Gathering of dirt in bearings and joints or clogging of spouts, weep holes and vent-holes ▪ Damage or deterioration in parapets and handrails ▪ Rain-cuts or erosion of banks of the side slopes of approaches ▪ Damage to wearing coat ▪ Damage or deterioration in approach slabs, pitching, apron, toes, floor or guide bunds ▪ Growth of vegetation affecting the structure or obstructing the waterway

S. No	Description of Item
3	**ROAD FURNITURES, SIGNAGES AND PAVEMENT MARKING**
	▪ Repair to road signs -damage to shape or position; Poor visibility or loss of retro-reflectivity ▪ Replacing/installing delineators ▪ Replacing uninstalling delineators & all type of road sign ▪ Repairs MBCB ▪ Replacing of MBCB /New jersey crash barrier ▪ Repairs to Handrails /Pedestrian guard rails /flyover railings etc. ▪ Replace Handrails /Pedestrian guardrails/flyover railings etc. ▪ Fixing of distance measurement stone ▪ Hectometre stones ▪ Kilometre stones ▪ 5th Kilometre stones ▪ Boundary stones ▪ Painting ▪ Hectometre stones ▪ Pavement Marking ▪ Hot applied thermoplastic compound ▪ Painting kerb with synthetic enamel paint
4	**MISCELLANEOUS ITEMS**
	Street Lighting, Electrical systems repair and maintenance etc

The routine maintenance expenses to maintain the asset to the standards set forth in the Concession Agreement are given in the table below.

Table 7-2: Routine maintenance cost of the Project

S. No.	Particulars	Frequency	Cost including GST (Cr.)	Remarks
1	**Routine Maintenance Cost**	**Annual**		
	Highway		0.87	
	Structures		0.63	
	Road Furniture, Signage & Pavement marking		0.56	
	Project Facilities		0.27	
	Total RM cost		**2.32**	

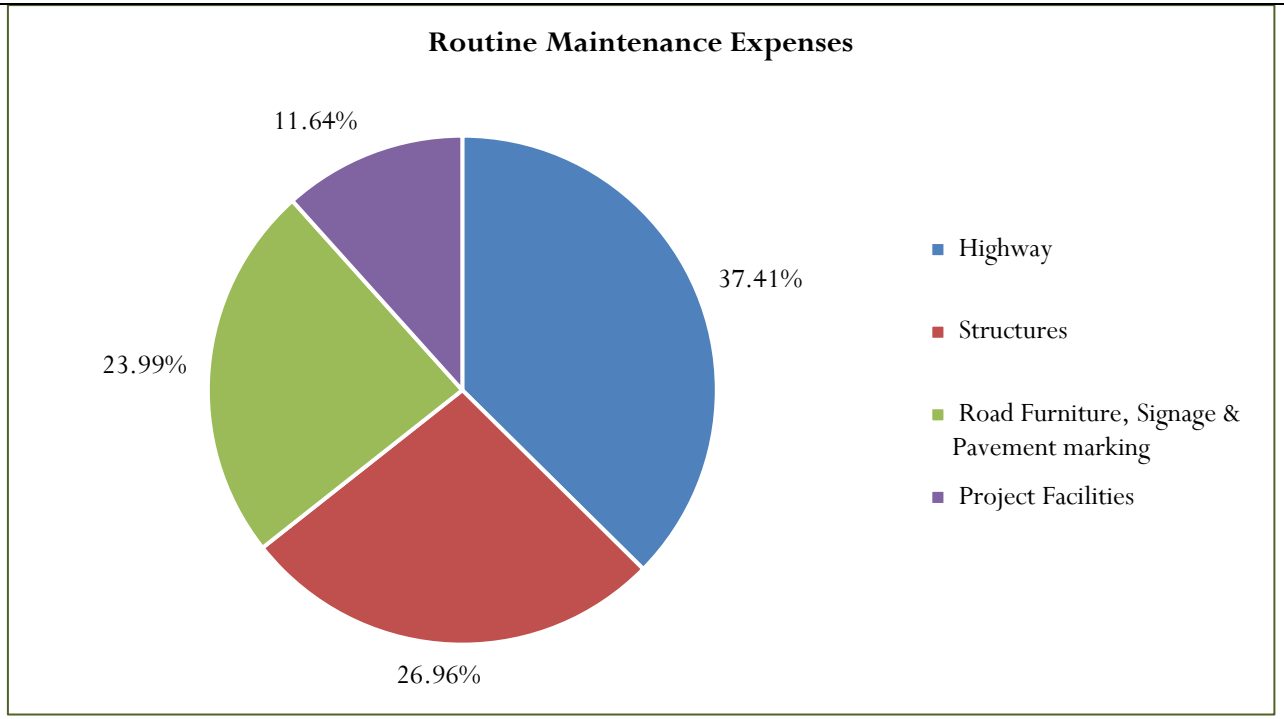


Figure 7-1: Breakup of Routine Maintenance

Table 7-3: Operational Expenditure of the Project for the Base Year FY 25

The calculation of operational expenditure for the base year FY 25 is given below:

S. no.	Description	Manpower	Annual Exp. (in Lakhs)
A.1	SPV staff and salaries	12	61.3
A.2	Tolling Operations Services_Not Applicable	0	0.0
A.3	Security Services_Outsourced	4	15.9
A.4	Incident Management Services	29	106.6
A.5	RoW and Horticulture Works_ Manpower		67.4
A.6	Electricity and Diesel Charges		85.1
A.7	TMS/HTMS System Expenses		26.9
A.8	Office Operating Expenses		4.9
A.9	Vehicle Running Expenses		20.1
A.10	Professional Fee		36.5
A.11	Community Development		0.0
A.12	Communication Expenses		1.2
A.13	Conveyance Expenses		2.4
A.14	Insurance Expenses		67.2
A.15	IE Fees		60.0
A.16	Contingency	1%	5.6
	OPEX		**561.1**

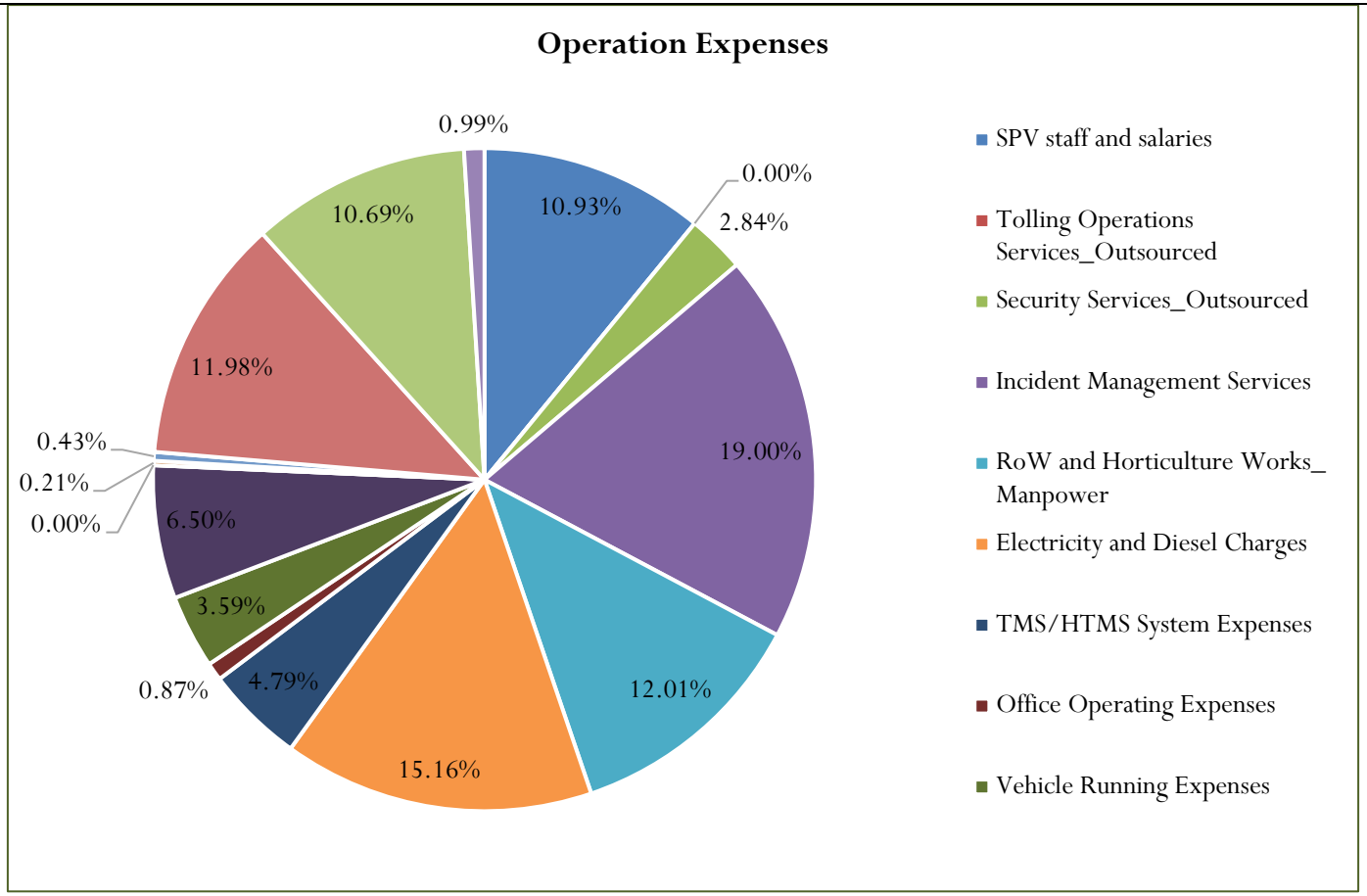


Figure 7-2: Breakup of Operation Cost

7.3 Major Maintenance Estimate

Cube Tech has considered 2 cycles for Major Maintenance as BC overlay of 40 mm for main carriageway for Cycle 1 & Cycle 2 and BC overlay of 30 mm for service road for Cycle 1 & Cycle 2. The estimate for Major Maintenance activities of the Project Stretch is as detailed below:

Table 7-4: Major Maintenance Cost for MM Cycle 1

Major Maintenance - 1st Cycle

S. No.	Description	Unit	Qty	Rate Rs.	Amount Rs.
1	Bituminous Concrete (VG - 40)	Cum	35845	10042	35,99,53,710
2	Tack Coat	Sqm	945258	13	1,22,88,355
3	Milling	Sqm	23110	90	20,79,873
4	DBM (5%)	Cum	1155	8652	99,97,258
5	Pavement Markings	Sqm	38327	520	1,99,29,982
6	Kerb Raising	Rmt	95616	300	2,86,84,800
7	Kerb Painting	Sqm	35856	90	32,27,040
8	Earthen Shoulder	Cum	7810	300	23,43,045
9	Expansion Joint (12.50% of Total Length)	Rmt	87	15750	13,65,830
10	Slope Protection Work	LS	1	5000000	50,00,000
11	Miscellaneous and Contingencies (1%)				44,48,699
				Grand Total	**44,93,18,593**
				Grand Total Including GST (18%)	**53,01,95,940**
				Grand Total (In Cr)	**53.02**

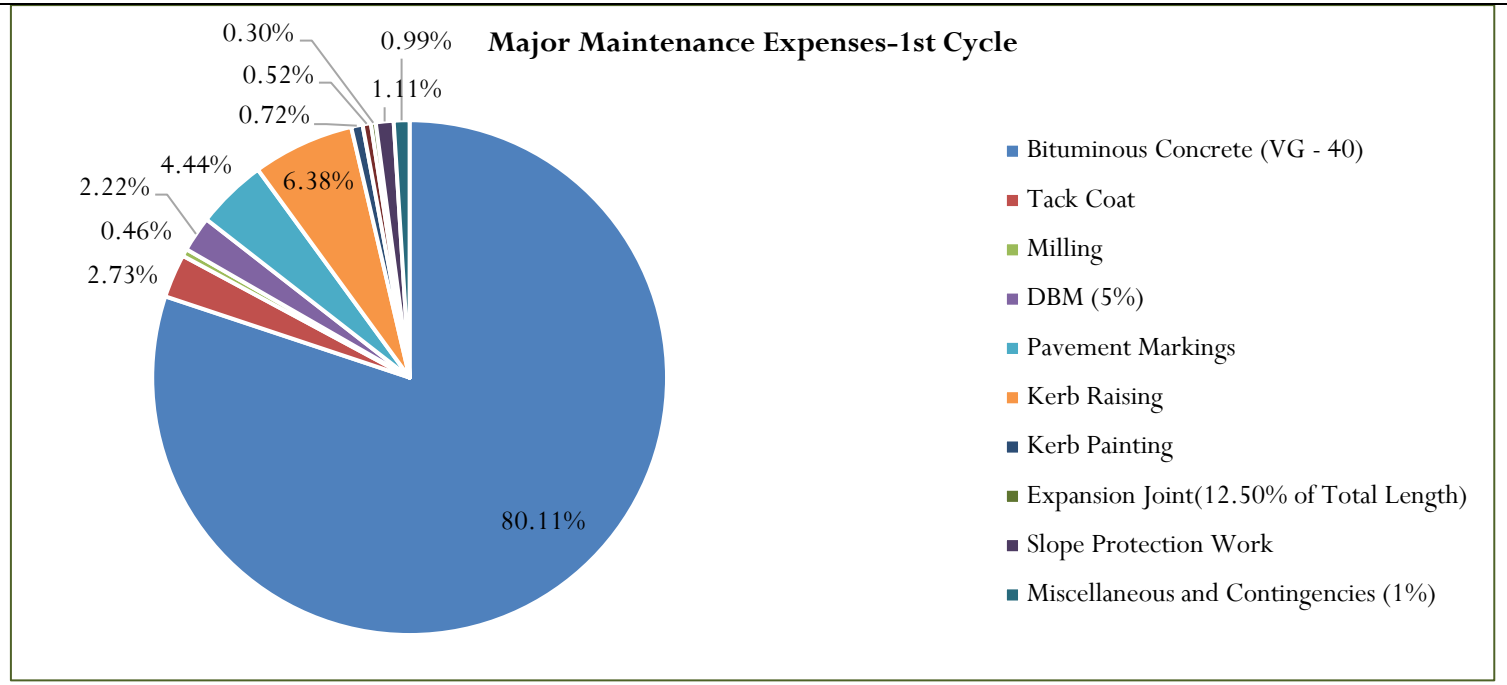


Figure 7-3: Breakup of Major Maintenance Expenses 1st Cycle

Table 7-5: Major Maintenance Cost for MM Cycle 2

Major Maintenance - 2nd Cycle					
S. No.	**Description**	**Unit**	**Qty**	**Rate Rs.**	**Amount Rs.**
1	Bituminous Concrete (VG - 40)	Cum	35845	10042	35,99,53,710
2	Tack Coat	Sqm	922148	13	1,19,87,929
3	Pavement Markings	Sqm	38327	520	1,99,29,982
4	Kerb Painting	Sqm	35856	90	32,27,040
5	Earthen Shoulder	Cum	7810	300	23,43,045
6	Electric Light Pole Bulb Replacement	No	1115	11000	1,22,65,000
7	Electric Light Pole Highmast Replacement	No	6	130000	7,80,000
9	Slope Protection Work	LS	1	5000000	50,00,000

Major Maintenance - 2nd Cycle					
S. No.	**Description**	**Unit**	**Qty**	**Rate Rs.**	**Amount Rs.**
10	Miscellaneous and Contingencies (2%)				41,68,525
			Grand Total		**42,10,21,061**
			Grand Total Including GST (18%)		**49,68,04,853**
			Grand Total (In Cr)		**49.68**

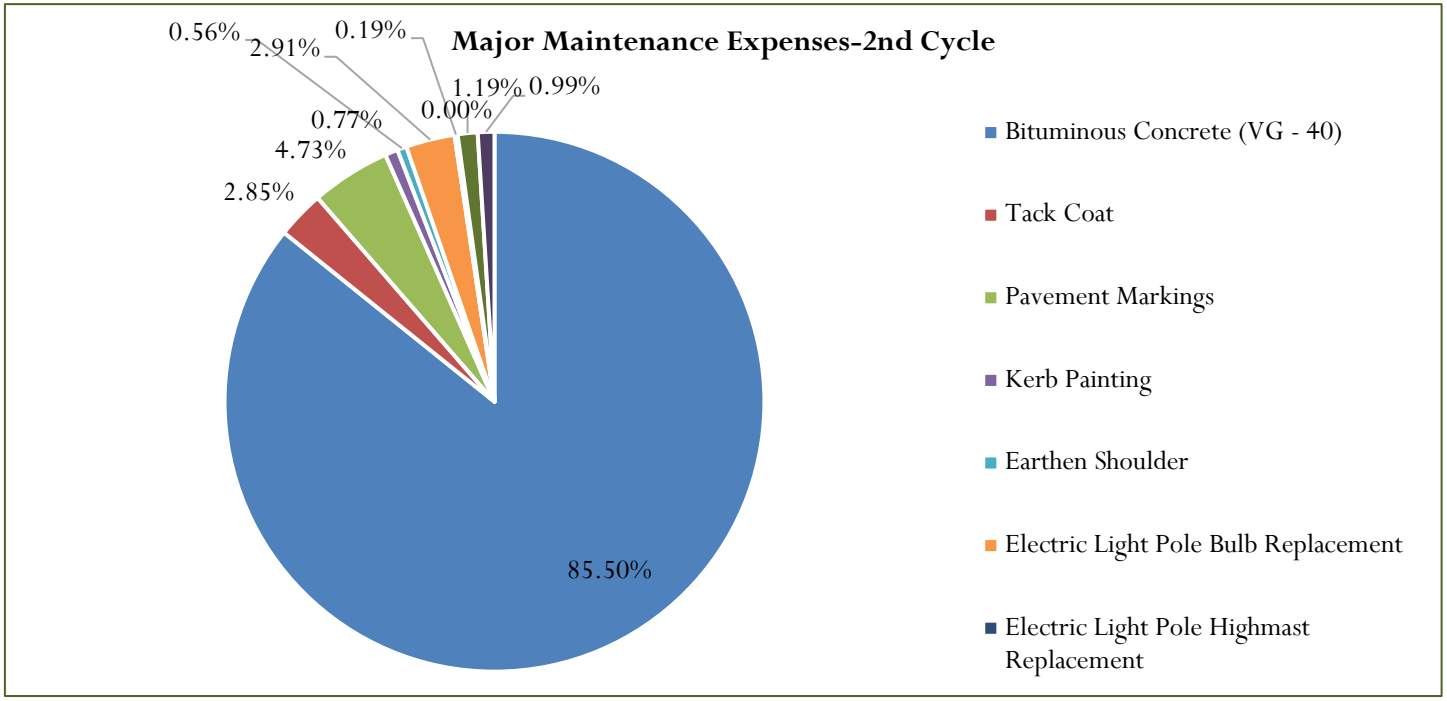


Figure 7-4: Major Maintenance Expenses 2nd Cycle

7.3.1 Major Maintenance expenses during O&M period

Based on the Cube Tech estimates, the total major maintenance expenses considering the escalation is 152.64 crores.

7.4 Projections of O&M Expenses

The O&M expenses for the entire Concession Period is presented in this section .

The following escalations are considered:

Table 7-6: Escalation Factors

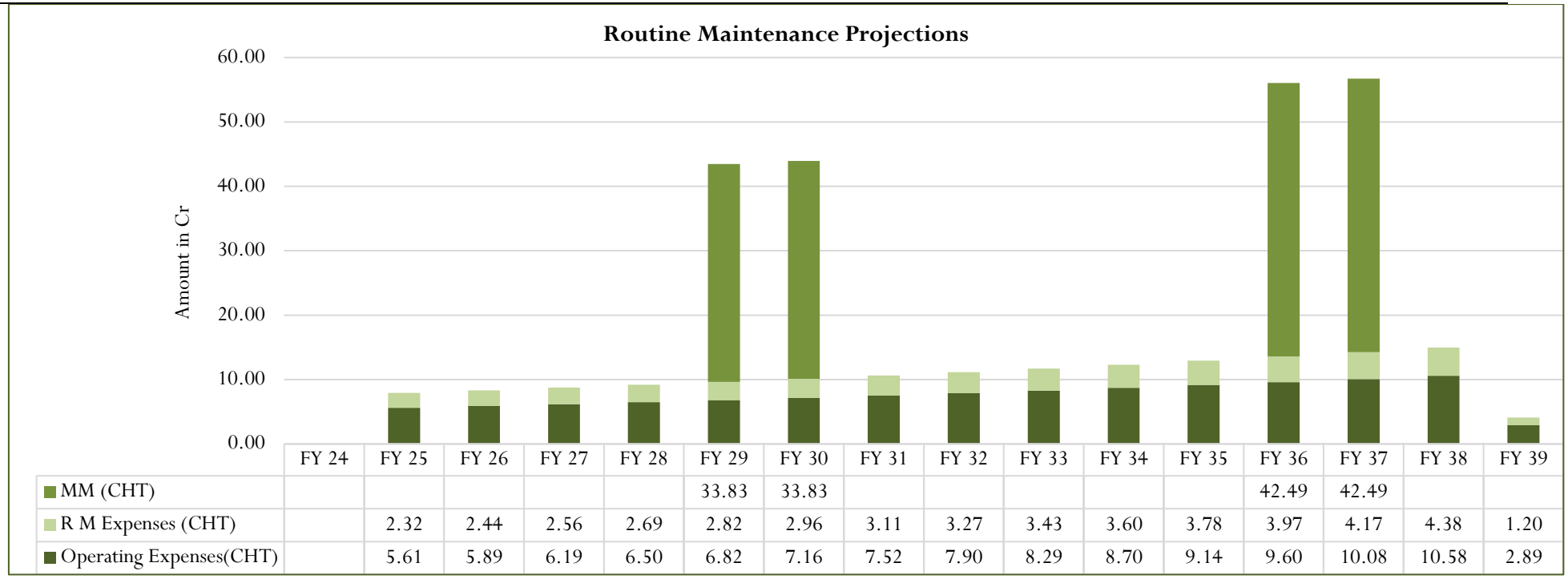
Items	Escalation
Operating Expenses	5.00%
Routine Maintenance	5.00%
Major Maintenance	5.00%

The Projections of total O& M expenses including Major Maintenance for 2 Cycles of the Project Company and CHT is given in the table below

Table 7-7: Projections of total O&M expenses of the Project during O&M period

Particulars	Total Expense (In Cr.)	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	FY 32	FY 33	FY 34	FY 35	FY 36	FY 37	FY 38	FY 39
Operating Expenses (CHT)	**112.86**	5.61	5.89	6.19	6.50	6.82	7.16	7.52	7.90	8.29	8.70	9.14	9.60	10.08	10.58	2.89
R M Expenses (CHT)	**46.71**	2.32	2.44	2.56	2.69	2.82	2.96	3.11	3.27	3.43	3.60	3.78	3.97	4.17	4.38	1.20
MM (CHT)	**152.64**					33.83	33.83						42.49	42.49		
O&M and MM (CHT)	**312.21**	**7.93**	**8.33**	**8.75**	**9.18**	**43.48**	**43.96**	**10.63**	**11.16**	**11.72**	**12.31**	**12.92**	**56.05**	**56.73**	**14.96**	**4.09**

The graph for the total cost Projections of expenses during O&M period given by the Cube Highways Technologies is shown in the figure below.

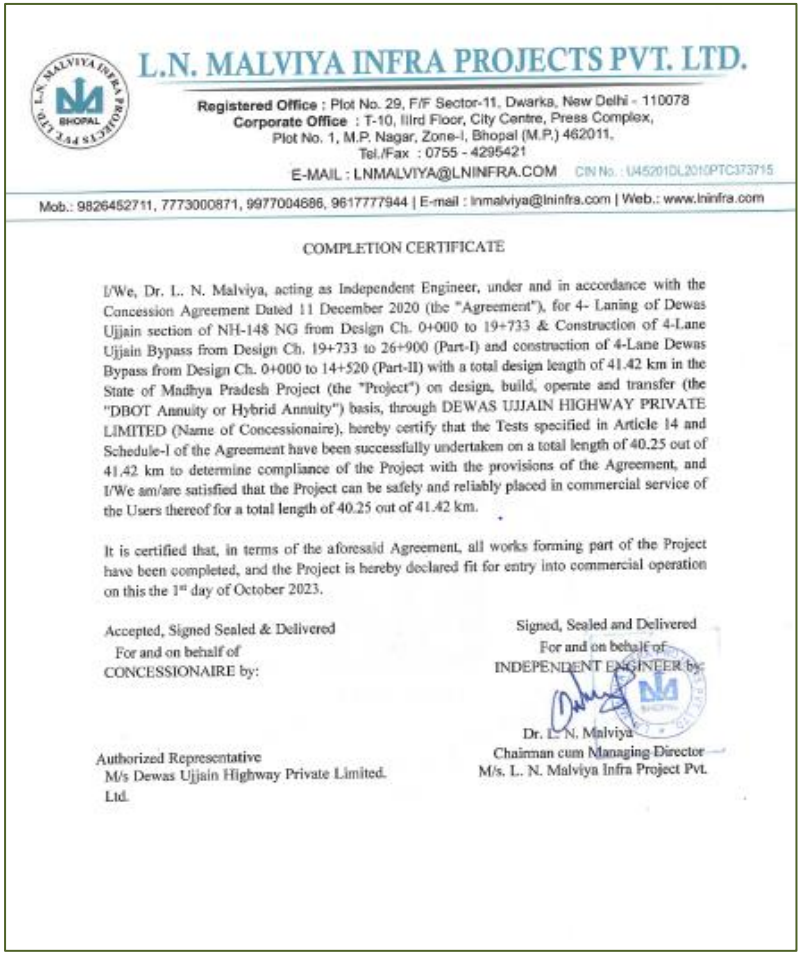


	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	FY 32	FY 33	FY 34	FY 35	FY 36	FY 37	FY 38	FY 39
MM (CHT)						33.83	33.83						42.49	42.49		
R M Expenses (CHT)		2.32	2.44	2.56	2.69	2.82	2.96	3.11	3.27	3.43	3.60	3.78	3.97	4.17	4.38	1.20
Operating Expenses(CHT)		5.61	5.89	6.19	6.50	6.82	7.16	7.52	7.90	8.29	8.70	9.14	9.60	10.08	10.58	2.89

Figure 7-5: O&M, RM and MM Expenses Projections

The total O&M cost including Major Maintenance estimated by the CHT is Rs.312.21 Cr.

Annexure I: PCOD & COD letters



L.N. MALVIYA INFRA PROJECTS PVT. LTD.

Registered Office : Plot No. 29, F/F Sector-11, Dwarka, New Delhi - 110078
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Tel./Fax : 0755 - 4295421
E-MAIL : LNMALVIYA@LNINFRA.COM CIN No. : U45201DL2010PTC373715
Mob.: 9826452711, 7773000871, 9977004686, 9617777944 | E-mail : lnmalviya@lninfra.com | Web.: www.lninfra.com

COMPLETION CERTIFICATE

I/We, Dr. L. N. Malviya, acting as Independent Engineer, under and in accordance with the Concession Agreement Dated 11 December 2020 (the "Agreement"), for 4- Laning of Dewas Ujjain section of NH-148 NG from Design Ch. 0+000 to 19+733 & Construction of 4-Lane Ujjain Bypass from Design Ch. 19+733 to 26+900 (Part-I) and construction of 4-Lane Dewas Bypass from Design Ch. 0+000 to 14+520 (Part-II) with a total design length of 41.42 km in the State of Madhya Pradesh Project (the "Project") on design, build, operate and transfer (the "DBOT Annuity or Hybrid Annuity") basis, through DEWAS UJJAIN HIGHWAY PRIVATE LIMITED (Name of Concessionaire), hereby certify that the Tests specified in Article 14 and Schedule-I of the Agreement have been successfully undertaken on a total length of 40.25 out of 41.42 km to determine compliance of the Project with the provisions of the Agreement, and I/We am/are satisfied that the Project can be safely and reliably placed in commercial service of the Users thereof for a total length of 40.25 out of 41.42 km.

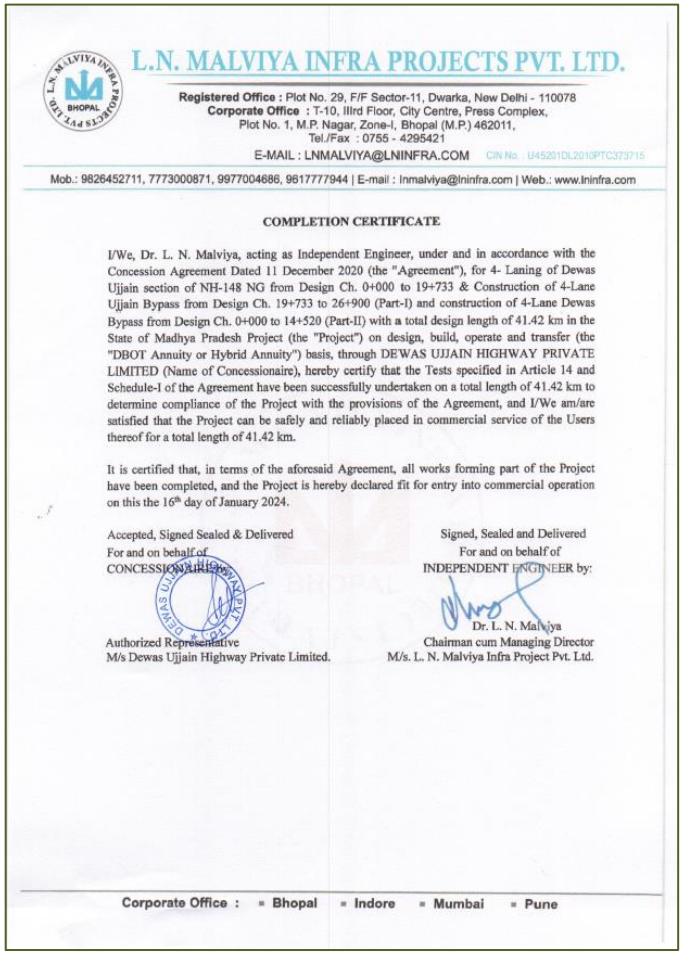
It is certified that, in terms of the aforesaid Agreement, all works forming part of the Project have been completed, and the Project is hereby declared fit for entry into commercial operation on this the 1st day of October 2023.

Accepted, Signed Sealed & Delivered
For and on behalf of
CONCESSIONAIRE by:

Authorized Representative
M/s Dewas Ujjain Highway Private Limited.
Ltd.

Signed, Sealed and Delivered
For and on behalf of
INDEPENDENT ENGINEER by:

Dr. L. N. Malviya
Chairman cum Managing Director
M/s. L. N. Malviya Infra Project Pvt.



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It is certified that, in terms of the aforesaid Agreement, all works forming part of the Project have been completed, and the Project is hereby declared fit for entry into commercial operation on this the 16th day of January 2024.

Accepted, Signed Sealed & Delivered
For and on behalf of
CONCESSIONAIRE by:

Authorized Representative
M/s Dewas Ujjain Highway Private Limited.

Signed, Sealed and Delivered
For and on behalf of
INDEPENDENT ENGINEER by:

Dr. L. N. Malviya
Chairman cum Managing Director
M/s. L. N. Malviya Infra Project Pvt. Ltd.

Corporate Office : ▪ Bhopal ▪ Indore ▪ Mumbai ▪ Pune

Annexure II: Pavement Distress Survey

A pavement condition survey gives an indication of the serviceability of the road pavement and is vital in deciding the maintenance activities. Some methods to conduct this survey are the Visual Condition Survey method (manual), Network Survey Vehicle (NSV) method, etc. However, Visual Condition Survey was conducted in this Project.

In a visual condition survey, the technical experienced staff makes a traverse along the project stretch, observing the different types of distresses on the pavement surface, and observations are made on each distress type.

Distresses on bituminous pavements includes,

- Cracks – Longitudinal, Transverse, and Alligator cracks
- Raveling
- Rutting
- Bleeding
- Potholes
- Patches

The cost for repair and rectification has been factored in the O&M estimation and the Concessionaire has taken up the rectification works. Observations made during the visual condition survey are detailed below.

Longitudinal Cracks

Structural cracks like longitudinal cracks develop parallel to the traffic direction and extend through the depth of the bituminous pavement layer, which can be bottom-up or top-down crack.

Longitudinal cracks were not observed at any locations of the project Stretch.

Transverse Cracks

Structural cracks like transverse cracks develop perpendicular to the traffic direction and extend through the depth of the bituminous pavement layer.

Transverse cracks were observed at very few locations (two) of the project Stretch (At structures approach slab).

Figure 7-6: Transverse cracks

Alligator Cracks

Alligator cracking also referred to as fatigue cracking or crocodile cracking, refers to a pattern of asphalt damage that resembles the scales on an alligator's skin. The cracks form co-joined, irregular "blocks' that are often four-sided, such as rectangles, but they can also have more sides and, on occasion, as few as three sides.

Alligator cracks were not observed at any locations of the project Stretch.

Raveling

Raveling is wearing away of the pavement surface due to loss of bitumen binder and dislodged aggregate particles. This distress indicates that either the bitumen binder has hardened appreciably, or a poor-quality mixture is present. In addition, ravelling may be caused by certain types of traffic, for example, tracked vehicles. Softening of the surface and dislodging of the aggregates due to oil spillage and weathering are also included under ravelling.

Low severity Raveling was observed at few locations of the project Stretch.

Figure 7-7: Raveling

Rutting

A rut is a surface depression of pavement in the wheel paths, and pavement uplift may occur along the sides of the rut. Rutting stems from a permanent deformation in any pavement layers or subgrade usually caused by consolidated or lateral movement of the materials due to traffic load.

Low severity Rutting associated with bleeding was observed at few locations of the project Stretch.

Bleeding

A surface having a thin film of excess or free bituminous binder on it, which creates a shiny, glass like reflecting surface tending to become soft in hot weather and slippery in cold and wet weather, eventually developing low skid resistance is referred to as bleeding or fatty bituminous surface.

Bleeding was at some locations of the project Stretch.

Figure 7-8: Bleeding

Potholes

Potholes are small (or big, based on severity) bowl-shaped depressions on the pavement surface. In general, potholes are formed in later stages of highly ravelled or cracked pavement surface resulting in bowl-shaped depressions.

Patches

The patch is an area of the pavement which have been repaired or replaced by new material to remove a certain defect on the pavement. The patch is considered a defect no matter how well it is performing, and some roughness is associated with this type of distress.

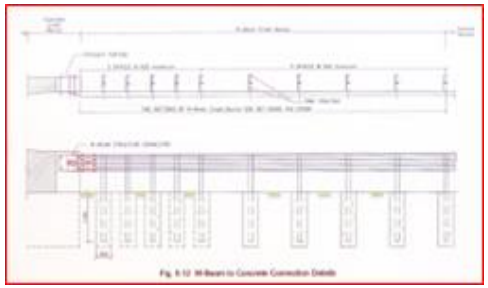
Patches were observed at only one location of the project Stretch.

Annexure III: Identified Safety concerns along the Project Road

Keeping in view the scope of assignment, safety concerns have been recorded on site and reported in the table below. Remarks and recommendation column includes information on clauses of CA & applicable manual, any observations in the IE reports/project documents and our recommendations against the highlighted safety concern. Risk and priority of each safety concern are also included as per the following criteria given in line with IRC: SP:88-2019 (Manual on Road Safety Audit).

- Risk categories for identified safety concern: Very High, High and Medium
- Priority level for recommendations: Essential, Highly Desirable and Desirable

Table 7-8: Summary of the Roughness values using NSV

S. No.	Safety concern		Recommendation		Type of concern
	Current Situation	Risk	Recommendation and Remarks	Priority	
1	**Safety Barrier**				
A	**connection between MBCB and Rigid barrier**	**Very High**		**Essential**	**Installation issue**
	transition arrangements between MBCB and the Rigid barrier. Generally, MBCB posts are spaced 2m apart. However, in the transition arrangement to the rigid barrier, number and spacing of post vary to provide greater rigidity to the semi-flexible barriers. (5 posts at intervals of 0.9m c/c, and next set of 5 posts at intervals of 0.6m c/c.) Image presents the current arrangement of the barriers at the transition section. 		Following transition arrangement is prescribed in applicable manual (IRC: SP:84-2014, Fig. 9.12).  However, the approved drawing that is submitted for review does not contain transition arrangement drawing.		
C	**Damaged Metal beam crash barrier**	**Very High**		**-**	**No Issue**

S. No.	Safety concern		Recommendation		Type of concern
	Current Situation	Risk	Recommendation and Remarks	Priority	
	It appears that all the furniture has been installed recently. During our site visit, the team did not encounter any damaged MBCB along the Project Road. However, proactive rectification of damaged furniture is key for safety of road users.				
D	**Wrong overlapping of MBCB plates**	**-**		**-**	**No Issue**
	No issue was observed				
E	**Improper Arrangement of MBCB and Kerb**	**-**		**-**	**No Issue**
	No issue was observed				
F	**MBCB Setback distance**	**-**		**-**	**No Issue**
	MBCB setback distance is adequate				
G	**Height of Crash barriers**	**-**		**-**	**No Issue**
	Based on visual inspection, height of crash barrier is adequate.				
H	**New installation of MBCB at hazardous locations**	**Very high**		**Essential**	**New Installation**
	During the site visit, it was observed that MBCB shall be provided at multiple hazardous locations, deviating from the applicable manual, such as: • At the base of overhead signboards • Unprotected rigid barriers (on median and shoulder sides) • At high embankment locations • At the base of electrical poles (low priority) The following photographs present few locations where MBCB is recommended as per applicable manual.		As per CA, i,e.- as per the IRC: SP: 84-2014, Clause 9.7.1 – Roadside Safety Barriers, MBCB shall be provided at hazardous locations Such observations have not been notified in the IE MPR submitted for review. However, details of hazardous locations where MBCB is required as per applicable manual are provided in Annexure I.		

S. No.	Safety concern		Recommendation		Type of concern
	Current Situation	Risk	Recommendation and Remarks	Priority	
I	**Welded connection of MBCB Plates**	**-**			**No Issue**
	No issue was observed				
J	**Wire Rope Barrier Setback distance**	**-**		**-**	**NA**
	NA		NA		
K	**Wire Rope Barriers Distance from face of the kerb**	**-**		**-**	**NA**
	NA		NA		
L	**Start of RCC crash barrier w.r.t. grade separator**	**-**		**-**	**No Issue**
	No issue was observed				
M	**RCC crash barrier at Bridges**	**-**		**-**	**No Issue**
	No issue was observed				
2	**Pedestrian Guard Rail**				
A	**New installation of PGR at built up section**	**-**		**-**	**No Issue**
	No issues observed				
B	**PGR and rigid barrier connection**	**-**		**-**	**No Issue**
	NA		NA		
3	**Pedestrian Facilities**	**-**		**-**	**No Issue**
	No issue was observed. Pedestrian facilities such as pedestrian cross marking and sign at every median opening has been provided.				

S. No.	Safety concern		Recommendation		Type of concern
	Current Situation	Risk	Recommendation and Remarks	Priority	
4	**Median walls in b/w structures**	**-**		**-**	**No Issue**
	No issue was observed. Median walls present between the bridge and Culvert rigid barriers of MCW and SR				
5	**Highway Lighting**				
A	**Highway Lighting at the underside of the Grade separator**	**High**			**New Installation**
	Floodlights are missing below the underpasses (for all structures), and there are no correspondence or road furniture plan drawings to support the provision of the same.		As per the applicable manual of CA (Clause 12.3.3 & 3.3.4 of IRC: SP:84-2014), lights shall be provided at top and underside of grade separated structures. Such observations have not been notified in the IE MPR submitted for review. Details & quantification of the lighting requirement as per applicable manual are provided in Annexure I. (Approximately 11 Grade separated structures).		
B	**Highway Lighting Lux**	**-**		**-**	**No Issue**
	Based on visual inspection, highway lightning functionality is adequate and effective. 		No issue was observed		
6	**Solar Blinker**				
A	**Non-Functional solar blinkers and missing blinker lights**	**-**		**-**	**No Issue**

S. No.	Safety concern		Recommendation		Type of concern
	Current Situation	Risk	Recommendation and Remarks	Priority	
	Solar blinkers are adequate and working.		No issue was observed.		
B	**Height of solar blinkers**	**-**		**-**	**No Issue**
	Based on visual inspection, it was observed that the height of solar blinker was adequate.		No issue was observed		
C	**LED Traffic Beacons/Solar Blinkers arrangement**	**-**			**No Issue**
	Currently, solar blinkers are placed as per standards		No issue was observed		
D	**New Installation of Solar Blinkers**	**-**		**-**	**No Issue**
	Solar blinkers are already installed as per applicable manual at median openings, service road diverging access points, and a few side roads, etc.		No issue was observed.		
7	**Night-time visibility**	**-**		**-**	**No Issue**
	Retroreflective stickers on the road furniture are adequate provided wherever required. Also, provided highway lighting is functional and effective.		No issue was observed		
8	**Sign Board**				
A	**Issue with an existing installation of sign boards (Damaged, faded, visibility, etc.,)**	**-**		**-**	**No Issue**
	As the Project Road has been recently constructed, all the provided road furniture items are effective and adequately provided.		No issue was observed		

S. No.	Safety concern		Recommendation		Type of concern
	Current Situation	Risk	Recommendation and Remarks	Priority	
9	**Object and Kerb Painting**	**-**		**-**	**No Issue**
	Based on visual inspection, the object painting provided is observed to be adequate.				
10	**Safety Measures at critical locations, i.e., Transverse Bar Marking**	**-**		**-**	**No Issue**
	Solar blinkers are observed at median openings and service road diverging portions. Additionally, TBM has been noticed at every median opening.		No issue was observed		
11	**Road Studs**	**-**		**-**	**No Issue**
	Road studs have been provided for most of the locations all along the Project Road.		No issue was observed		
12	**Road Delineator**	**-**		**-**	**No Issue**
	No issue was observed				
13	**Road Geometry**				
A	**Improper connections of Minor Roads**	**-**		**-**	**No Issue**
	All minor road connection profile is observed to be good as per site investigation		No issue was observed		
B	**Absence of storage lane at median opening/U-turn locations**	**-**		**-**	**No Issue**
	All existing median openings are equipped with storage lanes on BHS, along with traffic calming measures such as TBM, solar blinkers, markings, signage, etc.		No issue was observed		
C	**Un-Authorized Median Openings (UMO)**	**-**		**-**	**No Issue**
	No issues are currently observed. If any UMO is encountered in the future, it will be addressed with priority and closed promptly.				
14	**Landscaping and Tree Plantation**				
A	**Avenue plantation condition**	**-**			
	NA		NA		
B	**Median Plantation in No Plantation Zone**	**High**		**-**	**Other general safety concern**

S. No.	Safety concern		Recommendation		Type of concern
	Current Situation	Risk	Recommendation and Remarks	Priority	
	Median plantation has been observed on storage lanes that obstruct the visibility of MO/junction. Therefore, it is recommended to carry out visibility analysis and demarcate no plantation zones along the Project Road. 			
15	**Truck Lay Bays/Bus Bays/Wayside Amenities**				
A	**Truck Lay Bye Layout**	**-**		**-**	**NA**
	N/A		NA		
B	**Bus Bays and Bus Shelters**	**High**		**-**	**Other general safety concern**
	Bus shelters are equipped with proper auxiliary lanes, markings, studs. 		As per applicable manual Clause 12.5.8 of IRC:SP:84-2014, "The entire bus bay shall be provided with lighting (minimum illumination of 40lux)" .		

S. No.	Safety concern		Recommendation		Type of concern
	Current Situation	Risk	Recommendation and Remarks	Priority	
C	**Rest Areas / Wayside Amenities**	**-**		**-**	**NA**
	NA				
16	**Other General Issues**				
A	**Water Stagnation**	**-**		**-**	**No Issue**
	No issue was observed				
B	**Un-authorized vehicle parking on shoulder**	**-**		**-**	**No Issue**
	No un-authorized parking is observed				
C	**Encroachment by temporary shops**	**-**		**-**	**No Issue**
	No issue was observed				
17	**High Transmission Line Vertical clearance**	**-**		**-**	**No Issue**
	No issue was observed				
18	**Other Project Facilities**				
A	**Highway Patrol and Ambulance**		**-**		
	-				
C			**-**		
	-				
D			**-**		
	-				
E			**-**		
	-				
F	**Medical Aid Post**		**-**		
	-				

Technical Due Diligence for Two/Four Laning of BRT Tiger Reserve Boundary to Bangalore section of NH-209 (Existing chainage from km 287.520 to km 461.550) in the State of Karnataka on Hybrid Annuity mode under NHDP Phase IV.

Technical Due Diligence Report (Private and Confidential)

July 2024

Submitted to:

Gawar Bangalore Highways Private Limited

Cube Highways Technologies Private Limited

CUBETECH
Cube Highways Technologies Pvt. Ltd.

Technical Due Diligence for Two/Four Laning of BRT Tiger Reserve Boundary to Bangalore section of NH-209 (Existing chainage from km 287.520 to km 461.550) in the State of Karnataka on Hybrid Annuity mode under NHDP Phase IV.

Documents Submittal and Contents Amendment Record

S. No.	Revision	Description	Date	Sign
1	R0	Technical Due Diligence Report	July 2024	

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ABBREVIATIONS

Abbreviation	Description
ASTM	American Society for testing and Materials
AVC	Automatic Vehicle Classifier
ABP	Allahabad bypass package
BBD	Benkelman Beam Deflection
BC	Bituminous Concrete
BOT	Built, Operate and Transfer
CA	Concession Agreement
CC Drain	Cement Concrete Drains
COD	Commercial Operation Date
CRRI	Central Road Research Institute
CBR	California Bearing Ratio test
DBFOT	Design, Build, Finance, Operate and Transfer
ETC	Electronic Toll Collection
FWD	Falling Weight Deflectometer
GOI	Government of India
GCL	Gawar Construction Limited
GBHPL	Gawar Bangalore Highways Private Limited
HPC	Hume Pipe Culvert
IE	Independent Engineer
IRC	Indian Roads Congress
LA	Land Acquisition
LHS	Left Hand Side
LOA	Letter of Acceptance
MBCB	Metal Beam Crash Barrier
MJB	Major Bridge

Abbreviation	Description
MNB	Minor Bridge
MOST	Ministry of Surface Transport
MPR	Monthly Progress Report
NH	National Highway
NHAI	National Highway Authority of India
NSV	Network Survey Vehicle
O&M	Operation and Maintenance
OHLS	Overhead Lane Signal
OHM	Object Hazard Marker
PCOD	Provisional Commercial Operation Date
POS	Point of Sale
POS	Point of sale
RCC	Reinforced Cement Concrete
RHS	Right Hand Side
ROB	Road/Rail Over Bridge
ROW	Right of Way
RPV	Route Petrol Vehicle
RUB	Road/Rail Under Bridge
SH	State Highway
SPV	Special Purpose Vehicle
SR	Service Road
SSWIM	Slow Speed Weigh in Motion
SWB	Static Weigh Bridge
TOT	Toll Operate Transfer
TC	Toll Collector
Team	Team of Cube Highways Technologies Pvt Ltd.
TMS	Toll Management System
WIM	Weigh in Motion

Abbreviation	Description
WMM	Wet Mix Macadam

Chapter 1
INTRODUCTION

CHAPTER 1. INTRODUCTION

1.1 Background

Infrastructure Sector is a key driver for the Indian economy. In 2014, the Government of India have introduced a new investment vehicle which allows investors to participate in the growth story of infrastructure sector, named Infrastructure Investment Trusts (hereinafter referred to as 'InvITs'). InvITs are instruments on pattern of mutual funds and are designed to pool in money from a number of investors to invest in assets that give cash flow over a period of time. The InvITs are regulated by the SEBI (Infrastructure Investment Trusts) Regulations Act, 2014.

In highway sector, InvIT as an instrument provide greater flexibility to investors and is expected to attract patient capitals (for say, 20-30 years) to the market, as these investors are averse to construction risks and are interested in investment in assets which provide long-term stable returns.

InvIT shall have a (i) Trustee, (ii) Sponsor(s) (iii) Investment Manager and (iv) Project Manager, Sponsor and Project Manager are the same entities. During maintenance period of the project highway, Gawar Construction Limited. (In its capacity as the Project Manager of National Infrastructure Trust) has appointed M/s Cube Highways Technologies Private Limited as Technical Consultant for carrying out technical study and assessment of Opex and Major Maintenance requirement (MMR) for balance concession period. The scope includes review of operation and maintenance system and to prepare maintenance schedule for entire duration of concession period based on a technical analysis. In turn, Cube Highways Technologies undertook the site visits to carry out site inspection. The report is based on findings during this period.

National Infrastructure Trust ("Trust") was settled on September 25, 2023, in Gurugram pursuant to the Trust Deed as a contributory irrevocable trust in accordance with the Indian Trusts Act, 1882. The Trust is an Infrastructure Investment Trust (InvIT) established for making investments in special purpose vehicles as defined under Regulation 2(1) (zy) of the InvIT Regulations, or infrastructure projects or securities of Indian companies engaged in the infrastructure sector, as may be permitted in terms of Regulation 18(5) of the InvIT Regulations. Axis Trustee Services Limited (ATSL) is the Trustee to the Trust. Gawar Investment Manager Private Limited (GIMPL) was incorporated as a private limited company on August 26, 2023, under the Companies Act, 2013. GIMPL is a wholly owned subsidiary of Gawar Construction Limited. GIMPL has been appointed as the Investment Manager to the NIT InvIT by Axis Trustee Services Limited (ATSL); the trustee to NIT InvIT and is responsible for managing the operations of InvIT in accordance with InvIT regulations.

Table 1-1: Projects Comprising the Initial Portfolio Assets of National Infrastructure Trust

S. No.	Name of the Project	Length (km)
1.	Gawar Rohna Jhajjar Highway Private Limited	35.45
2.	Gawar Khajuwala BAP Highway Private Limited	212.107

S. No.	Name of the Project	Length (km)
3.	Gawar Narnaul Highway Private Limited	45.30
4.	Gawar Rohna Sonepat Highways Private Limited	40.50
5.	Hardiya Hasanpur Highway Private Limited	47.225
6.	Gawar Kiratpur Nerchowk Highway Private Limited	47.753
7.	Dewas Ujjain Highway Private Limited	41.42
8.	**Gawar Bangalore Highways Private Limited**	**164.34**
9.	Gawar Nainital Highways Private Limited	43.905

1.2 Asset Background

The National Highways Authority of India (NHAI) on behalf of Ministry of Road Transport and Highways (MORT&H), Government of India, have taken up the development of various National Highway corridors where the intensity of traffic has increased significantly and there is requirement of augmentation of capacity for safe and efficient movement of traffic. In this regard, NHAI has been entrusted to develop Projects for selected corridors through design, build, operate and transfer (the "DBOT Annuity" or "Hybrid Annuity") basis.

As part of this endeavour, the Government of India had entrusted to the Authority the development, maintenance and management of National Highway No. 209 including the section design chainage from km 287.500 to km 458.420 (existing chainage from. Km. 287.520 to km. 461.550) (approx. 170.920 km). The Authority had resolved to augment the existing road from km 287.520 to km 461.550 (design chainage from km 287.500 to km 458.420) (approximately 170.920 km) on the BRT Tiger Reserve Boundary to Bangalore section of National Highway No. 209 (hereinafter called the "NH 209") in the State of Karnataka by Two/Four-Laning thereof (the "Project") on design, build, operate and transfer (the "DBOT Annuity" or "Hybrid Annuity") basis, which shall be partly financed by the Concessionaire who shall recover its investment and costs through payments to be made by the Authority, in accordance with the terms and conditions to be set forth in the Concession Agreement.

The Hybrid Annuity Model (HAM) is a mix of BOT Annuity and EPC models. As per the design, the Authority will contribute up-to 40% of the Project cost in five equal instalments of 8% each during the construction period of 730 days with the provisions of Clause 23.4 of CA. The remaining payment will be made based on the assets created and the performance of the developer. Here, hybrid annuity means the first 40% payment is made as fixed amount in five equal instalments whereas the remaining 60% is paid as variable annuity amount after the completion of the Project. As per the design, Authority will contribute 40% of the BPC and the balance cost is funded by Concessionaire through debt and equity.

The Authority had accordingly invited proposals by its Request for Proposal dated 13th April 2016 (the "Request for Proposals" or "RFP") for short listing of bidders for construction, operation and maintenance of the above referred Project on Hybrid Annuity basis. The Authority had prescribed the technical and commercial terms and conditions and invited bids (the "Request for Proposals" or "RFP") from the bidders for undertaking the Project.

After evaluation of the bids received, the Authority had shortlisted certain bidders including, inter alia, the selected bidder and accepted the financial bid of the selected bidder i.e . M/s Sadhbav Infrastructure Projects Limited)

The Authority had accepted the bid of the selected bidder and issued its Letter of Award No. NHAI/TN-KNT Bdr/NH-209/63/2012/88845 dated 26th September 2016 (hereinafter called the "LOA") to the selected bidder requiring, inter alia, the execution of this Concession Agreement within 45 (forty-five) days of the date of issue thereof. However, on 08th December 2016 it was executed on mutually agreed terms, of the date of issue thereof. The Authority has declared the appointed date as 21st August 2017.Accordigly, the project construction Completion date has been scheduled as on 20th August 2019.

Concession Agreement dated December 08, 2016 ("**Concession Agreement**") executed between the NHAI and the Sadbhav Bangalore Highway Private Limited to construct and maintain Two/Four Laning of BRT Tiger Reserve Boundary to Bangalore Section of NH-209 (Existing chainage from km. 287.520 to km. 461.550) in the state of Karnataka on Hybrid Annuity mode under NHDP Phase- IV ("**Project**") and the endorsement agreement dated February 13, 2023, executed between the NHAI, Sadbhav Bangalore Highway Private Limited, Gawar Bangalore Highways Private Limited ("**New Concessionaire**") and State Bank of India **("Lender's Representative"),** pursuant to which the New Concessionaire has agreed to complete the balance work and taken over the rights and obligations of the Project from the Effective Date in terms of the Concession Agreement."

Accordingly, SPV M/s Gawar Bangalore Highways Pvt Ltd. (hereinafter referred to as "GBHPL") has been formed, for implementing the Project Stretch (the "Concessionaire"). As Concessionaire of this Project, GBHPL will develop the project, operate, and maintain the facilities after completion of construction. Under Hybrid Annuity Model (HAM), toll collection on the Project Stretch shall be responsibility of NHAI. The Concessionaire will be recovering its costs through annuity payments made during concession period of 17 years (annuity payments during construction as well as in operations period), including construction period of 730 days from the appointed date and Operation period of 15 years from COD.

The Concession has been awarded to Substitute Concessionaire M/ Gawar Bangalore Highways Private Limited, for a Concession period of 15 years. The Concessionaire has achieved financial closure and having complied with the conditions precedent as stipulated in the Concession Agreement. The Authority has declared the appointed date as 13th February 2023. Accordingly, the project construction Completion date has been scheduled to 27th March 2024.

1.3 Report Structure

The report contains eight chapters, including this Chapter on Introduction.

Chapter 2 Project Overview

Chapter 3 Asset Status

Chapter 4 Review of Structures

Chapter 5 Review of the pavement condition survey

Chapter 6 General Safety Concerns along the Project stretch and Improvements

Chapter 7 Operation and Maintenance Cost

Chapter 2
PROJECT OVERVIEW

CHAPTER 2. PROJECT OVERVIEW

2.1 Location

The existing Project Highway starts from BRT tiger Reserve at km 287.520 and ends at Bangalore section of NH-209 at km 461.550 in the state of Karnataka. The Project stretch is a part of Chamrajanagar-Kollegala-Malavalli-Kanakpura-Bangalore route. The project road has 3 nos of toll Plaza's proposed at km.298.940, km 359.800 and km 448.900 (as Concession Agreement).

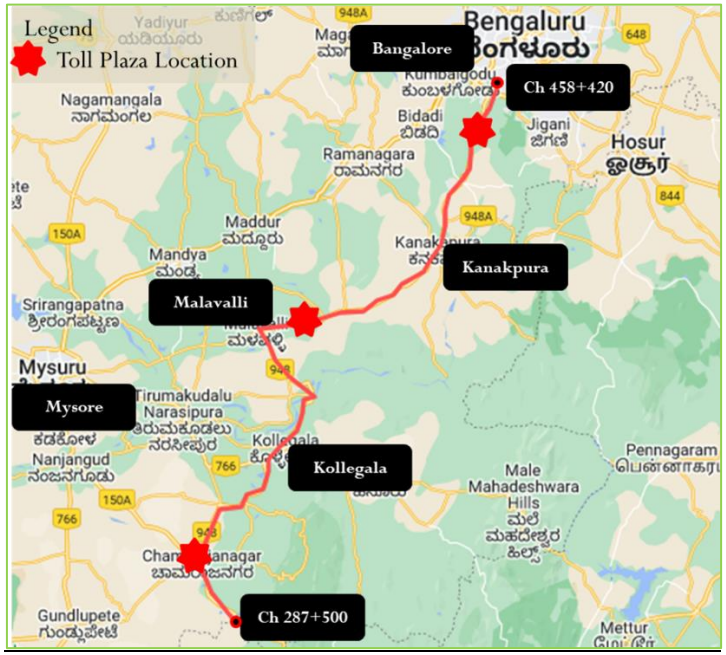


Figure 2-1: Project Alignment

2.2 Salient features

The salient features of the Project are summarised in the table below:

Table 2-1 Project Salient Features

S. No.	Scope	Description
1.	Name of the Project	Two/Four Laning of BRT Tiger Reserve Boundary to Bangalore Section Of NH-209 Design Chainage from Km.287.500 To Km. 458.420 In The State Of Karnataka On Hybrid Annuity Mode Under NHDP Phase - IV
2.	Name of Client	National Highways Authority of India
3.	Name of the Original Concessionaire	previously M/s Sadbhav Bangalore highway Pvt. Ltd.)
4.	Name of the New Concessionaire	M/s Gawar Bangalore Highways Pvt Ltd
5.	Name of EPC Contractor	M/s Gawar Constructions Ltd. (previously M/s Sadbhav Infrastructure Projects Ltd.)
6.	Independent Engineer	M/s TPF Getinsa Euroestudios S.L. in association with Segmental Consulting and Infrastructure Advisory Pvt Ltd., (Formerly GETINSA-PAYMA S.L.)
7.	Length of the Project	170.92 km as per CA (6.58 km descoped), Revised length is 164.34 km
8.	Bid Project Cost	Rs. 1008 crores
9.	Date of Award (LOA Date)	26th October 2016
10.	MOU	MOU signed on 27th July 2017 in RO, Bangalore.
11.	Date of Concession Agreement	08th December 2016
12.	Appointed Date	21st August 2017
13.	Construction Period	730 days from Appointed Date
14.	Concession period	15 Years
15.	Scheduled Date of Completion	20th August 2019
16.	Settlement Agreement date	16th August2021
17.	Intention to Termination notice issued from Authority.	12th January 2022
18.	Senior Lenders Representation (M/s SBI)	21st January 2022
19.	Substitution proposal submitted by Senior Lenders.	14th October 2022
20.	In-Principal approval for Substitution by NHAI-HQ	30th December 2022
21.	Signing of Endorsement Agreement for Substitution of Concessionaire	13th February 2023
22.	Revised SPCD	27th March 2024. (Considering 408 days from signing of Substitution Agreement)

S. No.	Scope	Description
23.	PCOD-1	31st December 2020 for the length of 81.175 km
24.	PCOD-2	IE has recommended to Authority for the length of 162.94 km out of 164.34 km via letter dated 3rd July 2024

2.3 Scope of the Project

The scope of the Project (the "Scope of the Project") shall mean and include,

- Construction of the Project on the site set forth in Schedule-A and as specified in Schedule-B together with provision of Project Facilities as specified in Schedule- C, and in conformity with the Specifications and Standards set forth in Schedule- D of the Concession Agreement.
- Operation and Maintenance of the Project in accordance with the provisions of Concession Agreement; and
- Performance and fulfilment of all other obligations of the Concessionaire in accordance with the provisions of Concession Agreement and matters incidental there to or necessary for the performance of any or all the obligations of the Concessionaire under Concession Agreement.

2.4 Physical features of the Project

The Concessionaire shall operate, manage and maintain the project stretch for entire Concession Period, subject to and in accordance with the provisions of this Agreement. The Concessionaire shall visit the Site and assess the durability and strength of Project Assets and make his own assessment for operation, management. and maintenance as per Specifications and Standards and bear and pay all costs, expenses and charges in connection with or incidental to the performance of operation, management and maintenance.

The project includes the following physical features.

Table 2-2: Project Physical Features

S. No.	Project Physical Features	As per CA & COS	As per site	Remarks
1	Total length of Project	164.34 km	162.94 km	Work is in progress at site
2	Total length of Service Road / Slip Road	6.60 km		As per Revised TCS shared (Approved)
	Width of Service/Slip Road	5.5 m		

S. No.	Project Physical Features	As per CA & COS	As per site	Remarks
3	Major Bridges	07	06	1 no descoped
4	Minor Bridges	55	48	07 no's descoped
5	Flyovers			
6	ROB	01	01	
7	VUP	06	06	
8	LVUP	00	03	COS-II
9	Box Culverts	171	188	
10	Pipe Culverts	161	211	Including COS I and COS II
11	Major Junctions	39 nos.		Including COS
12	Minor Junctions	166 nos.		Including COS
13	Toll Plaza	03 nos.		km 298.940, km 359.800 & km 448.900
14	Truck Lay byes	04 nos.		
15	Bus Bays/Shelters	74/74 nos.		

All the above features as per site have been accounted for the estimation of routine maintenance, repair and rehabilitation, major maintenance and operation expenditure.

2.5 Review of Concession Agreement

The Authority had adopted a single stage two envelope bidding process and accordingly invited proposals by its Request for Proposals dated 18th January 2017 (the "Request for Proposals" or "RFP") for qualification and short listing of bidders for construction, operation and maintenance of the above referred Project on Hybrid Annuity basis.

The Authority had prescribed the technical and commercial terms and conditions in the RFP and invited bids comprising technical and financial bids from the bidders for undertaking the Project.

After evaluation of the bids received, the Authority had technically qualified certain bidders including, inter alia, the selected bidder and accepted the financial bid of the selected bidder i.e., M/s Sadbhav Infrastructure Projects Ltd. and issued its Letter of Award No. NHAI/NHDP-V/2015/K-U-A/CU-Pkg-IV/98985 dated 27th April 2017 (hereinafter called the "LOA") to the selected bidder requiring, inter alia, the execution of this Concession Agreement within 45 (forty-five) days of the date of issue thereof. Concession Agreement dated December 08, 2016 ("**Concession Agreement**") executed between the NHAI and the Sadbhav Bangalore Highway Private Limited to construct and maintain Two/Four Laning of BRT Tiger Reserve Boundary to Bangalore Section of NH-209 (Existing chainage from km. 287.520 to km. 461.550) in the state

of Karnataka on Hybrid Annuity mode under NHDP Phase- IV ("**Project**") and the endorsement agreement dated February 13, 2023, executed between the NHAI, Sadbhav Bangalore Highway Private Limited, Gawar Bangalore Highways Private Limited ("**New Concessionaire**") and State Bank of India**("Lender's Representative"),** pursuant to which the New Concessionaire has agreed to complete the balance work and taken over the rights and obligations of the Project from the Effective Date in terms of the Concession Agreement."

Table 2-3: Review of CA

Article /Clause of CA	Subject	Description in brief	*Remarks*
Article 3	**Concession period**	Concession period includes construction period of 730 days and operational period of 15 years from COD	
	Total Project Cost	Total project cost is 60 % of the Bid Project Cost If there is an increase in WPI, on an average, by more than 3% per annum for the period between the Bid Date and COD, the Total Project Cost shall be increased such that the effect of increase in WPI, more than such 3%, is reflected in the Total Project Cost	
Article 6 Clause 6.1.2	**Obligation of Authority**	The authority undertakes rehabilitation and resettlement of persons affected by construction of project and must bear all cost and expenses thereof. The authority is also required to procure forest clearance as a condition precedent to concession agreement. (Article 4 Clause 4.1.2)	*Positive for developers as it shall result in increase in pace of execution*
Clause 23.4	**Release of construction grant**	Authority shall provide construction grant to the extent of 40% of the inflation indexed bid project cost. Construction grant is to be released in the form of five equal instalments subject to the achievement of physical progress of 10%, 30%, 50%, 75% and 90% respectively	*Positive for developers and lenders as funding of the 40% of the project cost from the Authority is expected to reduce the funding need. Furthermore, alignment of grant release with the achievement of physical progress is also expected to incentivize the developers for timely completion of work.*

Article /Clause of CA	Subject	Description in brief	*Remarks*
Clause 23.2	**Adjusted bid project cost**	For every month occurring after the Appointed Date, the Authority shall compute the variation in Price Index occurring between the Reference Index Date preceding the Bid Date and the Reference Index Date preceding the date of Invoice, and shall express the latter as a multiple of the former (the "Price Index Multiple").	
Article 14	**Provisional completion certificate**	If the Concessionaire has completed construction of 100% of the site made available to the Concessionaire up to 146 days from the appointed date, the Concessionaire is eligible for provisional completion certificate	*PCOD has been achieved on 31st December 2020 for the length of 81.175km*
Clause 14.2	**Completion certificate**	Upon completion of the construction works and the independent engineer determining the tests to be successful, it shall forthwith issue to the Concessionaire and the Authority a certificate substantially in the form set forth in Schedule-J (the "Completion Certificate").	
Article 16	**Change in scope**	The Authority shall pay to Concessionaire any increase in scope of work approved by Independent Engineer. While in case of reduction of scope due to reasons attributed by the Authority, cost of such reduced cost is to be accessed by the Independent Engineer, as per the schedule of rates applicable on the Bid Due Date. The civil cost of the reduced Scope shall be multiplied by 1.06 to arrive at the estimated cost of reduced Scope. The estimated cost of reduced Scope shall then be multiplied by the ratio of Bid Project Cost to Estimated Project Cost to arrive at the Total Cost of Reduced Scope.	Arrangement of Change of Scope O&M payments with project length is favourable for the Authority.
Article 31	**Termination payment**		

Article /Clause of CA	Subject	Description in brief	*Remarks*
	Termination payment in the event of default by Concessionaire prior to COD	Termination payment is allowed subject to achievement of second milestone for the payment of grant (i.e.,30% of the physical progress). Termination payment shall be paid in the range of 50-80% of the debt due or 5.25-32% of the project cost whichever is less minus insurance cover depending upon achievement of second to fifth milestone for release of construction grant.	Positive for the lenders as it protects their interest to a considerable extent
	Termination payment in the event of default by Concessionaire during operation	Authority shall pay to the Concessionaire an amount equal to 65% (sixty-five per cent) of the sum of Annuity Payments remaining unpaid for and in respect of the Concession Period, including interest thereon up to the Transfer Date.	
	Termination payment in the event of default by Authority prior to COD	a) Termination payment shall be paid debt due less insurance cover or 1.50% -40.50% of the bid project cost whichever is less minus insurance cover depending upon achievement of second to fifth milestone for release of construction grant. b) 150% (one hundred and fifty per cent) of the Adjusted Equity	
	Termination payment in the event of default by Authority during operation Period	An amount equal to sum of Annuity Payments remaining unpaid for and in respect of the Concession Period, including interest thereon up to the Transfer Date.	
Article 35	**Change in law**		
	Increase in cost	If the Concessionaire suffers aggregate financial effect due to change in law, which exceeds by Rs 1.29 crores or 2% of the total annuity payments in any accounting year the Concessionaire may notify Authority and propose amendments to this agreement so as to place the Concessionaire in the same financial position w/o change in law	*Concessionaire is protected*

Article /Clause of CA	Subject	Description in brief	*Remarks*
	Reduction in cost	If the Concessionaire benefits from reduction in costs and the aggregate financial effect due to change in law, exceeds by Rs 1.29 crores or 2% of the total annuity payments in any accounting year the Authority may notify Concessionaire and propose amendments to this agreement so as to place the Concessionaire in the same financial position w/o change in law	
Clause 6.3	Obligations relating to refinancing	Authority shall permit and enable Concessionaire for refinancing as per prevailing guidelines upon written request. Authority shall respond within 30 days of the receipt of proposal.	*Positive for the developers and lenders*
Clause 17.8	Damages for breach of Maintenance Obligation	if the Concessionaire fails to repair or rectify any defect or deficiency set forth in the Maintenance Requirements within the period specified the Authority shall be entitled to recover damages, to be calculated and paid for each day of delay until the breach is cured, at the higher of (a) 2% of the Performance Security, and (b) 0.1% of the cost of such repair or rectification as estimated by the Independent Engineer	*Concessionaire is made more responsible*
Clause 17.16	Advertising on the site	The Concessionaire shall not undertake or permit any form of commercial advertising, display or hoarding at any place on the site	
Article 20	Traffic aid post, medical aid post etc	Concessionaire shall construct a traffic aid post of 25 sqm, medical aid post and two residential quarters at its own cost and hand them over to authority.	
		Concessionaire shall provide to the State Police Department or a substitute thereof one Jeep or similar vehicle in good working condition along with chauffeurs for round-the-clock patrolling. The operating costs of such vehicle including the salaries and allowances of the chauffeurs shall be borne by Concessionaire.	

Article /Clause of CA	Subject	Description in brief	*Remarks*
		Concessionaire shall provide to the State Medical Department or a substitute thereof to be designated by the Authority one ambulance in good working condition along with chauffeurs for round-the-clock ambulance services. the operating costs of such ambulance including the salaries and allowances of the chauffeurs	
		The Concessionaire shall also reimburse to the State Medical Department (or a substitute thereof to be designated by the Authority) the actual expenditure incurred by it in each Accounting Year on the medical equipment, and the pay and allowances of up to 2 medical personnel deployed exclusively for the Medical Aid Posts and ambulance and shall maintain the Medical Aid Post buildings.	
Clause 21.3	Payment to independent engineer	The remuneration, cost and expenses of the Independent Engineer shall be paid by Authority and subject to the limits set Schedule-M, one-half of such remuneration, cost and expense shall be reimbursed by the Concessionaire to the Authority within 15 days of receiving a statement of expenditure from the Authority.	
Clause 23.9.1	Treatment to Incomplete works	The Parties acknowledge and agree that in the event COD occurs upon issuance of a Provisional Certificate, the Annuity Payments and O&M Payments as specified shall be made as if all works comprising the Project have been completed. The works remaining incomplete shall be completed by the Concessionaire in accordance with the provisions of this Agreement and thereupon, the Completion Certificate shall be issued forthwith.	*Positive for both Concessionaire and Lender*

Article /Clause of CA	Subject	Description in brief	*Remarks*
Clause 23.9.2		in the event the Authority determines that any incomplete works referred to in clause 23.9.1 are not required to be completed for any reason, it shall be modifying the Scope of this Project in accordance with the provisions of Article 16 and the Completion Cost, Annuity Payments and O&M payments shall be reduced on account of such Change of scope.	*Will affect Annuity Payments in one hand and will decrease O&M expenditure on the other hand*

Chapter 3
ASSET STATUS

CHAPTER 3. ASSET STATUS

3.1 Review of Highway Current Status

The Project has achieved PCOD for a length of 81.175 km and IE has recommend PCOD-2 to Authority for the length of 162.94 km out of 164.34 km on 3rd July 2024. SPV is addressing the defects/deficiencies as and when arises and pointed out by the Independent Engineers regularly. Road surface all along the highway is in good to fair condition, the observations made by our team are presented below.

Figure 3-1: Project start and end location

3.2 Service Road

As per the Revised TCS (Approved), the Service Road of length 6.60 km needs to be constructed on both sides having 5.50 m width along the project stretch. The pavement type is Flexible for the entire length. Construction of Service Road is in progress during site visit.

Figure 3-2: Service road

3.3 Drain

As per the details shared, the covered lined drain of length 28.560 needs to be constructed on both sides along the project stretch including COS. Construction of covered lined drain is in progress during site visit.

Figure 3-3: Drains

3.4 Junctions

As per the details shared, a total of 39 major junctions and 166 minor junctions needs to be constructed along the project stretch including COS.

Figure 3-4:- Junctions

3.5 Road Furniture

Following are the details of road furniture provided along the project stretch as per site.

Table 3-1: List of project furniture's

Type of furniture	Unit	Quantity	Remarks
Metal beam Crash barrier	km	22.183	As per the details shared
Pedestrian Guard rail	km	1.560	As per Approved TCS
Highway Lighting			
Single arm	No's	393	Including Toll Plaza
Double arm	No's	168	Including Toll Plaza
High mast	No's	08	Including Toll Plaza
Solar Blinkers	No's	78	As per the details shared

Metal beam crash barrier

Safety barriers (MBCB) installation is in progress along the project stretch. As per the details shared around 22.183 km of MBCB needs to be provided.

Figure 3-5: Safety crash barrier (MBCB) along the project stretch

Pedestrian Guard rails

As per the Revised TCS (Approved), Installation of safety barriers (PGR) of around 1.560 km needs to be provided.

Highway Lighting

Highway lighting like single arm, double arm and high mast lights has to be provided at toll plazas, Rest area, Urban areas, Truck lay byes ang Bus bays. During site visit, Highway lighting installation is in progress at various locations along the project stretch.

Figure 3-6: Highway lighting

3.6 Project facilities

Following are the details of project facilities along the project stretch.

Table 3-2: List of project facilities

Type of Facility	Quantity (Nos)	Remarks
Bus Bay/Bus Shelters	74/74	
Truck Lay bye	04	

Figure 3-7: Bus bays/shelters

Figure 3-8: Truck Lay bye

Chapter 4
REVIEW OF STRUCTURES

CHAPTER 4. REVIEW OF STRUCTURES

4.1 Structural investigations

Review of structures inventory and detailed condition survey of structures are the essential requirements for preparation of estimates for Capex and also for O & M cost for highway structures. Keeping in view of importance of this task, review of inventory and conducting visual condition survey were carried out as per procedure and guidelines prescribed in IRC: SP:35 bridge engineers. The details of condition survey of structures were furnished below.

4.1.1 Visual Condition Survey

Salient features for which data is collected as part of conditional survey are in accordance with IRC: SP: 35 Proforma. Main features recorded as part of detailed condition survey are listed below.

- Dense vegetation growth was observed on existing retained structure locations.
- Deterioration of RCC handrails observed in few of structure locations.
- Delamination and spalling were observed in few of existing structure locations.
- Dense vegetation growth observed of RE wall locations.
- Accumulation of silt and debris observed in some of the culverts.
- Culvert vent was partially buried with soil at few locations.
- Presently construction work is in progress and COD yet to achieve. Completed structures are in sound and satisfactory condition and some required However, some treatment has been suggested based on our observations and the Concessionaire has taken up the rectification work and cost of the same has been factored in O&M Cost. IE has recommended PCOD -2 to Authority for the length of 162.94 km out of 164.34 km via letter dated 3rd July 2024

4.2 General

Details of various types of structures as per site inventory survey are furnished below,

Table 4-1: Inventory of structures

S. no.	Type of Structure	As per Schedule-B	As per site inspection	Remarks
1	Major Bridges	07	06	1 no descoped
2	Minor Bridges	55	48	07 no's descoped
3	ROB	01	01	
4	VUP	06	06	
5	LVUP	00	03	COS II
6	Box Culverts	171	188	
7	Pipe Culverts	161	211	Including COS I and COS II
Total		**401**	**463**	

The condition survey of all structures was conducted by a team of bridge experts through visual inspection from 22nd January 2024 to 26th January 2024. The detailed condition of all structures with necessary repair and rehabilitation measures is provided in subsequent sections.

4.3 Major Bridges:

There are six major bridges on the project stretch. Detailed condition of major bridges based on our condition survey and necessary repair and pending maintenance works are given below, The condition survey of all structures was conducted by a team of bridge experts through visual inspection from 22nd January 2024 to 26th January 2024.Howver, as per IE May 2024 MPR, 4 out of 06 major bridges have been completed and 2 are in progress

Table 4-2: Existing condition and required repairs /maintenance works for Major bridges

S. no.	Chainage, km	Span Arrangement, m	Total Length, m	Side	Condition of Structure
1	291.504	2 x 40.00	80.00	Single bridge 2 lanes	1. Structure completed, Misc. works yet to be complete like RCC handrail casting, fixing of drainage spouts, strip seal elastomer fixing, Recess portion needs to be sealed for girders, quadrant pitching, etc.,
2	340.659	7 x 25.00	175.00		Descoped
3	355.194	1 x 55.00 +(60.635+30.40+60.35) x 6	605.00	Single bridge 2 lanes	1. Deck slab casting completed from spans P12-P13 to P18 to A2. 2. Substructure completed up to pedestal level from P1 to P 12. 3. A1 abutment wall final lift and abutment cap in progress.
4	388.220	2 x 14.00 +4 x 20.00	108.00	Single bridge	1.Structure completed.

S. no.	Chainage, km	Span Arrangement, m	Total Length, m	Side	Condition of Structure
				2 lanes	2. Some of the Misc works are yet to be complete like pitching works and installation of strip seal elastomer in the expansion joints.
5	391.805	2 x 40.00	80.00	Single bridge 2 lanes	1.Substructure completed. 2. Supers structure deck slab work in progress for the span A1-P1and P1-A2 span deck slab casting completed. 3. Return walls and dirt walls in progress.
6	420.669	4 x 25.00	100.00	Single bridge 2 lanes	1. Deck slab casting is completed for the all the spans. 2. Misc. works are in progress.
7	421.875	1 x 40.00 + 7 x 30.00	250.00	Single bridge 2 lanes	1. Deck slab casting completed from spans P1-P2 to P7-A2. 2. Span A1-P1 is pending, girder erection yet to be done. 3. Misc works yet to be complete.

Figure 4-1: Condition of Major Bridges

4.4 Minor Bridges:

There are forty-eight minor bridges on the project stretch. Detailed condition of bridges based on our condition survey and necessary repair and pending maintenance works are given below, The condition survey of all structures was conducted by a team of bridge experts through visual inspection from 22nd January 2024 to 26th January 2024.Howver, as per IE May 2024 MPR, 46 out of 48 Minor bridges have been completed and 2 are in progress

Table 4-3: Existing condition and required repairs /maintenance works for Minor bridges

S. no.	Chainage, km	Span Arrangement, m	Total Length, m	Side	Condition of Structure	Proposed repair and pending maintenance works	Remarks
1	288.496	1 x 15.00	15.00	Single bridge 2 lanes	1. Misc works are yet to be complete like fixing of drainage spouts, casting of RCC handrails and crash barrier on approaches, fixing of strip seal elastomer in the expansion joints etc.,		
2	298.445	2 x 10.50	21.00	Single bridge 2 lanes			
3	299.715	1 x 10.00	10.00	Single bridge 2 lanes	1. Misc works are yet to be complete like fixing of drainage spouts and protection works.		
4	300.308	1 x 8.00	8.00	Single bridge 2 lanes	1. Protection works are in progress.		
5	302.756	1 x 10.00	10.00	Single bridge 2 lanes	1. Misc works are yet to be complete like fixing of drainage spouts, protection works and painting of crash barrier.		
6	304.359	1 x 10.00	10.00	Single bridge 2 lanes	1. Misc works are yet to be complete like fixing of drainage spouts, protection works and painting of crash barrier.		
7	305.849	1 x 10.00	10.00	Single bridge 2 lanes	1. Deck slab rebar fixing, and sides form work is in progress.		
8	309.300	1 x 6.80	6.80	Single	Structure is in good condition		

S. no.	Chainage, km	Span Arrangement, m	Total Length, m	Side	Condition of Structure	Proposed repair and pending maintenance works	Remarks
				bridge 2 lanes			
9	317.473	6 x 6.00	36.00	Single bridge 2 lanes	2. Misc works yet to be complete like fixing of drainage spouts, protection works and crash barrier painting.		
10	318.954	2 x 20.00	40.00				Descope
11	319.439	2 x 20.00	40.00				Descope
12	328.978	1 x 12.00	12.00	Single bridge 2 lanes	Structure is in good condition		
13	338.679	1 x 10.00	10.00	Single bridge 2 lanes	1. Superstructure completed. 2. Retaining wall work is in progress.		
14	339.659	2 x 20.00	40.00	Single bridge 2 lanes	1. Excavation work is in progress.		
15	340.276	1 x 8.00	8.00	Single bridge 2 lanes	1. Superstructure completed. 2. Retaining wall work is in progress.		
16	345.804	3 x 10.40	19.80	Single bridge 2 lanes	1. Misc works are yet to be complete.		
17	347.186	1 x 6.70	6.70	Single bridge 2 lanes	1. Superstructure completed. 2. Misc works are yet to be complete like handrail casting, fixing of drainage spouts and pitching works.		
18	350.938	1 x 6.35	6.35	Single bridge 2 lanes	Structure is in good condition		
19	353.079	1 x 8.00	8.00	Single bridge	1. Honeycombing was observed on retaining wall final lift and crash barrier.	1. Chip-off the loose material around the affected area and the surface shall be	

S. no.	Chainage, km	Span Arrangement, m	Total Length, m	Side	Condition of Structure	Proposed repair and pending maintenance works	Remarks
				2 lanes		repaired with high strength epoxy mortar.	
20	360.378	1 x 7.00	7.00	Single bridge 2 lanes	1. Extra projected rebars were observed on RCC handrail vertical post. 2. Projection of drainpipes below the soffit of top slab was missing for the drainage spouts.	1. Extra projected rebars shall need to be cut 20mm deep and sealed with epoxy cement mortar. 2. Projection of drainpipe shall be extended 500mm below the soffit of top slab.	
21	361.455	1 x 8.80	8.80	Single bridge 2 lanes	1. Extra projected rebars were observed on RCC handrail vertical post.	1. Extra projected rebars shall need to be cut 20mm deep and sealed with epoxy cement mortar.	
22	362.219	1 x 7.50	7.50	Single bridge 2 lanes	Structure is in good condition		
23	370.966	3 x 7.00	7.00	Single bridge 2 lanes	1. Rain cuts and erosion pf soil was observed beneath the fly return wall on the existing bridge side. 2. Parat wall was damaged and broken on top of return wall on existing bridge A2 side.	1. Rain cuts shall be properly rectified, and stone pitching shall be done to retain the soil on the slopes. 2. Dismantle the existing parapet wall and shall be reconstructed.	
24	374.948	3 x 8.00	24.00	Single bridge 2 lanes	Structure is in good condition		
25	377.636	1 x 8.00	8.00	Single bridge 2 lanes	1. Spalling and corrosion of rebars were observed on the soffit of deck slab on the exiting retained bridge. 2. R.R Masonry parapet wall collapsed on RHS. 3. Mis works are yet to be complete like drainage spouts fixing, casting of crash barrier on approach slab and handrails etc.,	1. Chip-off the loose material at the distressed locations, clean the corroded rebars, apply anti-corrosion paint and the surface shall be repaired with high strength epoxy grout mortar. 2. Collapsed R.R. masonry shall be reinstated.	

S. no.	Chainage, km	Span Arrangement, m	Total Length, m	Side	Condition of Structure	Proposed repair and pending maintenance works	Remarks
26	381.753	2 x 5.70	11.40	Single bridge 2 lanes	Structure is in good condition		
27	390.091	1 x 8.70	8.70	Single bridge 2 lanes	Structure is in good condition		
28	391.084	1 x 15.00	15.00	Single bridge 2 lanes	Structure is in good condition		
29	392.130	1 x 10.00	10.00		Descoped		Descoped
30	392.677	1 x 10.00	10.00	Single bridge 2 lanes	Structure is in good condition		
31	394.227	1 x 8.60	8.60	Single bridge 2 lanes	Structure is in good condition		
32	395.304	1 x 8.00	8.00	Single bridge 2 lanes	Structure is in good condition		
33	396.675	1 x 8.30	8.30	Single bridge 2 lanes	Structure is in good condition		
34	399.227	2 x 8.40	16.80	Single bridge 2 lanes	Structure is in good condition		
35	405.099	1 x 8.00	8.00	Single bridge 2 lanes	Misc works yet to be complete like fixing of drainage spouts and protection works.		
36	405.799	1 x 10.20	10.20	Single bridge 2 lanes	2. Misc works yet to be complete like fixing of drainage spouts and protection works.		

S. no.	Chainage, km	Span Arrangement, m	Total Length, m	Side	Condition of Structure	Proposed repair and pending maintenance works	Remarks
37	411.153	1 x 12.00	12.00	Single bridge 2 lanes	1. Misc works are in progress.		
38	411.816	1 x 7.30	7.30	Single bridge 2 lanes	1. Misc works are in progress		
39	414.242	3 x 10.40	31.20	Single bridge 2 lanes	1. RCC handrail was damaged at the approach of the structure. 2. Projection of drainpipe was missing below the soffit for the drainage spouts. 3. Misc works yet to be complete like fixing of drainage spouts.	1. Damaged RCC handrail shall be reinstated. 2. Projection of drainpipe shall be extended	
40	416.942	1 x 10.00	10.00	Single bridge 2 lanes	1. Misc works are yet to be complete like fixing of drainage spouts, painting of crash barrier, pitching works etc.,		
41	426.001	1 x 7.80	7.80	LHS	1. Misc works are yet to be complete like protection works, painting of crash barrier etc.,		
				RHS	1. Misc works are yet to be complete like crash barrier casting on approaches, protection works, painting of crash barrier etc.,		
42	428.278	1 x 10.50	10.50	LHS	1. Widening work yet to be started.		
				RHS	1. Widening work yet to be started.		
43	428.572	1 x 8.00	8.00	LHS	1. Misc works are yet to be complete like protection works, painting of crash barrier etc.,		
				RHS	1. Misc works are yet to be complete like protection works, painting of crash barrier etc.,		
44	429.592	1 x 12.00	12.00	LHS	1. Misc works are yet to be complete		

S. no.	Chainage, km	Span Arrangement, m	Total Length, m	Side	Condition of Structure	Proposed repair and pending maintenance works	Remarks
					like protection works, painting of crash barrier etc.,		
				RHS	1. Misc works are yet to be complete like protection works, painting of crash barrier etc.,		
45	429.923	1 x 10.00	10.00	LHS	1. Misc works are yet to be complete like protection works, painting of crash barrier etc.,		
				RHS	1. Misc works are yet to be complete like protection works, painting of crash barrier etc.,		
46	429.991	1 x 8.00	8.00	LHS	1. Misc works are yet to be complete like protection works, painting of crash barrier, RCC handrail casting etc.,		
				RHS	1. Misc works are yet to be complete like protection works, painting of crash barrier etc.,		
47	430.653	1 x 15.00					Descope
48	430.939	1 x 10.00					Descope
49	432.315	1 x 8.80	8.80	LHS	1. Misc works are yet to be complete like protection works, painting of crash barrier etc.,		
				RHS	1. Misc works are yet to be complete like protection works, RCC crash barrier and handrail, etc.,		
50	435.290	1 x 20.00	20.00	LHS	1. Misc works are yet to be complete like protection works, strip seal elastomer fixing in joints, painting of crash barrier etc.,		
				RHS	1. Deck slab casting completed. 2. Return wall and dirt wall work in		

S. no.	Chainage, km	Span Arrangement, m	Total Length, m	Side	Condition of Structure	Proposed repair and pending maintenance works	Remarks
					progress.		
51	438.530	1 x 8.00	8.00	LHS	1. Misc works are yet to be complete like protection works, painting of crash barrier etc.,		
				RHS	1. Misc works are yet to be complete like protection works, painting of crash barrier etc.,		
52	439.326	2 x 15.00	30.00	LHS	1. Foundation works in progress,		
				RHS	1. Misc works are yet to be complete like protection works, strip seal elastomer fixing in joints, painting of crash barrier etc.,		
53	443.075	3 x 15.00	45.00	LHS	1. Misc works are yet to be complete like protection works, strip seal elastomer fixing in joints, painting of crash barrier, RCC handrail casting etc.,		
				RHS	1. Substructure and foundation works in progress.		
54	452.430	1 x 12.00					Descope
55	458.045	1 x 10.00					Descope

Figure 4-2: Condition of Minor Bridges at km 300+308 & 443+075

4.5 ROB

There is only one ROB on the project stretch. Present condition and required repair/ maintenance works for the ROB are given below:

Table 4-4: Existing condition and required repairs /maintenance works for ROBs

S. no.	Chainage, km	Span Arrangement, m	Total Length, m	Side	Condition of Structure	Proposed repair and pending maintenance works	Remarks
1	305.913	1 x 15.00 + 1 x 36.00 + 1 x 15.00	66.00	Single bridge 2 lane	1. Substructure completed up to pedestal level for all piers and abutments.		

Figure 4-3: Condition of ROB

4.6 VUPs:

There are six VUPs in the project stretch. Detailed condition survey, necessary repair and pending maintenance works for all the VUPs along the project stretch are given below, The condition survey of all structures was conducted by a team of bridge experts through visual inspection from 22nd January 2024 to 26th January 2024.Howver, as per IE May 2024 MPR, 6 out of 6 VUPs have been completed.

Table 4-5: Existing condition and required repairs /maintenance works for VUPs

S. no.	Chainage, km	Span Arrangement, m	Total Length, m	Side	Condition of Structure	Proposed repair and pending maintenance works	Remarks
1	303.510	1 x 12.00	12.00	Single bridge 2 lanes	1. Crash barrier casting on RE wall approach is in progress.		
2	305.705	1 x 12.00	12.00	Single bridge 2 lanes	1. Structure completed. 2. RE wall in progress on A2 side. 3. Misc works yet to be completed.		
3	337.300	2 x 12.00	24.00	Single bridge 2 lanes	1. Structure completed. 2. RE wall is in progress on A2 side and A1 side yet to start.		
4	340.030	1 x 12.00	12.00	Single bridge 2 lanes	1. Structure completed. 2. RE wall is in progress on A1 side and A2 side yet to start.		
5	420.300	1 x 12.00	12.00	Single bridge 2 lanes	. 2. Misc works yet to be complete like fixing of drainage spouts, painting of crash barrier etc.,		
6	436.290	1 x 12.00	12.00	Single bridge 2 lanes	2. Misc works yet to be complete like fixing of drainage spouts, painting of crash barrier etc.,		

Figure 4-4: Condition of VUPs

4.7 LVUP's:

There are three LVUPs in the project stretch. Detailed condition survey, necessary repair and pending maintenance works for all the LVUPs along the project stretch are given below,

Table 4-5: Existing condition and required repairs /maintenance works for LVUPs

S. no.	Chainage, km	Span Arrangement, m	Total Length, m	Side	Condition of Structure	Proposed repair and pending maintenance works	Remarks
1	301.189	1 x 10.00	7.00	Single bridge 2 lanes	1. Structure completed, misc. works like quadrant pitching, drainage spouts, painting, crossroad works etc., yet to be completed.		
2	355.689	1 x 12.00	12.00	Single bridge 2 lanes	1. Structure completed. 2. RE wall yet to start. 3. Misc works yet to be completed.		

S. no.	Chainage, km	Span Arrangement, m	Total Length, m	Side	Condition of Structure	Proposed repair and pending maintenance works	Remarks
3	391.727	1 x 10.00	10.00	Single bridge 2 lanes	1. Structure completed. 2. RE wall yet to start.		

Figure 4-5: Condition of LVUP's

4.8 Culverts:

There are three hundred and ninety-nine culverts in the project stretch including COS. Detailed condition survey, necessary repair and pending maintenance works for all the culverts along the project stretch are given below.

Table 4-6: Existing condition and required repairs /maintenance works for Culverts

S. no.	Type of Culverts	No. of Culverts	Condition of Structure	Proposed repair and pending maintenance works

S. no.	Type of Culverts	No. of Culverts	Condition of Structure	Proposed repair and pending maintenance works
1	Box/Slab Culverts	188	1. Water stagnation observed near the culvert location. 2. Few culverts vent area was partially buried. 3. Some of the culvert works are in progress. 4. Protection works are in progress for the newly constructed culverts.	1. U/s and D/s shall be cleaned for free flow of water. 2. Vent areas shall be opened to utilize the structure.
2	Pipe Culverts	211	2. Quadrant pitching was disturbed at a few locations. 3. Maximum Pipe vent area is clogged with debris. 4. Some of the culvert works are in progress.	1. Quadrant pitching shall be rectified.

Figure 4-5: Condition of Culverts

Chapter 5
CONDITION ASSESSMENT OF EXISTING PAVEMENT CONDITION

CHAPTER 5. CONDITION ASSESSMENT OF EXISTING PAVEMENT CONDITION

To evaluate the existing pavement condition of a Project Highway, investigations are to be carried out on the field to collect data from the field. The collected data is processed and analysed to obtain complete information on the pavement condition.

5.1 Pavement Condition Assessment for Technical Due Diligence

As a part of technical due diligence, the different investigations performed on the Project site are listed below.

- Assessment of Pavement Condition based on Visual Condition Survey

Based on the visual condition survey, the type of distress, its quantity, and severity for each Stretch are obtained. The same is used to evaluate the present condition of pavement, which classifies pavement conditions ranging from 'Distress' to 'Good'.

The pavement investigation studies carried out on the Project Highway from 22nd January to 25th January 2024 as a part of technical due diligence and their outcomes are detailed in the sections below. Based on letter dated 3rd July 2024, IE has recommend PCOD-02 for the length of 162.94 km out of 164.34 km to Authority.

5.2 Review of Concession Agreement

As per Schedule K of the Concession Agreement, the Concessionaire shall repair and rectify the defects and deficiencies as specified below

Table 5-1: Major maintenance criteria as per CA

S. No	Nature of Defect or Deficiency	Time limit for Repair/Rectification
1	Roughness value exceeding 2750 mm in a stretch of 1km (as measured by a standardized rough meter/bump integrator)	180 Days
2	Cracking in more than 5% of road surface in a stretch of 1 km	30 days
3	Rutting exceeding 10mm in more than 2% of road surface in a stretch of 1km (measured with 3m straight edge)	30days

5.3 Review of Pavement Design Report

- The design of new flexible pavement has been carried out in accordance with guidelines of IRC-37-2012.
- The thickness of bituminous-layers is designed for a period of 15 years.

- Effective Subgrade CBR for the Design of New Flexible Pavement for Section (From Start of the Project Road to End of Kollegal Bypass) is taken as 9%.
- Effective Subgrade CBR for the Design of New Flexible Pavement for Section (From End of Kollegal Bypass to End of the Project Road) is taken as 10%.
- The design of strengthening overlay of the existing flexible pavement has been carried out by FWD Method as per IRC: 115-2014.
- The pavement for the service road/ slip road has been designed as per IRC: 37-2012; Design Traffic is 10MSA and Effective Subgrade CBR is taken as 9%.

Table 5-2: Pavement Design Thicknesses for main carriageway as per Pavement Design Report

Section	Design Traffic (MSA)	Effective Subgrade CBR (%)	Thickness(mm) as per IRC:37-2012			
			Bituminous Concrete (BC)	Dense Bituminous Macadam	Wet Mix Macadam	Granular Sub-base (GSB)
287.520 to 317.136	29.4	9	40	85	250	200
317.136 to 344.392	6.7	9	40	50	250	200
344.392 to 376.150	11.4	10	40	50	250	200
376.150 to 428.059	19.3	10	40	60	250	200
428.059 to 461.550	28.7	10	50	70	250	200

Table 5-3: Pavement Design Thicknesses for service roads as per Pavement Design Report

Layer	Thickness(mm)
Bituminous Concrete (SDBC)	40
Dense Bituminous Macadam	50
Wet Mix Macadam	250
Granular Sub-base (GSB)	150

5.4 Key Site Visit Observations

Few observations made during the site visit by the pavement investigation team are as follows,

- The majority of the pavement condition was observed to be fair to good on two-lane undivided Main Carriageway of the project stretch.
- The majority of the pavement condition was observed to be in good condition on four-lane divided Main Carriageway of the project stretch.

- The rectification works i.e., Milling and patch works were in progress at few locations along the project stretch,
- Work is currently underway on few sections of the main carriageway and service roads.
- Based on the observations made during the visual condition survey, the pavement condition is categorized into three categories 'Good', 'Fair', and 'Distressed'. The summary of the visual condition survey for the pavement conditions of the four-lane divided section (from Ch. 287+500 to 424+940) and the two-lane undivided section (from Ch. 424+940 to 458+420) of the main carriageway for the accessible project stretch is provided below and detailed survey data is provided in Annexure -I.

  All above mentioned defects are being rectified under routine maintenance works and it is a general practice during O&M period

Table 5-4: Two-lane Undivided Main Carriageway Pavement Visual Condition Survey Results

Condition	BHS	
	Length (Km)	Length (%)
Good	102100	93%
Fair	8000	7%
Distress	0	0%

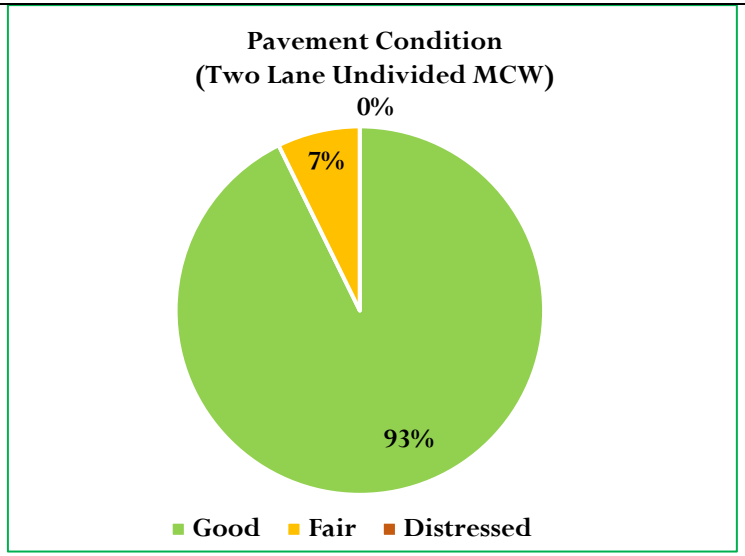


Figure 5-1: Two-lane Undivided Main Carriageway Pavement condition based on Visual condition survey

Table 5-5: Four-lane divided Main Carriageway Pavement Visual Condition Survey Results

Condition	LHS		RHS	
	Length (Km)	Length (%)	Length (Km)	Length (%)
Good	21.400	100%	21.550	100%
Fair	0	0%	0	0%
Distress	0	0%	0	0%

As shown in table above as per the visual condition survey only 1% section of completed two lane sections found distress and distressed sections are being rectified and attended under routine maintenance works.

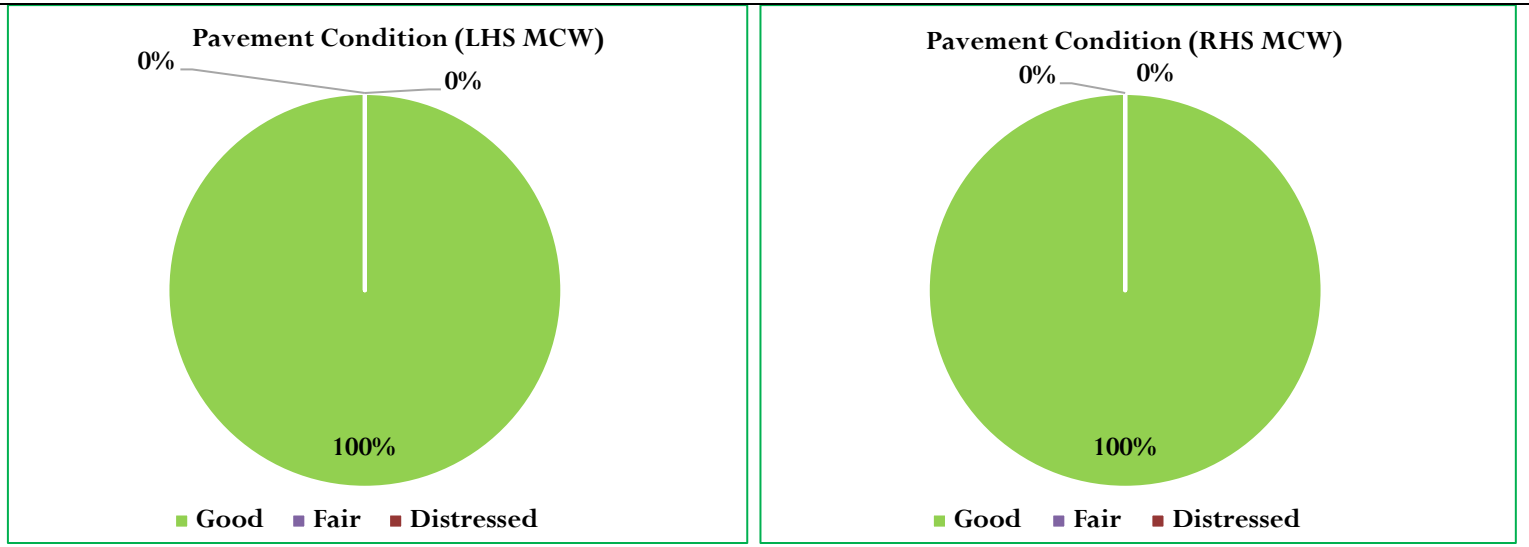


Figure 5-2: Four-lane divided Main Carriageway Pavement condition based on Visual condition survey

Observations made during the visual condition survey are presented in Annexure II .

5.5 Pavement Roughness

Roughness is one of the important parameters for determining the functional characteristics of pavements. According to the American Society for Testing and Materials (ASTM), roughness is defined as "the deviations of a pavement surface from a true planar surface with characteristic dimensions that affect vehicle dynamics, ride quality, dynamic loads, and drainage, for example, longitudinal profile, transverse profile and cross-slope".

The roughness of road surfaces is measured using different equipment/techniques such as rod and level survey, dip stick profiler, profilo graphs, response type road roughness meters, and profiling devices.

In India, the roughness is measured using the fifth wheel bump integrator (developed by CRRI) and is reported as Unevenness Index (UI) in mm/km. In this report, Roughness is measured using an NSV profilometer on 13th June 2024, and a summary of the results are presented below:

Table 5-6: Summary of the Roughness values using NSV

Roughness Criteria as per IRC SP-16 2019		LHS				RHS			
		Inner (m)	Inner (%)	Outer (m)	Outer (%)	Inner (m)	Inner (%)	Outer (m)	Outer (%)
Good	<1800	162940	100.00%	26920	100.00%	162940	100.00%	26920	100.00%
Fair	1800-2400	0	0.00%	0	0.00%	0	0.00%	0	0.00%
Poor	>2400	0	0.00%	0	0.00%	0	0.00%	0	0.00%

Chapter 6
ROAD SAFETY ASSESSMENT ALONG THE PROJECT STRETCH

CHAPTER 6. ROAD SAFETY ASSESSMENT ALONG THE PROJECT STRETCH

6.1 General

This chapter presents general safety concerns observed along the Project Road (BRT Tiger Reserve Boundary to Bangalore Section of NH-20) and improvements suggested to address the same.

6.2 Site visit

Road Safety along the highway depends upon the condition of various components of the highway, such as coordination between horizontal and vertical alignment, provision and placement of road furniture, intersection geometry, availability of adequate sight distance, night-time visibility along the highway, etc. It is essential to understand all these aspects of the highway from a point of view of safety of each type of road user. The purpose of this assignment is to understand the road safety worthiness of Project Road and quantify road furniture items that are required as per the provisions of the Concession Agreement (CA). The report also summarizes high-risk safety concerns that persist for a reasonable length along the Project Road that helps improve the safety of road user upon implemented. It may be noted that a few minor observations that are part of regular O&M activities have not been quantified in this report, and geometrical improvements along with blackspots are not reviewed as part of this assignment. The scope has been constrained keeping in view the status of Project Road and the focus is largely on the major safety concerns and deviations from CA provisions in road furniture, if any.

The Safety Team of CUBE Highways Technologies Pvt Ltd. visited the Project Road from 22nd to 25th Jan 2024

It may be noted that the Findings and Recommendations in this chapter are based on an independent inspection during a site visit along the Project Road and a review of available information/documents. This chapter mainly focuses on high-risk safety concerns and work zone-related issues along the Project Road, and any major geometrical improvements or location-specific improvements are not covered. However, based on visual observations and safety requirements identified by the safety team during the site visit, the requirement for additional safety furniture in line with CA provisions has been broadly identified and presented in the report. The chainages mentioned in the report may vary from the ground by approximately 50 to 100 m within acceptable tolerances.

Along with manual observations, the entire Project Road is video graphed using Vehicle Video Recorder Driver's Eye Level Video, a snapshot of output obtained from the app view is shown below:

Figure 6-1: Snapshot-displaying output format of driver's eye-level video

As can be seen in above image, the Vehicle Video Recorder records following details along with video:

- Video recording (front view – Driver's Eye Level View)
- Location of Video on the Google Map (along with coordinates of the location)
- Speed of the Recording Vehicle, in km/hour
- Identified safety concerns are provided in Annexure III

6.3 Review of Project Documents and Communications related to road safety aspects

The following documents have been reviewed as a part of the Road Safety Assessment.

Table 6-1: Review of Project Documents and Communications related to road safety aspects

Document	Broad comments from Road Safety aspect
Concession Agreement (CA) *(**Original Concessionaire:** Sadbhav Bangalore Highway Pvt.Ltd. and **substitute concessionaire:** Gawar Bangalore Highways Pvt Ltd)*	• Clauses and warrants of various facilities along the Project Road, applicable manuals, and specifications, deviations from the specification's manual, etc., has been reviewed. • The Project Road has been developed as per the following applicable manuals – IRC: SP:84-2014 for Four-lane configuration sections and IRC: SP:73-2015 for Two-lane configuration section. • Few important safety clauses mentioned in the CA are summarized below:

Document	Broad comments from Road Safety aspect
	▪ As per Sch-C, Clause V (1 & 2), W-beam crash barrier shall be provided along: o Along high embankment sections (>3m only) – about 12km. o On approaches to Minor & Major bridge - about 7.56 km. o On Curve with radii <450m, i.e., From Km 424+920 to Km 458.200. ▪ New Jersey crash barrier at median in built up areas shall be provided at built-up locations, about 1.6 km. ▪ As per Sch-C, Clause 2.2(ii), about 22 Nos. Cantilever and 20 Nos. Gantry signages shall be provided along the Project Road Details and quantity of most of the safety furniture have been provided in CA. However, it is important to note that the provision of median safety barrier on four lane is not mentioned in CA.
IE MPR -*TPF GETINSA EUROESTUDIOS S.L. in association with Segmental Consulting and Infrastructure Advisory Pvt Ltd., (Formerly GETINSA-PAYMA S.L.)*	About 7 Nos. of IE MPRs (April 2023, June to October 2023, December 2023 and May 2024) have been received from the Project Company and the same have been reviewed. This report provides a project overview of the following: • Few observations on traffic diversion arrangements have been noted in MPRs. • Approximately 14 block spots have been identified by MoRTH along the Project Road. Short-term safety improvement measures include the provision of traffic calming measures, signboards, road humps, road studs, etc. have been reported.
PCOD correspondences	As per Letter No. NHAI/KNT/BRT Tiger-Reserve/2021/89161; PCC -1 *for a length of 81.175km w.e.f. 31/12/2020, the stretch has been completed as of date.* IE has recommended to Authority for the length of 162.94 km out of 164.34 km via letter dated 3rd July 2024.
TCS, Plan & Profile, and Road Furniture drawings	• TCS, Plan & Profile drawings have been received and reviewed with respect to CA provisions. However, as mentioned earlier, location-specific/Black Spots-related geometrical aspects are not studied as part of this assignment. • TCS: Provision of a median safety barrier along the Project Road (four-lane configuration section only) is missing in the drawings and same was also not addressed in CA. • Road signage plan and locations of safety barrier-related drawings/information have not been submitted for review.
Accident Data	• Accident data for the previous 3 months (September, October, and December 2023) has been reported in IE MPRs and the same has been summarized in further sections of the report.

6.4 Accident Data Analysis

Three months of accident data have been extracted from IE MPRs, i.e., data for September, October, and December 2023. A preliminary analysis of this data has been carried out to understand the accident severity along the Project Road.

Month of accidents	No. of Accidents			Total Accidents	No. of Persons			Severity Index (Number of persons killed per 100 accidents)	Number of Persons Injured per 100 Accidents
	Fatal	Grievous	Minor		% Fatal Accidents	Killed	Injured		
Sep-23	4	3	1	8	50%	4	5	50.0	62.5
Oct-23	3	4	6	13	23%	4	9	30.8	69.2
Dec-23	2	1	0	3	67%	0	3	0.0	100.0
Total Accidents	**9**	**8**	**7**	**24**	**33%**	**8**	17		

Month of accident	Nature of accident				Total	Cause of accident			Total
	Rear End collision	Head on collision	Side collision	No data		Vehicle out of control	Overspeed	No data	
Sep-23	1	3	2	2	8	0	6	2	8
Oct-23	8	3	2	0	13	0	13	0	13
Dec-23	1	2	0	0	3	1	2	0	3
Total Accidents	**10**	**8**	**4**	**2**		**1**	**21**	**2**	

From the above tables, it can be inferred that:

- September month has seen fewer accidents compared to October. However, severity of accidents is higher in the month of September.
- In the month of December 2023, 2 fatal accidents were reported, yet the corresponding fatalities were recorded as zero. This discrepancy indicates that the data recording format or procedure requires improvement.
- Head-on & rear-end collision type of accidents are predominantly reported. However, no information is provided on road configuration type against each accident. Head-on collisions on 4-lane configuration road indicate probable wrong side movement on divided carriageway.
- Over speeding is reported as the major cause of accidents along the Project Road.

Chapter 7
OPERATION & MAINTENANCE COST

CHAPTER 7. OPERATION AND MAINTENANCE COST

7.1 General

This Chapter presents details on the O&M expenditure to be incurred. The expenses are divided into four heads.

- Routine Maintenance Expenses to maintain the asset to the standards set forth in the Concession Agreement.
- Major/ Periodic Maintenance Expenses
- Operating Expenses

7.2 Estimation of Operation & Maintainance cost

The Routine Maintenance activities related to pavement include pothole repair, crack sealing, shoulder repair, drain maintenance, renewal of road markings, maintenance of cross drainage works etc. A before-hand estimate of repairs to be carried annually, must be determined to calculate the anticipated routine maintenance cost of the Project. Most of the annual routine maintenance activities are estimated based on experience and the past data of the Project as these activities varies Project to Project and there are no hard and fast rules to obtain exact quantity.

Routine maintenance cost for this Project is summarized in next section of Cost Estimates. The list of items considered in routine maintenance are summarized in the table below,

Table 7-1: List of Items Considered in Routine Maintenance Cost Estimate

S. No	Description of Item
1	**HIGHWAY**
	Flexible Pavement
	▪ Potholes ▪ Cracks ▪ Rutting/Depression/Settlement ▪ Ravelling/Stripping ▪ Re-surfacing
	Rigid Pavement

S. No	Description of Item
	▪ Slab Replacement ▪ Crack Sealing ▪ Ravelling/honeycombing, scaling, Polished Surface
	Hard/Earth shoulders, side slopes
	▪ Edge drop at shoulders ▪ Blading/reshaping to restore proper slopes and sides so as to maintain the standard formation width ▪ Rain cuts/gullies in slope ▪ Repairs of Stone Pitching/Turfing
2	**STRUCTURES**
	Superstructure of Bridges
	▪ Cracks ▪ Temporary Measures ▪ Permanent Measures ▪ Spalling / Scaling
	Foundation of Bridges
	▪ Scouring and /or Cavitation
	Piers, abutments, return walls and wing walls of bridges
	▪ Cracks and damages including settlement and tilting
	Joints in bridges
	▪ Loosening and malfunctioning of joints
	Other items relating to bridges
	▪ Gathering of dirt in bearings and joints or clogging of spouts, weep holes and vent-holes ▪ Damage or deterioration in parapets and handrails ▪ Rain-cuts or erosion of banks of the side slopes of approaches ▪ Damage to wearing coat ▪ Damage or deterioration in approach slabs, pitching, apron, toes, floor or guide bunds ▪ Growth of vegetation affecting the structure or obstructing the waterway

S. No	Description of Item
3	**ROAD FURNITURES, SIGNAGES AND PAVEMENT MARKING**
	▪ Repair to road signs -damage to shape or position; Poor visibility or loss of retro-reflectivity ▪ Replacing/installing delineators ▪ Replacing uninstalling delineators & all type of road sign ▪ Repairs MBCB ▪ Replacing of MBCB /New jersey crash barrier ▪ Repairs to Handrails /Pedestrian guard rails /flyover railings etc. ▪ Replace Handrails /Pedestrian guardrails/flyover railings etc. ▪ Fixing of distance measurement stone ▪ Hectometre stones ▪ Kilometre stones ▪ 5th Kilometre stones ▪ Boundary stones ▪ Painting ▪ Hectometre stones ▪ Pavement Marking ▪ Hot applied thermoplastic compound ▪ Painting kerb with synthetic enamel paint
4	**MISCELLANEOUS ITEMS**
	Street Lighting, Electrical systems repair and maintenance etc

The routine maintenance expenses to maintain the asset to the standards set forth in the Concession Agreement are given in the table below.

Table 7-2: Routine maintenance cost of the Project FY 2025

S. No.	Particulars	Frequency	Cost including GST (Cr.)	Remarks
1	**Routine Maintenance Cost**	**Annual**		
	Highway		173.00	
	Structures		153.18	
	Road Furniture, Signage & Pavement marking		87.59	
	Project Facilities		21.30	
	Total RM cost		**435.08**	

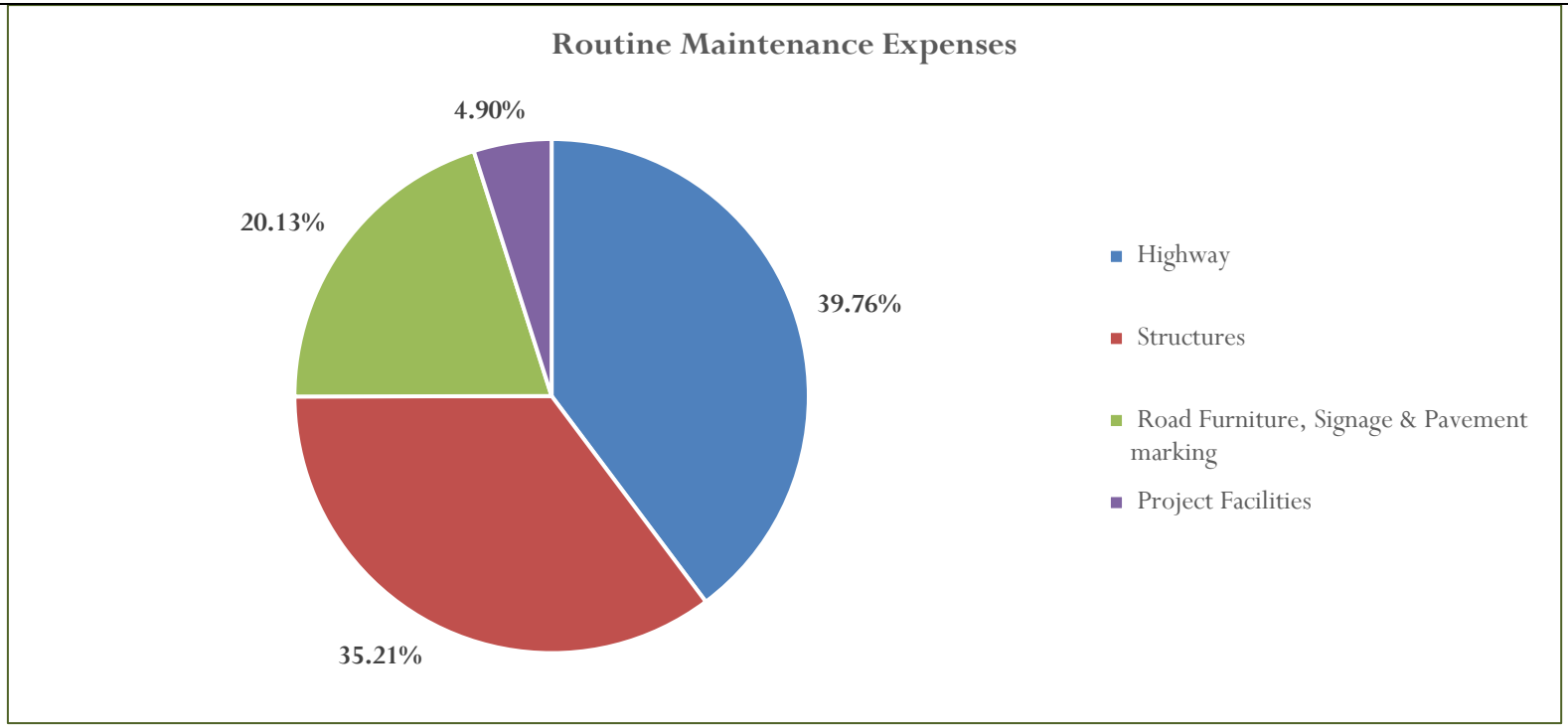


Figure 7-1: Breakup of Routine Maintenance

Table 7-3: Operational Expenditure of the Project for the Base Year FY 25

The calculation of operational expenditure for the base year FY 25 is given below:

S. no.	Description	Manpower	Annual Exp. (in Lakhs)
A.1	SPV staff and salaries	24.75	106.61
A.2	Tolling Operations Services_Outsourced	0	0.00
A.3	Security Services_Outsourced	12	47.79
A.4	Incident Management Services	78	319.61
A.5	RoW and Horticulture Works_ Manpower		132.56
A.6	Electricity and Diesel Charges		68.26
A.7	TMS/HTMS System Expenses		37.69
A.8	Office Operating Expenses		4.88
A.9	Vehicle Running Expenses		55.04
A.10	Professional Fee		65.01
A.11	Community Development		0.00
A.12	Communication Expenses		1.20
A.13	Conveyance Expenses		2.40
A.14	Insurance Expenses		118.03
A.15	IE Fees		60.00
A.16	Contingency	1%	10.19
	OPEX		**1029.27**

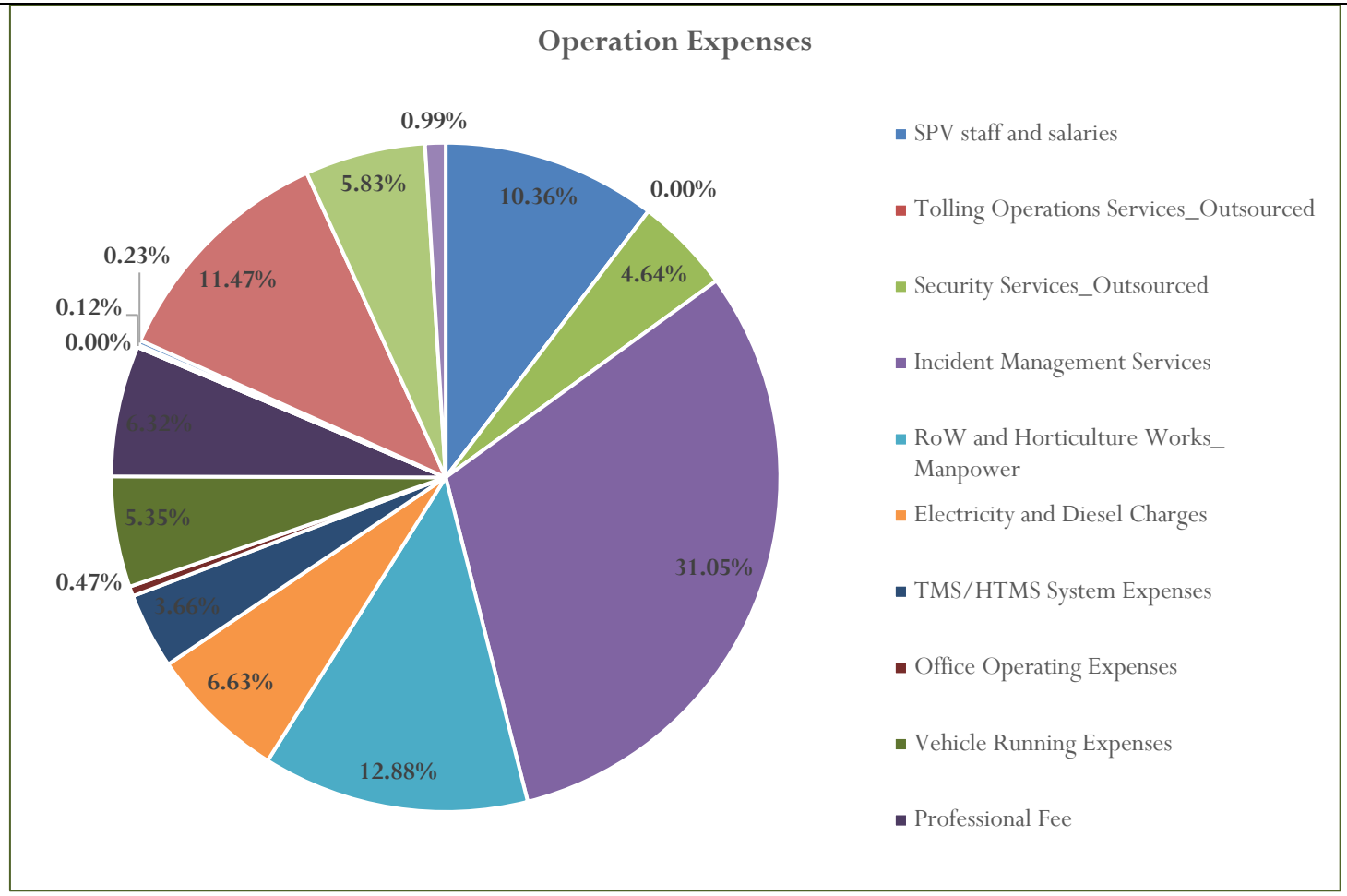


Figure 7-2: Breakup of Operation Cost

7.3 Major Maintenance Estimate

As detailed in the previous sections, quantities were obtained after the said analysis for Periodic maintenance. Rates of each item as obtained from SoR and other sources specific to project are used to calculate the cost of pavement maintenance.

CUBE Tech has considered 2 cycles for Major Maintenance as BC overlay of 30 mm for Cycle 1 and BC overlay of 40 mm for Cycle 2. The estimate for Major Maintenance activities of the Project Stretch is as detailed below:

Table 7-4: Major Maintenance Cost for MM Cycle 1

Major Maintenance - 1st Cycle					
S. No.	**Description**	**Unit**	**Qty**	**Rate**	**Amount**
1	Bituminous Concrete (VG - 40)	Cum	62,993	10,514	66,23,04,277
2	Tack Coat	Sqm	2456712	14	3,43,93,964
3	Milling	Sqm	356958	90	3,21,26,230
4	DBM (2.5%)	Cum	17,848	9,094	16,23,08,853
5	Pavement Markings	Sqm	73,934	520	3,84,45,798
6	Kerb Painting	Sqm	23,900	90	21,50,955
7	Earthen Shoulder	Cum	23,953	360	86,23,238
8	Miscellaneous and Contingencies (1%)				94,03,533
			Total		**94,97,56,847**
	GST (18%)				**17,09,56,233**
	Grand Total				**1,12,07,13,080**
	Grand Total (In Cr)				**112.07**

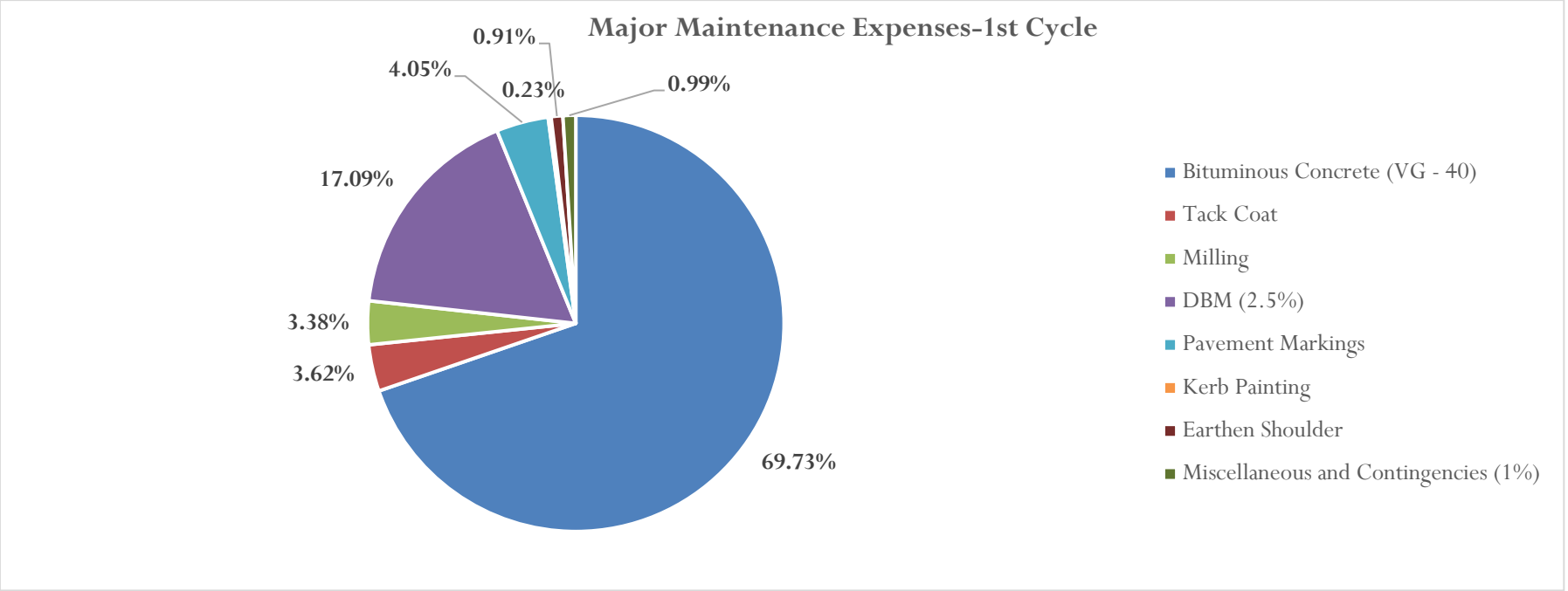


Figure 7-3: Breakup of Major Maintenance Expenses 1st Cycle

Table 7-5: Major Maintenance Cost for MM Cycle 2

Major Maintenance - 2nd Cycle					
S. No.	**Description**	**Unit**	**Qty**	**Rate**	**Amount**
1	Bituminous Concrete (VG - 40)	Cum	83,990	10,514	88,30,72,369
2	Tack Coat	Sqm	20,99,754	14	2,93,96,550
3	Pavement Markings	Sqm	73,934	520	3,84,45,798
4	Kerb Painting	Sqm	23,900	90	21,50,955
5	Earthen Shoulder	Cum	23,953	360	86,23,238
6	Miscellaneous and Contingencies (1%)				96,16,889
			Total		**97,13,05,800**
			GST (18%)		**17,48,35,044**

Major Maintenance - 2nd Cycle					
S. No.	**Description**	**Unit**	**Qty**	**Rate**	**Amount**
			Grand Total		**1,14,61,40,843**
			Grand Total (In Cr)		**114.61**

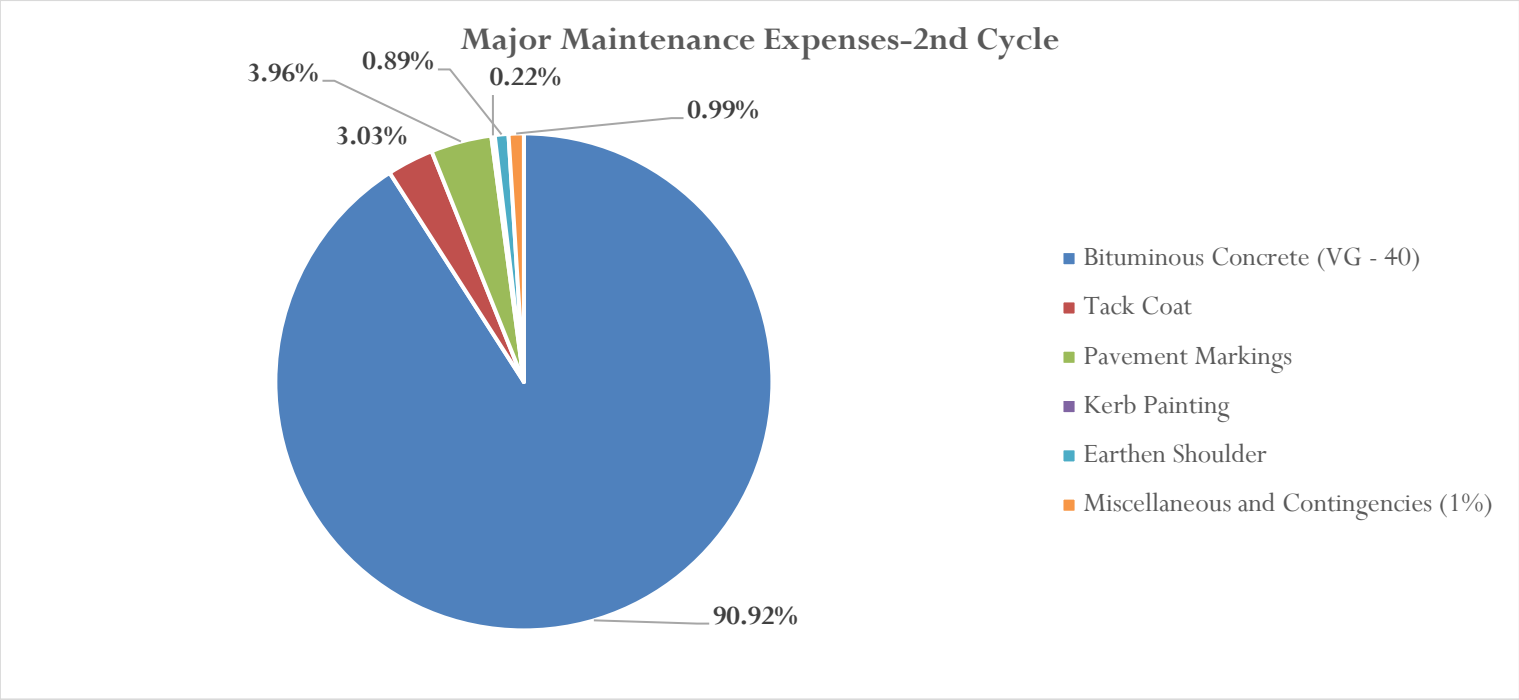


Figure 7-4: Major Maintenance Expenses 2nd Cycle

7.3.1 Major Maintenance expenses during O&M period

Based on the Cube Tech estimates, the total major maintenance expenses considering the escalation is 287.01 crores.

7.4 Projections of O&M Expenses

The O&M expenses for the entire Concession Period is presented in this section .

The following escalations are considered:

Table 7-6:Escalation Factors

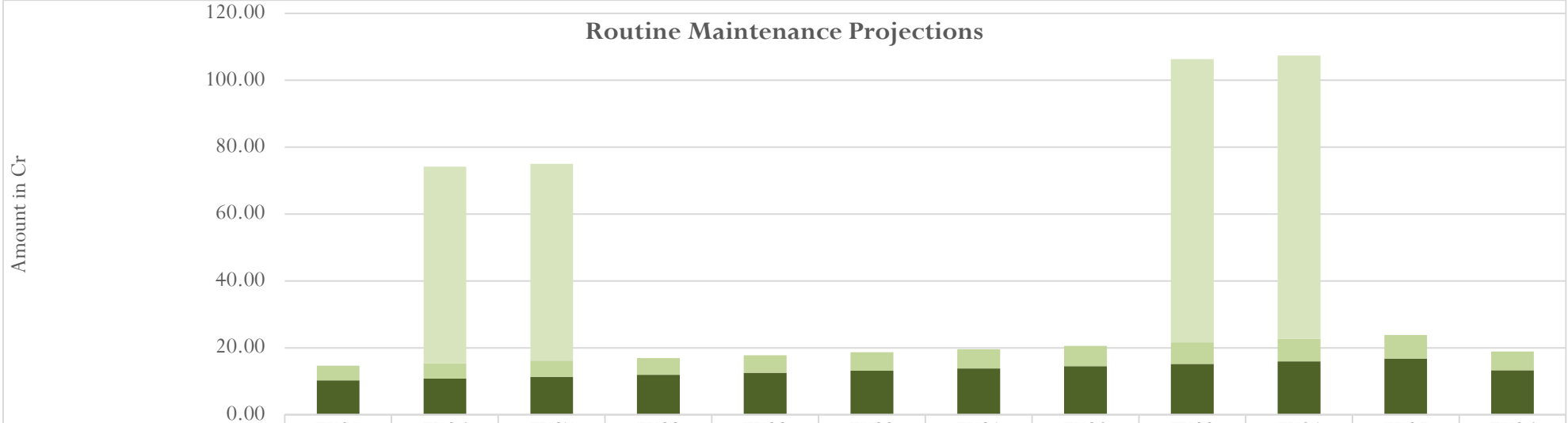
Items	Escalation
Operating Expenses	5.00%
Routine Maintenance	5.00%
Major Maintenance	5.00%

The Projections of total O& M expenses including Major Maintenance for 2 Cycles of the Project Company and CHT is given in the table below

Table 7-7: Projections of total O&M expenses of the Project during O&M period

Particulars	Total Expense (In Cr.)	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	FY 32	FY 33	FY 34	FY 35	FY 36
Operating Expenses (CHT)	**159.49**	10.29	10.81	11.35	11.92	12.51	13.14	13.79	14.48	15.21	15.97	16.77	13.26
R M Expenses (CHT)	**67.42**	4.35	4.57	4.80	5.04	5.29	5.55	5.83	6.12	6.43	6.75	7.09	5.61
MM (CHT)	**287.01**		58.84	58.84						84.67	84.67		
O&M and MM (CHT)	**513.92**	14.64	74.21	74.98	16.95	17.80	18.69	19.62	20.60	106.30	107.39	23.85	18.87

The graph for the total cost Projections of expenses during O&M period given by the Cube Highways Technologies is shown in the figure below.



	FY25	FY26	FY27	FY28	FY29	FY30	FY31	FY32	FY33	FY34	FY35	FY36
MM (CHT)		58.84	58.84						84.67	84.67		
R M Expenses (CHT)	4.35	4.57	4.80	5.04	5.29	5.55	5.83	6.12	6.43	6.75	7.09	5.61
Operating Expenses(CHT)	10.29	10.81	11.35	11.92	12.51	13.14	13.79	14.48	15.21	15.97	16.77	13.26

Figure 7-5: O&M, RM and MM Expenses Projections

The total O&M cost including Major Maintenance estimated by the CHT is Rs.513.92Cr

ANNEXURES

Annexure I: Pavement Visual Condition Survey data for MCW

Two-lane Undivided Main Carriageway Pavement condition based on Visual condition survey			
From	**To**	**Condition**	**Remarks**
287+500	288+000	Good	No distresses
288+000	289+000	Good	No distresses
289+000	290+000	Good	No distresses (Patchworks observed)
290+000	291+000	Good	No distresses
291+000	292+000	Good	No distresses
292+000	293+000	Good	No distresses
293+000	294+000	Good	No distresses
294+000	295+000	Good	No distresses (Patchworks observed)
295+000	296+000	Good	No distresses
296+000	297+000	Good	No distresses
297+000	298+000	Good	No distresses
298+000	299+000	Good	No distresses
299+000	300+000	Good	No distresses
300+000	301+000	Good	No distresses
301+000	302+000	Good	No distresses
302+000	303+000	Good	200m bleeding
303+000	304+000	Good	No distresses
304+000	305+000	Good	No distresses
305+000	306+000	Good	No distresses, 600m WIP
307+000	308+000	Good	No distresses
308+000	309+000	Good	<5% cracks + Few Patchworks + bumps at 2 locations
309+000	310+000	Fair	100m longitudinal cracks +patchwork
310+000	311+000	Good	<5% cracks
311+000	312+000	Good	<5% cracks + Patchworks + potholes at 2 locations
312+000	313+000	Good	>20% cracks
313+000	314+000	Good	>20% cracks

Two-lane Undivided Main Carriageway Pavement condition based on Visual condition survey			
From	**To**	**Condition**	**Remarks**
314+000	315+000	Good	5% to 20% cracks
315+000	316+000	Good	5% to 20% cracks
316+000	317+000	Good	No distresses (Patchworks observed)
317+000	318+000	Good	No distresses (Patchworks observed)
318+000	318+300	Good	No distresses
320+000	321+000	Fair	300m longitudinal cracks
321+000	322+000	Good	No distresses (Patchworks in progress)
322+000	323+000	Good	<5% cracks
323+000	324+000	Fair	5% to 20% cracks (Patchworks in progress)
324+000	325+000	Good	100m Patchworks in progress
325+000	326+000	Good	No distresses
326+000	327+000	Fair	>20% cracks + Patchworks in progress
327+000	328+000	Good	400m Patchworks in progress
328+000	329+000	Fair	200m longitudinal cracks + 5% to 20% cracks
329+000	330+000	Good	50m longitudinal cracks
330+000	331+000	Good	No distresses
331+000	332+000	Fair	100m longitudinal cracks
332+000	333+000	Good	No distresses
333+000	334+000	Good	5% to 20% cracks
334+000	334+300	Good	No distresses
336+000	337+000	Good	No distresses
337+000	337+300	Good	No distresses
343+000	344+000	Good	300m Patchworks in progress
344+000	345+000	Good	200m Patchworks in progress
345+000	346+000	Good	No distresses
346+000	347+000	Good	200m work balance
347+000	348+000	Fair	250m shoving + 70m longitudinal cracks
348+000	349+000	Good	<5% cracks +1 pothole

Two-lane Undivided Main Carriageway Pavement condition based on Visual condition survey			
From	**To**	**Condition**	**Remarks**
349+000	350+000	Good	No distresses
350+000	351+000	Good	<5% cracks + 50m longitudinal cracks +1 pothole + 1 settlement
351+000	352+200	Good	<5% cracks
355+900	357+000	Good	No distresses
357+000	358+000	Good	No distresses
358+000	359+000	Good	No distresses
359+000	360+000	Good	No distresses
360+000	361+000	Good	No distresses
361+000	362+000	Good	No distresses
362+000	363+000	Good	No distresses
363+000	364+000	Good	No distresses
364+000	365+000	Good	No distresses
365+000	366+000	Good	1 settlement
366+000	367+000	Good	<5% cracks +1 delamination
367+000	368+000	Good	No distresses
368+000	369+000	Good	<5% cracks
369+000	370+000	Good	<5% cracks + 300m longitudinal cracks
370+000	371+000	Good	<5% cracks
371+000	372+000	Good	<5% cracks + 100m longitudinal cracks
372+000	372+600	Good	<5% cracks + 200m longitudinal cracks
373+250	374+000	Good	<5% cracks + 200m longitudinal cracks
374+000	375+000	Good	5% to 20% cracks + 300m longitudinal cracks
375+000	376+000	Good	<5% cracks + 300m longitudinal cracks
376+000	377+000	Good	<5% cracks + 150m longitudinal cracks
377+000	378+000	Good	<5% cracks + 500m longitudinal cracks
378+000	379+000	Good	No distresses
379+000	380+000	Good	<5% cracks + raveling

Two-lane Undivided Main Carriageway Pavement condition based on Visual condition survey			
From	**To**	**Condition**	**Remarks**
380+000	381+000	Good	<5% cracks
381+000	382+000	Good	<5% cracks
382+000	383+000	Good	<5% cracks + 300m longitudinal cracks
383+000	384+000	Good	100m longitudinal cracks + raveling
384+000	385+000	Good	<5% cracks
385+000	386+000	Good	<5% cracks
386+000	387+000	Good	<5% cracks
387+000	388+000	Good	<5% cracks
388+000	389+000	Good	No distresses
389+000	390+000	Good	No distresses
390+000	391+000	Good	No distresses
391+000	391+650	Good	No distresses
394+000	395+000	Good	<5% cracks +1 delamination
395+000	396+000	Fair	5% to 20% cracks + rutting
396+000	397+000	Good	hungry surface
397+000	398+000	Good	hungry surface
398+000	399+000	Good	<5% cracks
399+000	400+000	Good	<5% cracks
400+000	401+000	Good	hungry surface
401+000	402+000	Good	No distresses
402+000	403+000	Good	100m bleeding
403+000	404+000	Good	hungry surface
404+000	405+000	Good	hungry surface
405+000	406+000	Good	hungry surface
406+000	407+000	Good	hungry surface
407+000	408+000	Good	hungry surface
408+000	409+000	Good	5% to 20% cracks + rutting
409+000	410+000	Good	No distresses

Two-lane Undivided Main Carriageway Pavement condition based on Visual condition survey			
From	**To**	**Condition**	**Remarks**
410+000	411+000	Good	1 pothole
411+000	412+000	Good	No distresses
412+000	413+000	Good	No distresses
413+000	413+400	Good	No distresses
415+000	416+400	Good	No distresses

Annexure II: Pavement Distress Survey

A pavement condition survey gives an indication of the serviceability of the road pavement and is vital in deciding the maintenance activities. Some methods to conduct this survey are the Visual Condition Survey method (manual), Network Survey Vehicle (NSV) method, etc. However, Visual Condition Survey was conducted in this Project.

In a visual condition survey, the technical experienced staff makes a traverse along the project stretch, observing the different types of distresses on the pavement surface, and observations are made on each distress type.

Distresses on bituminous pavements include:

- Cracks – Longitudinal, Transverse, and Alligator cracks
- Raveling
- Rutting
- Bleeding
- Potholes
- Patches

Longitudinal Cracks

Structural cracks like longitudinal cracks develop parallel to the traffic direction and extend through the depth of the bituminous pavement layer, which can be bottom-up or top-down crack.

Longitudinal cracks were observed few locations of the project Stretch. These are routine maintenance work and cost of the same captured in Y-o-Y O&M and concessionaire has taken up the rectification works.

Figure 7-6: Longitudinal Cracks

Transverse Cracks

Structural cracks like transverse cracks develop perpendicular to the traffic direction and extend through the depth of the bituminous pavement layer.

Transverse cracks were not observed at any locations of the project Stretch.

Alligator Cracks

Alligator cracking also referred to as fatigue cracking or crocodile cracking, refers to a pattern of asphalt damage that resembles the scales on an alligator's skin. The cracks form co-joined, irregular "blocks' that are often four-sided, such as rectangles, but they can also have more sides and, on occasion, as few as three sides.

Alligator cracks were observed at few locations of the project Stretch. These are routine maintenance work and cost of the same captured in Y-o-Y O&M and concessionaire has taken up the rectification works.

Figure 7-7: Alligator Cracks

Raveling

Raveling is wearing away of the pavement surface due to loss of bitumen binder and dislodged aggregate particles. This distress indicates that either the bitumen binder has hardened appreciably, or a poor-quality mixture is present. In addition, ravelling may be caused by certain types of traffic, for example, tracked vehicles. Softening of the surface and dislodging of the aggregates due to oil spillage and weathering are also included under ravelling.

Low severity Raveling was observed at few locations of the project Stretch. These are routine maintenance work and cost of the same captured in Y-o-Y O&M and concessionaire has taken up the rectification works.

Figure 7-8: Raveling

Rutting

A rut is a surface depression of pavement in the wheel paths, and pavement uplift may occur along the sides of the rut. Rutting stems from a permanent deformation in any pavement layers or subgrade usually caused by consolidated or lateral movement of the materials due to traffic load.

Rutting associated with cracks was observed at few locations of the project Stretch. These are routine maintenance work and cost of the same captured in Y-o-Y O&M and concessionaire has taken up the rectification works.

Figure 7-9: Rutting

Bleeding

A surface having a thin film of excess or free bituminous binder on it, which creates a shiny, glass like reflecting surface tending to become soft in hot weather and slippery in cold and wet weather, eventually developing low skid resistance is referred to as bleeding or fatty bituminous surface.

Bleeding was observed at few locations of the project Stretch. These are routine maintenance work and cost of the same captured in Y-o-Y O&M and concessionaire has taken up the rectification works.

Figure 7-10: Bleeding

Potholes

Potholes are small (or big, based on severity) bowl-shaped depressions on the pavement surface. In general, potholes are formed in later stages of highly ravelled or cracked pavement surface resulting in bowl-shaped depressions.

Potholes associated with delamination were not observed at few location of the project Stretch.

Patches

The patch is an area of the pavement which have been repaired or replaced by new material to remove a certain defect on the pavement. The patch is considered a defect no matter how well it is performing, and some roughness is associated with this type of distress.

Patches were observed at many locations of the project Stretch. These are routine maintenance work and cost of the same captured in Y-o-Y O&M and concessionaire has taken up the rectification works.

Figure 7-11: Patches

.

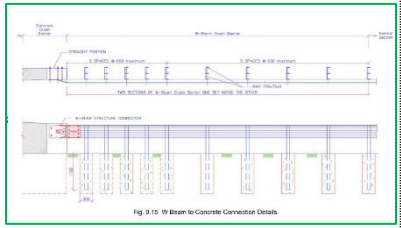
Annexure III: Identified Safety Concerns

Identified Safety Concerns along the Project Road

Keeping in view the scope of the assignment, safety concerns have been recorded on-site and reported in the table below. The remarks and recommendation column includes information on clauses of CA & applicable manual, any observations in the IE report/project documents, and our recommendations against the highlighted safety concern. The risk and priority of each safety concern are also included as per the following criteria given in line with IRC: SP:88-2019 (Manual on Road Safety Audit).

- Risk categories for identified safety concern: Very High, High, and Medium
- Priority level for recommendations: Essential, Highly Desirable and Desirable

Table 7-8 Safety Observations along the Project Road

S. No.	Safety concern		Recommendation		Type of Concern
	Current Situation	Risk	Recommendation and Remarks	Priority	
1	**Safety Barrier**				
A	**Proper connection between MBCB and Rigid barrier shall be provided**	**Very High**		**Essential**	**Installation issue**
	Transition arrangements between MBCB and the Rigid barrier. Fishplate at the transition between MBCB and the rigid crash barrier shall be provided at most of the locations along the Project Road. Also, post spacing in the transition arrangement section shall be provided as per the provisions of the applicable manual. In the transition arrangement to the rigid barrier, number and spacing of post vary to provide greater rigidity to the semi-flexible barriers. (5 posts at intervals of 0.9m c/c, and the next set of 5 posts at intervals of 0.6m c/c.)		As per the applicable manuals of CA, the transition arrangement between MBCB and Rigid Crash Barrier shall be provided as per Figure 9.2 of IRC: SP:84-2014 and Figure 9.15 of IRC: SP:73-2015. 		

S. No.	Safety concern		Recommendation		Type of Concern
	Current Situation	Risk	Recommendation and Remarks	Priority	
B	**start-end treatment of MBCB**	**Very High for the approach side and High for the departure side**		**Essential**	**Installation issue**
	As shown in the photograph, MBCB start and end treatmentsshall be provided properly at a few locations. MBCB is directly installed without any start and end treatment, which poses a risk to approaching vehicles. If a vehicle collides with the start of the W-Beam barrier, it could penetrate the vehicle, causing serious harm to the passengers.		As per the applicable manuals of CA (Fig. 9.9 of IRC: SP:84-2014 and Fig 9.13 of IRC: SP:73-2015): *The end treatment on approach shall be Modified Eccentric Loader Terminal (MELT) arrangement and on the departure side it shall be Trailing Terminal (TT) arrangement.* ..		
C	**Damaged Metal beam crash barrier**	**-**		**-**	**No Issue**
	No issue was observed				
D	**Wrong overlapping of MBCB plates**	**-**		**-**	**No Issue**
	No issue was observed				
E	**Improper Arrangement of MBCB and Kerb**	**-**		**-**	**No Issue**
	No issue was observed				

S. No.	Safety concern		Recommendation		Type of Concern
	Current Situation	Risk	Recommendation and Remarks	Priority	
F	**MBCB Setback distance**	**-**		**-**	**No Issue**
	Based on visual inspection, MBCB setback distance is adequate at most of the locations		No issue was observed		
G	**Height of Crash barriers**	**-**		**-**	**No Issue**
	Based on visual inspection, the height of crash barrier is adequate at most of the locations		No issue was observed		
I	**Welded connection of MBCB Plates**				**No Issue**
	No issue was observed				
J	**Wire Rope Barrier Setback distance**			**-**	**NA**
	NA		NA		
K	**Wire Rope Barriers Distance from face of the kerb**			**-**	**NA**
	NA		NA		
L	**Start of RCC crash barrier w.r.t. grade separator**	**-**		**-**	**NA**
	Most of the structures are in the under-construction stage.				
M	**RCC crash barrier at Bridges**	**-**		**-**	**NA**
	Most of the structures are in the under-construction stage.				
2	**Pedestrian Guard Rail**				
A	**New installation of PGR at built-up section**	**-**		**-**	**NA**
	NA				
B	**PGR and rigid barrier connection**	**-**		**-**	**NA**
	NA		NA		
3	**Pedestrian Facilities**	**-**		**-**	**NA**
	NA		NA		
4	**Median walls in b/w structures**	**-**		**-**	**NA**
	Most of the structures are in the under-construction stage.		NA		
5	**Highway Lighting**				
A	**Highway Lighting at the underside of the Grade separator**	**-**			**NA**

S. No.	Safety concern		Recommendation		Type of Concern
	Current Situation	**Risk**	**Recommendation and Remarks**	**Priority**	
	Grade separator structures are under construction		NA		
B	**Highway Lighting Lux**	**-**		**-**	**NA**
	Currently, Highway lighting installation works are in the under-construction stage.		NA		
6	**Solar Blinker**				
A	**Non-Functional solar blinkers and missing blinker lights**	**High**		**Essential**	**O&M issue**
	Solar blinkers have been installed at median openings situated in ribbon development, public gathering points etc (two-way section).				
B	**Height of solar blinkers**	**-**		**-**	**No Issue**
	During the site inspection, it was observed that the height of solar blinker was adequate.		No issue was observed		
C	**LED Traffic Beacons/Solar Blinkers arrangement**	**-**			**No Issue**
	No issue was observed				
7	**Nighttime visibility**	**-**		**-**	**NA**
	NA		NA		
8	**Sign Board**				

S. No.	Safety concern		Recommendation		Type of Concern
	Current Situation	Risk	Recommendation and Remarks	Priority	
A	**Issue with an existing installation of sign boards (Damaged, faded, visibility, etc.,)**	**-**		**-**	**No Issue**
	As mentioned above, most of the roadworks are in progress, and the corresponding installation of road furniture items is underway. Therefore, issues regarding signboards have not been encountered.				
B	**New installation of signboard**	**High**		**Essential**	**New Installation**
	During our site visit, construction activities are in progress. Activities like installation of new sign board have not been taken up as yet. Also, the approved sign plan of the Project Road has not been provided for review. Therefore, no comment or suggestion can be made in this regard.				
9	**Object and Kerb Painting**	**-**		**-**	**No Issue**
	Based on visual inspection, the object painting provided is observed to be adequate.				
10	**Safety Measures at critical locations, i.e., Transverse Bar Marking**	**-**		**-**	**No Issue**
	Traffic calming measures in terms of TBM, and solar blinkers have been observed in the operational section, but not sure specifications adopted.				
11	**Road Studs**	**-**		**-**	**No Issue**
	Road studs have been observed at urban and curve sections.				
12	**Road Delineator**	**-**			**NA**
	NA				
13	**Road Geometry**				
A	**Improper connections of Minor Roads**	**-**		**-**	**-**
	NA				
B	**Absence of storage lane at median opening/U-turn locations**	**-**		**-**	**No Issue**
	All existing median openings are equipped with storage lanes on BHS.				
C	**Un-Authorized Median Openings (UMO)**	**-**		**-**	**No Issue**
	No issues are currently observed. At a few locations, temporary cuts are made for ease of ongoing construction activities.				
14	**Landscaping and Tree Plantation**				
A	**Avenue plantation condition**				**NA**

S. No.	Safety concern		Recommendation		Type of Concern
	Current Situation	**Risk**	**Recommendation and Remarks**	**Priority**	
	NA				
B	**Median Plantation in No Plantation Zone**	**-**		**-**	
	-				
15	**Truck Lay Bays/Bus Bays/Wayside Amenities**				
A	**Truck Lay Bye Layout**	**High**		**-**	**Under construction**
	Two truck lay-bys are observed along the Project Road; the geometry in terms of acceleration and deceleration lanes are adequate. However, installation of safety furniture items is in progress.		It is important to prioritize the provision of road furniture items like Two-way OHMs, studs, streetlights etc		
B	**Bus Bays and Bus Shelters**	**-**		**-**	**Under construction**
	Bus-bay and Bus-shelters are under construction along the Project Road.				
C	**Rest Areas / Wayside Amenities**	**High**		**-**	**NA**
	NA				
16	**Other General Issues**				
A	**Water Stagnation**	**High**		**-**	**No Issue**
	No issue was observed				
B	**Un-authorized vehicle parking on shoulder**	**-**		**-**	**No Issue**

S. No.	Safety concern		Recommendation		Type of Concern
	Current Situation	Risk	Recommendation and Remarks	Priority	
	-				
C	**Encroachment by temporary shops**	**-**		**-**	**No Issue**
	No issue was observed				
17	**High Transmission Line Vertical clearance**	**-**		**-**	**No Issue**
	No issue was observed				

Summary of identified road furniture quantities for safety enhancement along the Project Road

It may be noted that during the safety inspection, a few safety concerns that can be attributed to deviation from the applicable manual have been identified and presented in the Report. However, it is acknowledged that the site is been mostly constructed in accordance with the approved drawings.

The following points below provide a summary of recommendations based on the site visit and review of submitted documents that shall help in elevating the overall profile of Project Road.

- Installation of MBCB on either side of rigid crash barriers, at the base of overhead signs, and along high embankment sections *(Refer Sch-C, Clause V (1 &2) of CA).*
- Improving the connection between MBCB and rigid crash barriers, as well as the start/end treatments of MBCB, to enhance road safety.
- Review the provision of advanced directional signages along the Project Road *(Refer Sch-C, Clause 2.2(ii) of CA).*
- Install the missing OHM to highlight hazards close to the travel path.
- Rectify the non-functional solar blinkers and review the provision of solar blinkers at median openings.
- Improvements to traffic diversion arrangements shall be made, and roadworks signs, including access denial notices, shall be provided in advance warning zones to enhance overall traffic safety.

As mentioned earlier, PCC -1 for 81.175 km out of a total length of 164.32 km has been received (*(As per Letter No. NHAI/KNT/BRT Tiger-Reserve/2021/89161 i.e.* effective from 31/12/2020. IE has recommended PCOD -2 to Authority for the length of 162.94 km out of 164.34 km via letter dated 3rd July 2024

Technical Due Diligence for 4-Laning of Rampur – Kathgodam Section of NH-87 (New NH no. 09, 109) from km 42.791 (Design Chainage km 43.446) to km 88.000 (Design Chainage km 93.226) [Package – II] in the State of Uttarakhand under NHDP Phase – III on Hybrid Annuity Mode

Technical Due Diligence Report (Private and Confidential)

July 2024

Submitted to:

Gawar Nainital Highways Private Limited

Cube Highways Technologies Private Limited

CUBETECH
Cube Highways Technologies Pvt. Ltd.

Technical Due Diligence for 4-Laning of Rampur – Kathgodam Section of NH-87 (New NH no. 09, 109) from km 42.791 (Design Chainage km 43.446) to km 88.000 (Design Chainage km 93.226) [Package – II] in the State of Uttarakhand under NHDP Phase – III on Hybrid Annuity Mode

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S. No.	Revision	Description	Date	Sign
1	R0	Technical Due Diligence Report	July 2024	

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ABBREVIATIONS

Abbreviation	Description
ASTM	American Society for testing and Materials
AVC	Automatic Vehicle Classifier
ABP	Allahabad bypass package
BBD	Benkelman Beam Deflection
BC	Bituminous Concrete
BOT	Built, Operate and Transfer
CA	Concession Agreement
CC Drain	Cement Concrete Drains
COD	Commercial Operation Date
CRRI	Central Road Research Institute
CBR	California Bearing Ratio test
DBFOT	Design, Build, Finance, Operate and Transfer
ETC	Electronic Toll Collection
FWD	Falling Weight Deflectometer
GOI	Government of India
GNHPL	Gawar Nainital Highways Private Limited
GCL	Gawar Construction Limited
HPC	Hume Pipe Culvert
IE	Independent Engineer
IRC	Indian Roads Congress
LA	Land Acquisition
LHS	Left Hand Side
LOA	Letter of Acceptance
MBCB	Metal Beam Crash Barrier
MJB	Major Bridge

Abbreviation	Description
MNB	Minor Bridge
MOST	Ministry of Surface Transport
MPR	Monthly Progress Report
NH	National Highway
NHAI	National Highway Authority of India
NSV	Network Survey Vehicle
O&M	Operation and Maintenance
OHLS	Overhead Lane Signal
OHM	Object Hazard Marker
PCOD	Provisional Commercial Operation Date
POS	Point of Sale
POS	Point of sale
RCC	Reinforced Cement Concrete
RHS	Right Hand Side
ROB	Road/Rail Over Bridge
ROW	Right of Way
RPV	Route Petrol Vehicle
RUB	Road/Rail Under Bridge
SH	State Highway
SPV	Special Purpose Vehicle
SR	Service Road
SSWIM	Slow Speed Weigh in Motion
SWB	Static Weigh Bridge
TOT	Toll Operate Transfer
TC	Toll Collector
Team	Team of Cube Highways Technologies Pvt Ltd.
TMS	Toll Management System
WIM	Weigh in Motion

Abbreviation	Description
WMM	Wet Mix Macadam

INTRODUCTION

CHAPTER 1. INTRODUCTION

1.1 Background

Infrastructure Sector is a key driver for the Indian economy. In 2014, the Government of India have introduced a new investment vehicle which allows investors to participate in the growth story of infrastructure sector, named Infrastructure Investment Trusts (hereinafter referred to as 'InvITs'). InvITs are instruments on pattern of mutual funds and are designed to pool in money from a number of investors to invest in assets that give cash flow over a period of time. The InvITs are regulated by the SEBI (Infrastructure Investment Trusts) Regulations Act, 2014.

In highway sector, InvIT as an instrument provide greater flexibility to investors and is expected to attract patient capitals (for say, 20-30 years) to the market, as these investors are averse to construction risks and are interested in investment in assets which provide long-term stable returns.

InvIT shall have a (i) Trustee, (ii) Sponsor(s) (iii) Investment Manager and (iv) Project Manager Sponsor and the Project Manager are the same entity. During maintenance period of the Project Stretch, Gawar Construction Limited. (In its capacity as the Project Manager of National Infrastructure Trust) has appointed M/s Cube Highways Technologies Private Limited as Technical Consultant for carrying out technical study and assessment of Opex and Major Maintenance requirement (MMR) for balance concession period. The scope includes review of operation and maintenance system and to prepare maintenance schedule for entire duration of concession period based on a technical analysis. In turn, Cube Highways Technologies undertook the site visits to carry out site inspection. The report is based on findings during this period.

National Infrastructure Trust ("Trust") was settled on September 25, 2023, in Gurugram pursuant to the Trust Deed as a contributory irrevocable trust in accordance with the Indian Trusts Act, 1882. The Trust is an Infrastructure Investment Trust (InvIT) established for making investments in special purpose vehicles as defined under Regulation 2(1) (zy) of the InvIT Regulations, or infrastructure projects or securities of Indian companies engaged in the infrastructure sector, as may be permitted in terms of Regulation 18(5) of the InvIT Regulations. Axis Trustee Services Limited (ATSL) is the Trustee to the Trust. Gawar Investment Manager Private Limited (GIMPL) was incorporated as a private limited company on August 26, 2023, under the Companies Act, 2013. GIMPL is a wholly owned subsidiary of GCL. GIMPL has been appointed as the Investment Manager to the NIT InvIT by Axis Trustee Services Limited (ATSL); the trustee to NIT InvIT and is responsible for managing the operations of InvIT in accordance with InvIT regulations.

Table 1-1: Projects comprising the Initial Portfolio Assets of National Infrastructure Trust

S. No.	Name of the Project	Length (km)
1.	Gawar Rohna Jhajjar Highway Private Limited	35.450
2.	Gawar Khajuwala BAP Highway Private Limited	212.107

S. No.	Name of the Project	Length (km)
3.	Gawar Narnaul Highway Private Limited	45.300
4.	Gawar Rohna Sonepat Highways Private Limited	40.500
5.	Hardiya Hasanpur Highway Private Limited	47.225
6.	Gawar Kiratpur Nerchowk Highway Private Limited	47.753
7.	Dewas Ujjain Highway Private Limited	41.420
8.	Gawar Bangalore Highways Private Limited	164.340
9.	**Gawar Nainital Highways Private Limited**	**43.905**

1.2 Asset Background

The National Highway Authority of India (NHAI) on behalf of Ministry of Road Transport and Highways (MoRT&H), Government of India, have taken up the development of various National Highway corridors where the intensity of traffic has increased significantly and there is requirement of augmentation of capacity for safe and efficient movement of traffic. In this regard, NHAI has been entrusted to develop projects for selected corridors through Public Private Partnership (PPP) basis on Design, Build, Operate and Transfer (DBOT) pattern.

As part of this endeavour, the Government of India (GOI) had entrusted to the Authority the development, maintenance, and management of National Highway (NH) 87 including the section from km 42.791 to km 88.000. The Authority had resolved to augment the existing road from km 42.791 to km 88.000 on the Rampur-Kathgodam section of National Highway 87 (New NH-9, 109) (hereinafter called the "NH 87 (New NH-9,109)") in the State of Uttarakhand by Four-Laning thereof (the "Project") on design, build, operate and transfer (the "DBOT Annuity" or "Hybrid Annuity") basis, which shall be partly financed by the Concessionaire who shall recover its investment and costs through payments to be made by the Authority, in accordance with the terms and conditions as set forth in the Concession Agreement (CA).

The Hybrid Annuity Model (HAM) is a mix of Built, Operate and Transfer (BOT) Annuity and Engineering, Procurement and Construction (EPC) models. As per the design, the Authority will contribute up-to 40% of the Project Cost in five equal instalments of 8% each during the Construction Period of 730 days with the provisions of Clause 23.4 of CA. The remaining payment will be made based on the assets created and the performance of the developer. Here, hybrid annuity means the first 40% payment is made as fixed amount in five equal instalments whereas the remaining 60% is paid as variable annuity amount after the completion of the Project. As per the design, the Authority will contribute 40% of the Bid Project Cost (BPC) and the balance cost is funded by the Concessionaire through debt and equity.

The Authority had adopted a single stage two envelope bidding process and accordingly invited proposals by its Request for Proposals (the "Request for Proposals" or "RFP") for qualification and short listing of bidders for construction, operation, and maintenance of the above referred Project on Hybrid Annuity basis. The Authority had prescribed the technical and commercial terms and conditions in the RFP and invited bids comprising technical and financial bids from the bidders for undertaking the Project.

After evaluation of the bids received, the Authority had technically qualified certain bidders including, inter alia, the selected bidder and accepted the financial bid of the selected bidder i.e., M/s Sadhbav Infrastructure Projects Limited.

Accordingly, Special Purpose Vehicle (SPV) M/s. Gawar Nanital Highway Private Limited (Sadbhav Nainital Highway Private Limited was the erstwhile Concessionaire) has been formed, for implementing the Project the "Concessionaire"). As the Concessionaire of this Project, they will be developing the Project, operate and maintain the facilities after completion of construction.

Under Hybrid Annuity Model (HAM), toll collection on the Project shall be responsibility of NHAI. The Concessionaire will be recovering its costs through annuity payments made during Concession Period of 17 years (annuity payments during Construction as well as in Operations Period), including Construction Period of 730 days from the Appointed Date and Operation Period of 15 years from Commercial Operation Date (COD).

Endorsement Agreement has been signed between NHAI, M/s Sadbhav Nainital Highway Private Limited (SNHL), M/s Gawar Nainital Highway Private Limited (GNHPL) ("**New Concessionaire**") and IndusInd Bank Limited **("Lender's Representative")** on 14th July 2023. Pursuant to which the New Concessionaire has agreed to complete the balance work and taken over the rights and obligations of the Project from the Effective Date in terms of the Concession Agreement."

The Concession has been awarded to Substitute Concessionaire M/s Gawar Nainital Highway Private Limited., for a Concession period of 15 years. The Concessionaire has achieved financial closure and having complied with the conditions precedent as stipulated in the Concession Agreement. The Concessionaire has to complete the work in 9 months from date of signing of Endorsement agreement that is 14th July 2024, completion date is 14th April 2024, as per the Concessionaire, they are applying for EOT till 15th October 2024.

1.3 Report Structure

The report contains eight chapters, including this Chapter on Introduction.

Chapter 2 Project Overview

Chapter 3 Asset Status

Chapter 4 Review of Structures

Chapter 5 Review of the pavement condition survey

Chapter 6 General Safety Concerns along the Project Stretch and Improvements

Chapter 7 Operation and Maintenance Cost

Chapter 2
PROJECT OVERVIEW

CHAPTER 2. PROJECT OVERVIEW

2.1 Location

The Project starts at Rampur km 43.446 and ends at Kathgodam km 93.226. The Start co-ordinate of the Project is Latitude 28°57'36.20427" N and Longitude 79°23'8.0817" E. The end co-ordinate of the Project is Latitude 29°16'10.41564" N and Longitude 79°32'40.33271" E. The Project corridor also includes 1 bypass around Haldwani of length 13.202 km along with realignment at two locations.

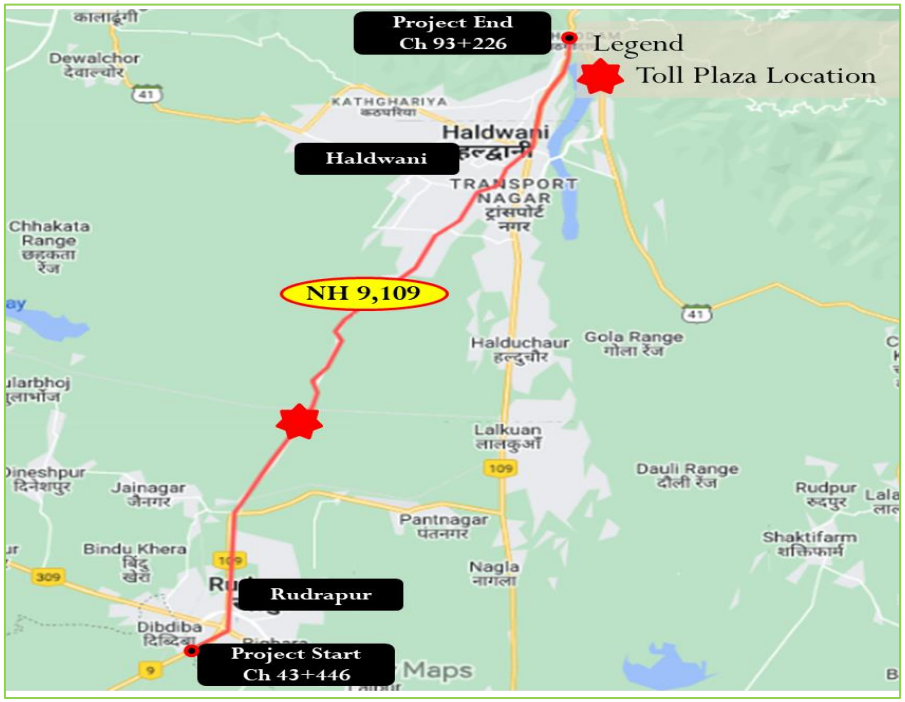

Figure 2-1: Project Alignment

2.2 Salient features

The salient features of the Project are summarised in the table below:

Table 2-1 Project Salient Features

S. No	Scope	Description
1	Name of the Project	4-Laning of Rampur – Kathgodam section of NH-87 (New NH no. 09, 109) from km 42.791 (Design Chainage km 43.446) to km 88.000 (Design Chainage km 93.226) [Package – II] in the State of Uttarakhand under NHDP Phase – III on Hybrid Annuity Mode.
2	Name of Client	National Highways Authority of India
3	Name of Previous Concessionaire	M/s Sadbhav Nanital Highway Pvt. Ltd.
4	Name of New Concessionaire	M/s Gawar Nainital Highway Pvt. Ltd.
5	Independent Engineer	M/s LEA Associates South Asia Pvt. Ltd
6	Length of the Project	49.780 km (Revised 43.905 km)
7	Bid Project Cost	Rs. 657 crores
8	Revised Project Cost	Rs. 560.11 crores
9	Letter of award	Rampur-Kathgodam/NH-87/Pkg-II/hybrid annuity/UKD(Tech-Div)/2015/80673 dated 31st March 2016
10	Signing of Concession Agreement date	2nd June 2016
11	Appointed Date	28th October 2017
12	Construction Period	730 days from Appointed Date
13	Operation Period	15 years from PCOD/COD
14	PCOD	8th December 2021 w.e.f 27th October 2019 for a length of 18.085 km
15	Signing of Endorsement Agreement	14th July 2023
16	Completion Date as per Endorsement Agreement	14th April 2024 (i.e., 9 months from signing of Endorsement Agreement)
17	EOT	As per the Concessionaire, they are applying for EOT till 15th October 2024.

2.3 Scope of the Project

The scope of the Project (the "Scope of the Project") shall mean and include,

- Construction of the Project on the site set forth in Schedule-A and as specified in Schedule-B together with provision of Project Facilities as specified in Schedule- C, and in conformity with the Specifications and Standards set forth in Schedule- D of the Concession Agreement.
- Operation and Maintenance of the Project in accordance with the provisions of Concession Agreement; and
- Performance and fulfilment of all other obligations of the Concessionaire in accordance with the provisions of Concession Agreement and matters incidental there to or necessary for the performance of any or all the obligations of the Concessionaire under Concession Agreement.

2.4 Physical features of the Project

The Concessionaire shall operate, manage and maintain the Project Stretch for entire Concession Period, subject to and in accordance with the provisions of this Agreement. The Concessionaire shall visit the Site and assess the durability and strength of Project Assets and make his own assessment for operation, management. and maintenance as per Specifications and Standards and bear and pay all costs, expenses and charges in connection with or incidental to the performance of operation, management and maintenance.

The project includes the following physical features.

Table 2-2: Project Physical Features

S. No	Project Physical Features	UoM	As per CA	As on-Site Inspection (dated 29th Jan 2024)	Remarks
1	Total Length of Project Stretch	km	49.780 Revised 43.905	24.1	As per IE report for June 2024, 42.700 km length has been completed, COS (5.875 km descoped),
2	Total length of Service Road/Slip Road	km	3.150/7.800	4.774	Under Construction
3	Major Bridges	nos.	02	02	Rehabilitation work is under progress.
4	Minor Bridges	nos.	08	09	Including COS (2 nos. added in COS and 1 no. descoped)

S. No	Project Physical Features	UoM	As per CA	As on-Site Inspection (dated 29th Jan 2024)	Remarks
5	ROBs	nos.	02	01	Including COS (1 no. descoped)
6	RUB	nos.	01	01	
7	VUPs	nos.	03	01	Including COS (2 nos. descoped)
8	PUPs	nos.	04	0	Including COS (4 nos. descoped)
9	Box/Slab Culverts	nos.	34	52	Including COS
10	Pipe Culvert	nos.	0	5	Including COS
11	Junctions	nos.	28	27	Including COS (1 nos. descoped)
12	Toll Plaza	nos.	1	1	

All the above features as per site have been accounted for the estimation of routine maintenance, repair and rehabilitation, major maintenance and operation expenditure.

2.5 Review of Concession Agreement

The Authority had adopted a single stage two envelope bidding process and accordingly invited proposals by its Request for Proposals (the "Request for Proposals" or "RFP") for qualification and short listing of bidders for construction, operation and maintenance of the above referred Project on Hybrid Annuity basis.

The Authority had prescribed the technical and commercial terms and conditions in the RFP and invited bids comprising technical and financial bids from the bidders for undertaking the Project.

After evaluation of the bids received, the Authority had technically qualified certain bidders including, inter alia, the selected bidder and accepted the financial bid of the selected bidder i.e., M/s Gawar Constructions Ltd. and issued its Letter of Award No. Rampur-Kathgodam/NH-87/Pkg-II/hybridannuity/UKD(Tech-Div)/2015/80673 dated 31st March 2016 (hereinafter called the "LOA") to the selected bidder requiring, inter alia, the execution of this Concession Agreement within 45 (forty-five) days and on 2nd June 2016 it was accepted.

Table 2-3: Review of CA

Article /Clause of CA	Subject	Description in brief	*Remarks*
Article 3	**Concession period**	Concession period includes construction period of 730 days and operational period of 15 years from COD	
	Total Project Cost	Total project cost is 60 % of the Bid Project Cost If there is an increase in WPI, on an average, by more than 3% per annum for the period between the Bid Date and COD, the Total Project Cost shall be increased such that the effect of increase in WPI, more than such 3%, is reflected in the Total Project Cost	
Article 16	**Change in scope**	The Authority shall pay to Concessionaire any increase in scope of work approved by Independent Engineer. While in the case of reduction of scope due to reasons attributed by the Authority, cost of such reduced cost is to be accessed by the Independent Engineer, as per the schedule of rates applicable on the Bid Due Date. The civil cost of the reduced Scope shall be multiplied by the 1.086 to arrive at the estimated cost of reduced Scope. The estimated cost of reduced Scope shall then be multiplied by the ratio of Bid Project Cost to Estimated Project Cost to arrive at the Total Cost of Reduced Scope.	
Article 31	**Termination payment**		
	Termination payment in the event of default by Concessionaire during operation	The Authority shall pay to the Concessionaire an amount equal to 65% (sixty-five per cent) of the sum of Annuity Payments remaining unpaid for and in respect of the Concession Period, including interest thereon up to the Transfer Date.	
	Termination payment in the event of default by Authority during operation Period	An amount equal to the sum of Annuity Payments remaining unpaid for and in respect of the Concession Period, including interest thereon up to the Transfer Date.	
Article 35	**Change in law**		

Article /Clause of CA	Subject	Description in brief	*Remarks*
	Increase in cost	If the Concessionaire suffers aggregate financial effect due to change in law, which exceeds by Rs 1.14 crores or 2% of the total annuity payments in any accounting year the Concessionaire may notify Authority and propose amendments to this agreement so as to place the Concessionaire in the same financial position w/o change in law	*Concessionaire is protected*
	Reduction in cost	If the Concessionaire benefits from reduction in costs and the aggregate financial effect due to change in law, exceeds by Rs 1.14 crores or 2% of the total annuity payments in any accounting year the Authority may notify Concessionaire and propose amendments to this agreement so as to place the Concessionaire in the same financial position w/o change in law	
Clause 6.3	Obligations relating to refinancing	The Authority shall permit and enable Concessionaire for refinancing as per prevailing guidelines upon written request. Authority shall respond within 30 days of the receipt of proposal.	*Positive for the developers and lenders*
Article 28	**Force majeure**		
	Time Extension		
	c) After COD	After COD, the Concessionaire shall be entitled to receive Annuity Payments plus interest due and payable under this Agreement. Provided any payment to be made under this clause shall be subject to deduction of outstanding dues of the Authority, if any	
	Cost arising out of force majeure event		
	a) Before Appointed date	Cost to be borne by Concessionaire & Authority respectively	

Article /Clause of CA	Subject	Description in brief	*Remarks*
Clause 17.8	Damages for breach of Maintenance Obligation	if the Concessionaire fails to repair or rectify any defect or deficiency set forth in the Maintenance Requirements within the period specified the Authority shall be entitled to recover damages, to be calculated and paid for each day of delay until the breach is cured, at the higher of (a) 2% of the Performance Security, and (b) 0.1% of the cost of such repair or rectification as estimated by the Independent Engineer	*Concessionaire is made more responsible*
Clause 17.16	Advertising on the site	The Concessionaire shall not undertake or permit any form of commercial advertising, display or hoarding at any place on the site	
Article 20	Traffic aid post, medical aid post etc.	Concessionaire shall construct a traffic aid post of 25 sqm, medical aid post and two residential quarters at its own cost and hand them over to authority.	
		The Concessionaire shall provide to the State Police Department or a substitute thereof one Jeep or similar vehicle in good working condition along with chauffeurs for round-the-clock patrolling. The operating costs of such vehicle including the salaries and allowances of the chauffeurs shall be borne by Concessionaire.	
		The Concessionaire shall provide to the State Medical Department or a substitute thereof to be designated by the Authority one ambulance in good working condition along with chauffeurs for round-the-clock ambulance services. the operating costs of such ambulance including the salaries and allowances of the chauffeurs	

Article /Clause of CA	Subject	Description in brief	*Remarks*
		The Concessionaire shall also reimburse to the State Medical Department (or a substitute thereof to be designated by the Authority) the actual expenditure incurred by it in each Accounting Year on the medical equipment, and the pay and allowances of up to 2 medical personnel deployed exclusively for the Medical Aid Posts and ambulance and shall maintain the Medical Aid Post buildings.	
Clause 21.3	Payment to independent engineer	The remuneration, cost and expenses of the Independent Engineer shall be paid by Authority and subject to the limits set Schedule-M, one-half of such remuneration, cost and expense shall be reimbursed by the Concessionaire to the Authority within 15 days of receiving a statement of expenditure from the Authority	
Clause 23.9.1	Treatment to Incomplete works	The Parties acknowledge and agree that in the event COD occurs upon issuance of a Provisional Certificate, the Annuity Payments and O&M Payments as specified shall be made as if all works comprising the Project have been completed. The works remaining incomplete shall be completed by the Concessionaire in accordance with the provisions of this Agreement and thereupon, the Completion Certificate shall be issued forthwith.	*Positive for both Concessionaire and Lender*
Clause 23.9.2		in the event the Authority determines that any incomplete works referred to in clause 23.9.1 are not required to be completed for any reason, it shall be modifying the Scope of this Project in accordance with the provisions of Article 16 and the Completion Cost, Annuity Payments and O&M payments shall be reduced on account of such Change of scope.	*Will affect Annuity Payments in one hand and will decrease O&M expenditure on the other hand*

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Chapter 3
ASSET STATUS

CHAPTER 3. ASSET STATUS

3.1 Review of Project Stretch

As per site condition 24.1 km length was found completed during site visit on 29th January 2024. However, as per IE report June 2024, 42.900 km length is completed . SPV is addressing the defects/deficiencies as and when arises and pointed out by the Independent Engineers regularly.

As per our visual inspection, the pavement is in good condition, the observations made by our team are presented below.

Figure 3-1: Project start and end location

The team had following general observations during the visit,

- Bus shelters were in progress along the Project Stretch.
- During the site inspection, it was observed that road marking is pending in multiple locations.
- Kerb casting was in progress along the Project Stretch.

- Crash barrier installation was in progress along Project Stretch.

3.2 Drain

Based on the site inventory, construction of Median drain and shoulder drain are in progress along the Project Stretch. The detailed list of drains along the Project Stretch is enclosed in Annexure II.

3.3 Intersections/Junctions

Based on the site observation, there are 36 Major/Minor Junctions were found along the Project Stretch and their maintenance was in progress.

Figure 3-2: Junctions

3.4 Road Furniture

Following are the details of road furniture provided along the Project Stretch as per site.

Table 3-1: List of project furniture's

Type furniture	Unit	Quantity
Metal beam Crash barrier	km	39.590
Streetlights		
Single arm	Nos	401
Double arm	Nos	509

Metal beam crash barrier

Installation of Metal beam safety barriers was in progress along the Project Stretch.

Figure 3-3: Safety crash barrier (MBCB) along the Project Stretch

Highway Lighting

Highway lighting such as single arm, double arm, and high mast lights have been provided along the Project Stretch, which includes main carriageway, service roads toll plazas etc. As per site observations, streetlights installation is in progress along the Project Stretch.

Figure 3-4: Highway lighting

3.5 Project facilities

Following are the details of project facilities along the Project Stretch,

Table 3-2: List of project facilities

Type facility	Unit	Quantity
Bus shelters	nos.	32

Chapter 4
REVIEW OF STRUCTURES

CHAPTER 4. REVIEW OF STRUCTURES

4.1 Structural investigations

Review of structures inventory and detailed condition survey of structures are the essential requirements for preparation of estimates for Capex and also for O & M cost for highway structures. Keeping in view of importance of this task, review of inventory and conducting visual condition survey were carried out as per procedure and guidelines prescribed in IRC: SP:35 bridge engineers. The details of condition survey of structures were furnished below.

Visual Condition Survey

Salient features for which data is collected as part of conditional survey are in accordance with IRC: SP: 35 Proforma. Main features recorded as part of detailed condition survey are listed below.

- At some locations, the strip seals of expansion joint and drainage spouts were filled with dirt & debris, also some strip seal elastomers were damaged/punctured.
- At a few culvert locations, parapet wall was found damaged and object hazard marking board was missing.
- Silt and debris accumulation was observed in the vent area and a few culverts were partially buried.
- Drainage spouts assemblies were found missing at a few structure locations.
- Overall structures are in sound and satisfactory condition. However, some treatment has been suggested based on our observations and are being done under the routine maintenance works. The cost of the above rectification works is factored in the routine O&M cost. Also, project is in construction phase, these issues will be addressed once construction is completed. As per IE report for June 2024, 91% physical progress has been achieved.

4.2 General

Details of various types of structures as per CA as well as site inventory survey are furnished below,

Table 4-1: Summary of structures

S. no.	Type of Structure	As per CA	As per site inspection	Remarks
1	Major Bridges	02	02	Rehabilitation work is under progress.

S. no.	Type of Structure	As per CA	As per site inspection	Remarks
2	Minor Bridges	08	09	Including COS (2 nos. added in COS and 1 no. descoped)
3	ROBs	02	01	Including COS (1 descoped)
4	RUB	01	01	
5	VUPs	03	01	Including COS (2 nos. descoped)
6	PUPs	04	0	Including COS (4 nos. descoped)
7	Box/Slab Culverts	34	52	Including COS
8	Pipe Culvert	0	5	Including COS
	TOTAL	**71**		

The next section presents the observations on Structures. The visual inspection of all the major structures was conducted by team of Bridge experts to assess the present condition of structures. The detailed condition survey is furnished in subsequent sections of this report.

4.2.1 Major Bridges:

There are 02 nos. of Major Bridges on the Project Stretch. As per the latest IE MPR of the June 2024, the rehabilitation works are in progress in the Major Bridges. **The cost for repair and rectification has been factored in the O&M estimation and the Concessionaire has taken up the rectification/ rehabilitation works under approved COS for Major bridge at km 92+725. The Structures are found in sound and satisfactory condition.**

Detailed condition of Major Bridge based on our condition survey and necessary repair and pending maintenance works are given below,

Table 4-2: Existing condition and required repairs /maintenance works for Major Bridges

S. no.	Chainage, km	Span Arrangement, m	Total Length, m	Side	Condition of Structure	Proposed repair and pending maintenance works
1	84.736	13 x 28.75	373.75		1. Exposure of reinforcement was observed on abutment cap on A1. 2. Leaching cracks were observed on the soffit of deck slab on cantilever portion. 3. Rain cuts were observed, and quadrant pitching was disturbed on A1 side.	1. Loose material shall be removed and reinforcement to be made rust free and the surface to be packed with high strength micro concrete. 2. Epoxy pressure grouting shall be done for affected areas in order to seal the voids and densify the concrete. 3. Rain cuts and quadrant pitching shall need to be rectified.
2	92.725	28.75+7+28.75+ 7+28.75	100.25		1. Leaching cracks were observed on the soffit of deck slab. 2. Drainage spouts assembly was missing only 100mm Dia hole was made in deck slab. 3. Water leakage marks were noticed on the expansion gap in between the span on the soffit of deck slab in cantilever portion. 4.Exposure of reinforcement was observed on crash barrier. **Note**: The Concessionaire has taken up the rehabilitation of protection works under the COS.	1. Epoxy pressure grouting shall be done for affected areas in order to seal the voids and densify the concrete. 2. New drainage spouts assembly shall need to be provided with G.I gratings and extension of down take pipe need to be extended up to 500mm down from soffit of girder to prevent water spillage. 3. Polymer bituminous sealant shall be applied on top and bottom of expansion gap to arrest the water leakage from median gap. 4. Chip-off the loose concrete, clean the rebars, apply anti-corrosive paint and repair the surface with high strength epoxy mortar.

Figure 4-1: Condition of Major Bridges

4.2.2 Minor Bridges:

There are 09 nos. of Minor Bridges on the Project Stretch. As per the latest IE MPR of June 2024, the work has been completed in the minor bridges. The miscellaneous works are in progress.

The cost for repair and rectification has been factored in the O&M estimation and the Concessionaire has taken up the rectification works. The Structures are found in sound and satisfactory condition.

Detailed condition of Minor Bridges based on our condition survey and necessary repair and pending maintenance works are given below.

Table 4-3: Existing condition and required repairs /maintenance works for Minor Bridges

S. no.	Chainage, km	Span Arrangement, m	Total Length, m	Side	Condition of Structure	Proposed repair and pending maintenance works
1	52.910	1 x 10.45	10.45	LHS	Work in progress.	
				RHS	Misc. works like handrails, drainage spouts and median wall yet to start.	
2	54.775	1 x 6.85 + 1 x 7.10	13.95	LHS	structure was in good condition.	
				RHS	1.Drainage spouts assembly was missing only 100mm Dia hole was made in deck slab. 2. Handrail was not constructed.	1. New drainage spouts assembly shall need to be provided with G.I gratings and extension of down take pipe need to be extended up to 500mm down from soffit of slab to prevent water spillage. 2. Handrail shall need to be constructed.
3	56.430	2 x 8.00	16.00	LHS	Misc. works like handrails, drainage spouts and median wall yet to start.	
				RHS	Misc. works like handrails, drainage spouts and median wall yet to start.	
4	57.415	1 x 14.00	14.00	LHS	Misc. works like handrails, drainage spouts and median wall yet to start.	
				RHS	Misc. works like handrails, drainage spouts and median wall yet to start.	

S. no.	Chainage, km	Span Arrangement, m	Total Length, m	Side	Condition of Structure	Proposed repair and pending maintenance works
5	58.440	1 x 14.00	14.00	LHS	Misc. works like handrails, drainage spouts and median wall yet to start.	
				RHS	Misc. works like handrails, drainage spouts and median wall yet to start.	
6	60.635	1 x 9.4 +1 x 9.15	18.55	LHS	Misc. works like handrails, drainage assembly etc. are pending.	
				RHS	Misc. works like handrails, drainage spouts and median wall yet to start.	
7	62.425	1 x 9.00	9.00	LHS	Rain cuts were observed on A1 and A2 side and protection works were damaged.	Rain cuts and protection works shall need to be rectified.
				RHS	Drainage spouts assembly was missing only 100mm Dia hole was made in deck slab.	New drainage spouts assembly shall need to be provided with G.I gratings and extension of down take pipe need to be extended up to 500mm down from soffit of slab to prevent water spillage.
8.	63.446	2 x 8.50	17.00		Drainage spout was observed in clogged condition.	Drainage spouts shall need to be cleaned and make it functional.

Figure 4-2: Condition of Minor Bridges

4.2.3 Road Over Bridges:

There is one ROB on the Project Stretch. As per the latest IE MPR of June 2024, the work is in progress in the structure.

The cost for repair and rectification has been factored in the O&M estimation and the Concessionaire has taken up the rectification works. The Structures are found in sound and satisfactory condition.

Present condition and required repair/ maintenance works for the ROB are given below.

Table 4-4: Existing condition and required repairs /maintenance works for ROB

S. no.	Chainage, km	Span Arrangement, m	Total Length, m	Side	Condition of Structure	Proposed repair and pending maintenance works
1	80.651	2 x 30 + 41.50	101.50	LHS	Work in progress.	
		2 x 30 + 41.50	101.50	RHS	Work in progress.	

Figure 4-3: Progress of ROB

4.2.4 RUB:

There is only one RUB on the Project Stretch. **The cost for repair and rectification has been factored in the O&M estimation and the Concessionaire has taken up the rectification works. The Structures are found in sound and satisfactory condition.**

Present condition and required repair/ maintenance works for the RUB are given below.

Table 4-5: Existing condition and required repairs /maintenance works for RUB

S. no.	Chainage, km	Span Arrangement, m	Total Length, m	Side	Condition of Structure	Proposed repair and pending maintenance works
1	67.250	2 x 8.00	16.00	LHS	Leaching was observed on the soffit of deck slab and side walls.	Epoxy pressure grouting shall be done for affected areas in order to seal the voids and densify the concrete.
				RHS	Leaching was observed on the soffit of deck slab and side walls.	Epoxy pressure grouting shall be done for affected areas in order to seal the voids and densify the concrete.

Figure 4-4: Condition of RUB

4.2.5 Vehicular Underpasses:

There is one Vehicular Underpasses on the Project Stretch. As per the latest IE MPR of the June 2024, the miscellaneous works are in progress in the structure.

The cost for repair and rectification has been factored in the O&M estimation and the Concessionaire has taken up the rectification works. The Structures are found in sound and satisfactory condition.

Present condition and required repair/maintenance work for the Vehicular Underpasses are given below.

Table 4-6: Existing condition and required repairs /maintenance works for Vehicular Underpasses.

S. no.	Chainage, km	Span Arrangement, m	Total Length, m	Side	Condition of Structure	Proposed repair and pending maintenance works
1	52.660	2 x 12.50	25.00	LHS	1. Approach RE wall works are in progress. 2. Misc. works like handrails, drainage assembly etc. yet to start.	

S. no.	Chainage, km	Span Arrangement, m	Total Length, m	Side	Condition of Structure	Proposed repair and pending maintenance works
				RHS	1.Approach RE wall works are in progress. 2. Misc. works like handrails, drainage assembly etc. yet to start.	

Figure 4-5: Condition of Vehicular Undperpass

4.2.6 Culverts:

There are 57 nos. of Culverts on the Project Stretch out of which 52 nos. were Box/Slab Culverts and 5 nos. are Pipe Culverts. As per the latest IE MPR of the June 2024 month, the work is in progress in one culvert. Also, the miscellaneous works are in progress.

The cost for repair and rectification has been factored in the O&M estimation and the Concessionaire has taken up the rectification works. The Structures are found in sound and satisfactory condition.

Common defects and / or pending maintenance works observed in condition survey, necessary repair and pending maintenance works for all the Culverts along the Project Stretch are given below.

Table 4-7: Existing condition and required repairs /maintenance works for Culverts.

S. no.	Type of Culverts	No. of Culverts	Condition of Structure	Proposed repair and pending maintenance works
1	Box/Slab Culverts	54	1. Honeycombing was observed on the parapet walls and soffit of top slab for some of the culverts. 2.Spalling was observed on the soffit of top slap at km 91.992. 3. Silt and debris accumulation was observed in the vent area and a few culverts were partially buried. 4. Stone pitching was disturbed in some locations. 5.Protection work (Rigid apron and Flexible apron) was missing.	1. Remove the loose material around the affected area and the surface shall be repaired with a high strength epoxy mortar. 2. Leaching shall need to be clean and apply sealing agent on that location. 3. Silt and debris accumulation shall be removed from the vent area. 4. Stone pitching shall need to be rectified. 5. Protection work (Rigid apron and Flexible apron) shall need to be provided.
2	Pipe Culverts	5	1.Honeycombing was observed on parapet walls in some locations. 2. For most of the culverts pipe vent area was clogged with debris. 3. Water stagnation was observed inside the vent way for some the culverts.	1. Remove the loose material around the affected area and the surface shall be repaired with a high strength epoxy mortar. 2. Debris shall be removed from the pipe vents. 3. U/S and D/S shall need to be cleaned and make the water flow from one side to another side

Figure 4-6: Condition of Culverts

Chapter 5
CONDITION ASSESSMENT OF EXISTING PAVEMENT CONDITION

CHAPTER 5. CONDITION ASSESSMENT OF EXISTING PAVEMENT CONDITION

To evaluate the existing pavement condition of a Project Stretch, investigations are to be carried out on the field to collect data from the field. The collected data is processed and analysed to obtain complete information on the pavement condition.

5.1 Pavement Condition Assessment for Technical Due Diligence

As a part of technical due diligence, the different investigations performed on the Project site are listed below.

- Assessment of Pavement Condition based on Visual Condition Survey

Based on the visual condition survey, the type of distress, its quantity, and severity for each Stretch are obtained. The same is used to evaluate the present condition of pavement, which classifies pavement conditions ranging from 'Distress' to 'Good'.

The pavement investigation studies carried out on the Project Stretch from 29th January to 30th January 2024 as a part of technical due diligence and their outcomes are detailed in the sections below.

5.2 Review of Concession Agreement

As per Schedule K of the Concession Agreement, the Concessionaire shall repair and rectify the defects and deficiencies as specified below

Table 5-1: Major maintenance criteria as per CA

S. No	Nature of Defect or Deficiency	Time limit for Repair/Rectification
1	Roughness value exceeding 2750 mm in a stretch of 1km (as measured by a standardized rough meter/bump integrator)	180 Days
2	Cracking in more than 5% of road surface in a stretch of 1 km	30 Days
3	Rutting exceeding 10mm in more than 2% of road surface in a stretch of 1km (measured with 3m straight edge)	30 Days

5.3 Key Site Visit Observations

Few observations made during the site visit by the pavement investigation team are as follows,

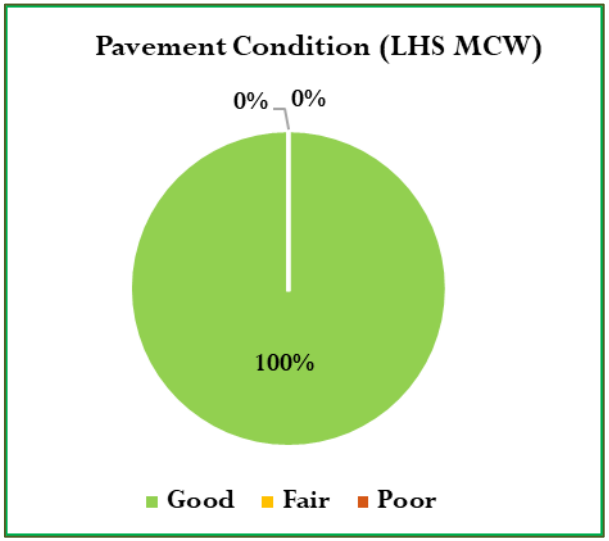
- Project Stretch includes both flexible and rigid pavement.

- Majority of stretch is rigid pavement along Project Stretch and is in construction phase.
- The survey only covers the completed stretch.
- Longitudinal and transverse cracks were observed as the predominant distresses in the Project Stretch.

Based on the observations made during the visual condition survey, the pavement condition is categorized into three categories 'Good', 'Fair', and 'Distress'. The visual survey data and summary of the pavement condition of completed Project Stretch is given below.

Table 5-2: Main Carriageway Pavement Visual Condition Survey Results

Condition	LHS		RHS	
	Length(km)	Length (%)	Length(km)	Length (%)
Completed	23.200	46.61	25.000	50.22
Good	23.200	100	25.000	100
Fair	0	0	0	0
Poor	0	0	0	0



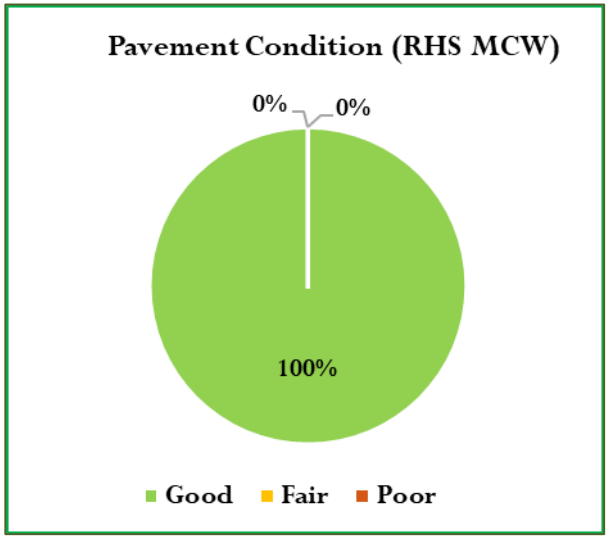


Figure 5-1: Pavement condition for completed section based on Visual condition survey

5.4 Pavement Roughness

Roughness is one of the important parameters for determining the functional characteristics of pavements. According to the American Society for Testing and Materials (ASTM), roughness is defined as "the deviations of a pavement surface from a true planar surface with characteristic dimensions that affect vehicle dynamics, ride quality, dynamic loads, and drainage, for example, longitudinal profile, transverse profile and cross-slope".

The roughness of road surfaces is measured using different equipment/techniques such as rod and level survey, dip stick profiler, profilographs, response type road roughness meters, and profiling devices.

In India, the roughness is measured using the fifth wheel bump integrator (developed by CRRI) and is reported as Unevenness Index (UI) in mm/km. In this report, Roughness is measured using an NSV profilometer on 11th April 2024, and a summary of the results are presented below:

Table 5-3: Summary of the Roughness values using NSV

Roughness Criteria as per IRC SP-16 2019		LHS				RHS			
		Inner (m)	Inner (%)	Outer (m)	Outer (%)	Inner (m)	Inner (%)	Outer (m)	Outer (%)
Good	<2000	20032	100.00%	20032	100.00%	21260	100.00%	21260	100.00%
Fair	2000-2400	0	0.00%	0	0.00%	0	0.00%	0	0.00%
Poor	>2400	0	0.00%	0	0.00%	0	0.00%	0	0.00%

Chapter 6
ROAD SAFETY ASSESSMENT ALONG THE PROJECT STRETCH

CHAPTER 6. ROAD SAFETY ASSESSMENT ALONG THE PROJECT STRETCH

6.1 General

This chapter presents general safety concerns observed along the Project Road (Rampur to Kathgodam Section of NH-09) and improvements suggested to address the same.

6.2 Site visit

Road Safety along the highway depends upon the condition of various components of the highway, such as coordination between horizontal and vertical alignment, provision and placement of road furniture, intersection geometry, availability of adequate sight distance, night-time visibility along the highway, etc. It is essential to understand all these aspects of the highway from a point of view of safety of each type of road user. The purpose of this assignment is to understand the road safety worthiness of Project Road and quantify road furniture items that are required as per the provisions of the Concession Agreement (CA). The report also summarizes high-risk safety concerns that persist for a reasonable length along the Project Road that helps improve the safety of road user upon implemented. It may be noted that a few minor observations that are part of regular O&M activities have not been quantified in this report, and geometrical improvements along with blackspots are not reviewed as part of this assignment. The scope has been constrained keeping in view the status of Project Road and the focus is largely on the major safety concerns and deviations from CA provisions in road furniture, if any.

The Safety Team of CUBE Highways Technologies Pvt Ltd. visited the Project Road from 7th to 8th Feb 2024

It may be noted that the Findings and Recommendations in this chapter are based on an independent inspection during a site visit along the Project Road and a review of available information/documents. This chapter mainly focuses on high-risk safety concerns and work zone-related issues along the Project Road, and any major geometrical improvements or location-specific improvements are not covered. However, based on visual observations and safety requirements identified by the safety team during the site visit, the requirement for additional safety furniture in line with CA provisions has been broadly identified and presented in the report. The chainages mentioned in the report may vary from the ground by approximately 50 to 100 m within acceptable tolerances.

Along with manual observations, the entire Project Road is video graphed using Vehicle Video Recorder Driver's Eye Level Video, a snapshot of output obtained from the app view is shown below:

Figure 6-1: Snapshot-displaying output format of driver's eye-level video.

As can be seen in above image, the Vehicle Video Recorder records following details along with video:

- Video recording (front view – Driver's Eye Level View)
- Location of Video on the Google Map (along with coordinates of the location)
- Speed of the Recording Vehicle, in km/hour

6.3 Review of Project Documents and Communications related to road safety aspects

The following documents have been reviewed as a part of the Road Safety Assessment.

Table 6-1: Review of Project Documents and Communications related to road safety aspects

Document	Broad comments from Road Safety aspect
Concession Agreement (CA) *(**Original Concessionaire:** Sadbhav National Highway Pvt. Ltd. and **substitute concessionaire:** Gawar Nainital Highways Pvt Ltd)*	• Clauses and warrants of various facilities along the Project Road, applicable manuals, and specifications, deviations from the specification's manual, etc., are reviewed. • The Project Road has been developed as per the applicable manuals – IRC: SP:84-2014 (Four-lane configuration) and IRC: SP:73-2015 (Two-lane configuration). • Few important safety clauses mentioned in the CA are summarized below: ▪ As per Sch-C, Clause 1.2 (vii), about 10 Nos. Cantilever and 3 Nos. Gantry signages shall be provided along the Project Road.

Document	Broad comments from Road Safety aspect
	▪ As per Sch-C, Clause 1.2 (ii), Concrete crash barrier, metal beam crash barrier, and separators (MS railings) shall be provided as per provision of IRC: SP:84-2014. ○ The minimum length of the concrete crash barrier shall be 3,000 m. ○ MBCB shall be 10,000 m. ○ Separators- (MS railings) shall be 1,800 m.
IE MPR - *LEA Associates South Asia Pvt. Ltd.*	About 3 IE MPRs (September, November and December 2023) have been received from the Project Company and the same have been reviewed. Following point are summarized in these MPRs: • Executive summary on project aspects, physical progress of site activities, financial progress, strip chart, etc.
PCOD correspondences	PCOD is not received
TCS, Plan & Profile, and Road Furniture drawings	• TCS, Plan & Profile and Road signage plan drawings have been received and reviewed with respect to CA provisions. However, as mentioned earlier, location-specific/Black Spots-related geometrical aspects are not studied as part of this assignment.
Accident Data Analysis	• Accident data reports from January 2024 to June 2024 have been provided and only two accidents were reported during these six months.

Chapter 7
OPERATION & MAINTENANCE COST

CHAPTER 7. OPERATION AND MAINTENANCE COST

7.1 General

This Chapter presents details on the O&M expenditure to be incurred. The expenses are divided into four heads.

- Routine Maintenance Expenses to maintain the asset to the standards set forth in the Concession Agreement.
- Major/ Periodic Maintenance Expenses
- Operating Expenses

7.2 Estimation of Operation & Maintainance cost

The Routine Maintenance activities related to pavement include pothole repair, crack sealing, shoulder repair, drain maintenance, renewal of road markings, maintenance of cross drainage works etc. A before-hand estimate of repairs to be carried annually, must be determined to calculate the anticipated routine maintenance cost of the Project. Most of the annual routine maintenance activities are estimated based on experience and the past data of the Project as these activities varies Project to Project and there are no hard and fast rules to obtain exact quantity.

Routine maintenance cost for this Project is summarized in next section of Cost Estimates. The list of items considered in routine maintenance are summarized in the table below,

Figure 7-1: List of Items Considered in Routine Maintenance Cost Estimate

S. No	Description of Item
1	**HIGHWAY**
	Flexible Pavement
	▪ Potholes ▪ Cracks ▪ Rutting/Depression/Settlement ▪ Ravelling/Stripping ▪ Re-surfacing
	Rigid Pavement

S. No	Description of Item
	▪ Slab Replacement ▪ Crack Sealing ▪ Ravelling/honeycombing, scaling, Polished Surface
	Hard/Earth shoulders, side slopes
	▪ Edge drop at shoulders ▪ Blading/reshaping to restore proper slopes and sides so as to maintain the standard formation width ▪ Rain cuts/gullies in slope ▪ Repairs of Stone Pitching/Turfing
2	**STRUCTURES**
	Superstructure of Bridges
	▪ Cracks ▪ Temporary Measures ▪ Permanent Measures ▪ Spalling / Scaling
	Foundation of Bridges
	▪ Scouring and /or Cavitation
	Piers, abutments, return walls and wing walls of bridges
	▪ Cracks and damages including settlement and tilting
	Joints in bridges
	▪ Loosening and malfunctioning of joints
	Other items relating to bridges

S. No	Description of Item
	▪ Gathering of dirt in bearings and joints or clogging of spouts, weep holes and vent-holes ▪ Damage or deterioration in parapets and handrails ▪ Rain-cuts or erosion of banks of the side slopes of approaches ▪ Damage to wearing coat ▪ Damage or deterioration in approach slabs, pitching, apron, toes, floor or guide bunds ▪ Growth of vegetation affecting the structure or obstructing the waterway
3	**ROAD FURNITURES, SIGNAGES AND PAVEMENT MARKING**
	▪ Repair to road signs -damage to shape or position; Poor visibility or loss of retro-reflectivity ▪ Replacing/installing delineators ▪ Replacing uninstalling delineators & all type of road sign ▪ Repairs MBCB ▪ Replacing of MBCB /New jersey crash barrier ▪ Repairs to Handrails /Pedestrian guard rails /flyover railings etc. ▪ Replace Handrails /Pedestrian guardrails/flyover railings etc. ▪ Fixing of distance measurement stone ▪ Hectometre stones ▪ Kilometre stones ▪ 5th Kilometre stones ▪ Boundary stones ▪ Painting ▪ Hectometre stones ▪ Pavement Marking ▪ Hot applied thermoplastic compound ▪ Painting kerb with synthetic enamel paint
4	**MISCELLANEOUS ITEMS**
	Street Lighting, Electrical systems repair and maintenance etc

The routine maintenance expenses to maintain the asset to the standards set forth in the Concession Agreement are given in the table below.

Table 7-1: Routine maintenance cost of the Project

S. No.	Particulars	Frequency	Cost including GST (Cr.)	Remarks
1	**Routine Maintenance Cost**	**Annual**		
	Highway		0.50	
	Structures		0.45	
	Road Furniture, Signage & Pavement marking		0.66	
	Project Facilities		0.36	
	Total RM cost		**1.98**	

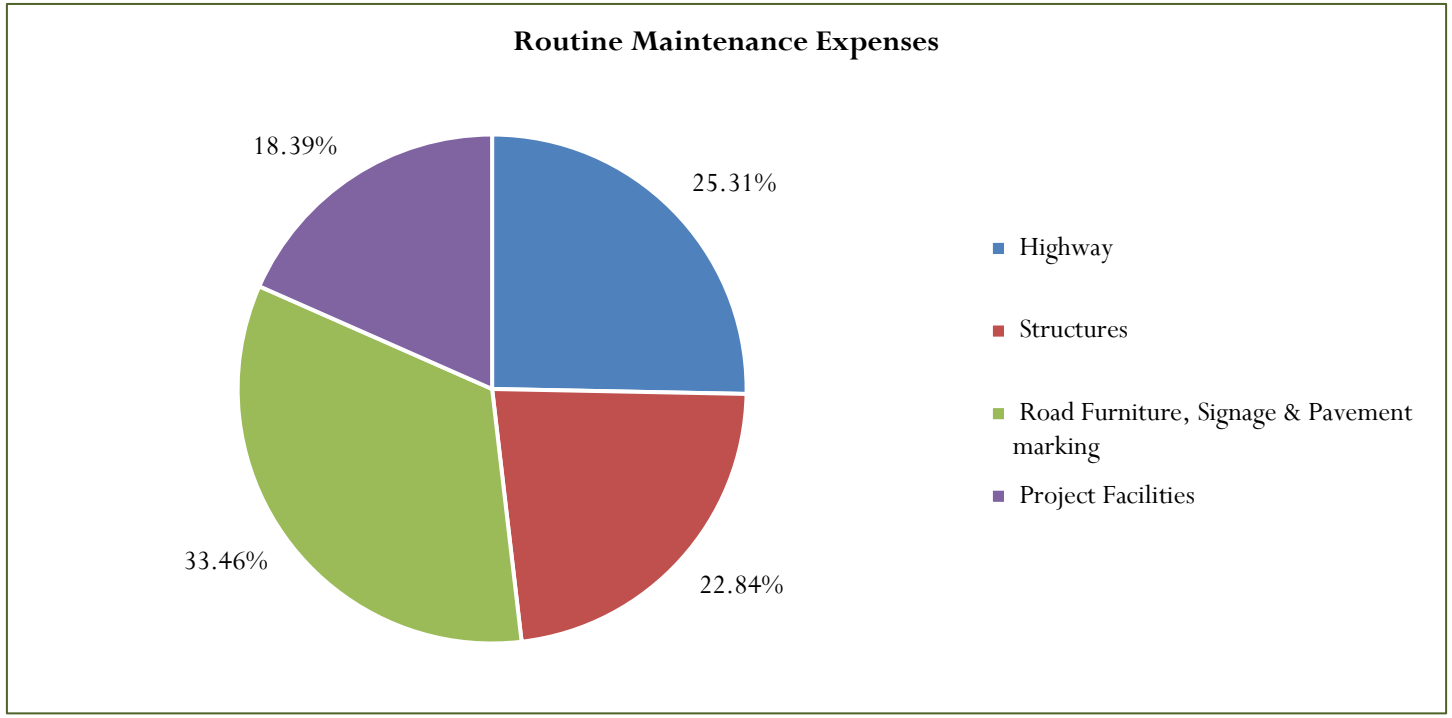


Figure 7-2: Breakup of Routine Maintenance

Table 7-2: Operational Expenditure of the Project for the Base Year FY 25

The calculation of operational expenditure for the base year FY 25 is given below:

S. no.	Description	Manpower	Annual Exp. (in Lakhs)
A.1	SPV staff and salaries	9.75	52.6
A.2	Tolling Operations Services_Outsourced	0	0.0
A.3	Security Services_Outsourced	4	15.9
A.4	Incident Management Services	28	108.7
A.5	RoW and Horticulture Works_ Manpower		61.9
A.6	Electricity and Diesel Charges		135.9
A.7	TMS/HTMS System Expenses		33.7
A.8	Office Operating Expenses		4.9
A.9	Vehicle Running Expenses		12.1
A.10	Professional Fee		36.5
A.11	Community Development		0.0
A.12	Communication Expenses		1.2
A.13	Conveyance Expenses		2.4
A.14	Insurance Expenses		67.2
A.15	IE Fees		60.0
A.16	Contingency	1%	5.9
	OPEX		**599.0**

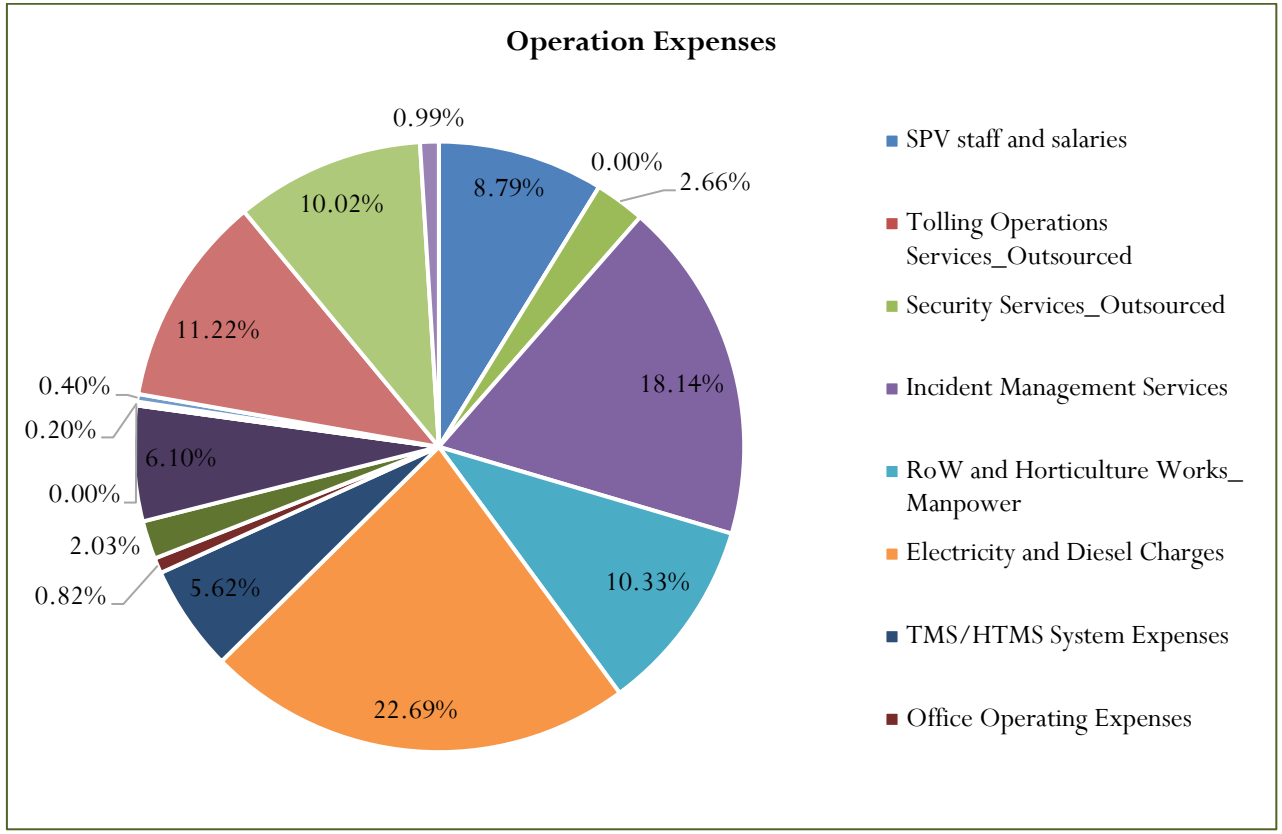


Figure 7-3: Breakup of Operation Cost

7.3 Major Maintenance Estimate

Cube Tech has considered 2 cycles for Major Maintenance. In cycle 1, for main carriageway BC overlay of 30 mm is considered and for service road microsurfacing is considered. In cycle 2, for main carriageway and service road BC overlay of 30 mm is considered.

The estimate for Major Maintenance activities of the Project Stretch is as detailed below:

Table 7-3: Major Maintenance Cost for MM Cycle 1

Major Maintenance - 1st Cycle					
S. No.	**Description**	**Unit**	**Qty**	**Rate**	**Amount**
1	Bituminous Concrete (VG - 40)	Cum	7,404.45	9,700	7,18,23,143
2	Tack Coat	Sqm	2,46,815	14	34,55,409
3	Pavement Markings	Sqm	22,101.58	520	1,14,92,823
4	Slab replacement cost (PQC)	Cum	1,227.54	6,800	83,47,249
5	Joint seal defects, spalling and faulting of joints	Rm	33,030.00	120	39,63,600
6	PQC Taxing	Sqm	1,57,376.48	100	1,57,37,648
7	Kerb Painting	Sqm	31,692.75	90	28,52,348
8	Microsurfacing	Sqm	21,000.00	150	31,50,000
9	Earthen Shoulder	Cum	5,081.76	340	17,27,798
10	Miscellaneous and Contingencies (1%)				12,25,500
			Grand Total		**12,37,75,517.64**
			Grand Total including GST (18%)		**14,60,55,110.82**
			Grand Total (In Cr)		**14.61**

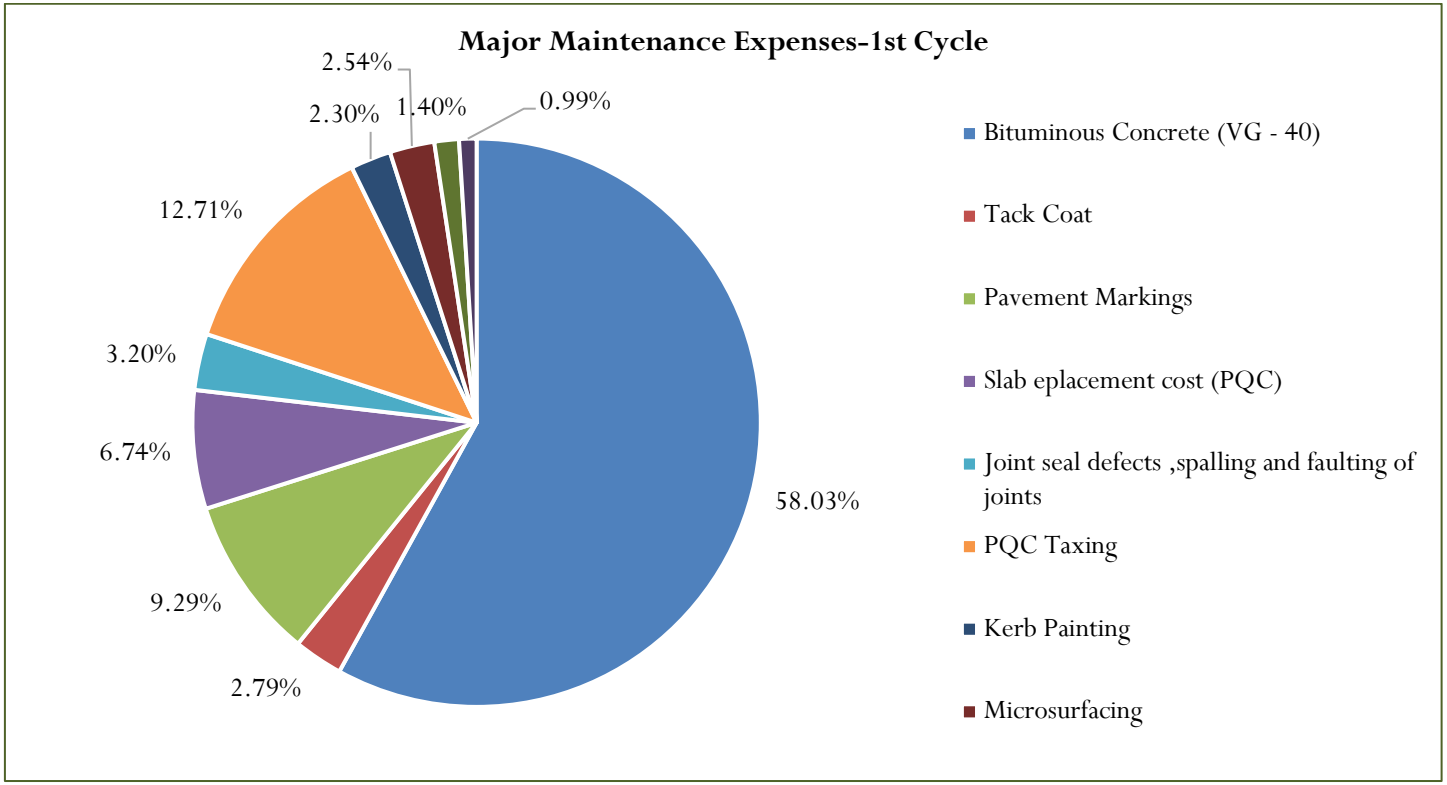


Figure 7-4: Breakup of Major Maintenance Expenses 1st Cycle

Table 7-4: Major Maintenance Cost for MM Cycle 2

Major Maintenance - 2nd Cycle					
S. No.	**Description**	**Unit**	**Qty**	**Rate**	**Amount**
1	Bituminous Concrete (VG - 40)	Cum	7,359.50	9,700	7,13,87,175
2	Tack Coat	Sqm	2,45,316.75	14	34,34,435
3	Pavement Markings	Sqm	22,101.58	520	1,14,92,823
4	Slab replacement cost (PQC)	Cum	2,984.07	6,800	2,02,91,654
5	Joint seal defects, spalling and faulting of joints	Rm	33,030.00	120	39,63,600

Major Maintenance - 2nd Cycle					
S. No.	**Description**	**Unit**	**Qty**	**Rate**	**Amount**
6	PQC Taxing	Sqm	2,86,929.50	100	2,86,92,950
7	Kerb Painting	Sqm	31,692.75	90	28,52,348
8	Earthen Shoulder	Cum	5,081.76	340	17,27,798
9	ATMS replacement	Ls	1	1,00,00,000	1,00,00,000
10	Miscellaneous and Contingencies (1%)				14,38,428
			Grand Total		**15,52,81,210.37**
			Grand Total including GST (18%)		**18,32,31,828.24**
			Grand Total (In Cr)		**18.32**

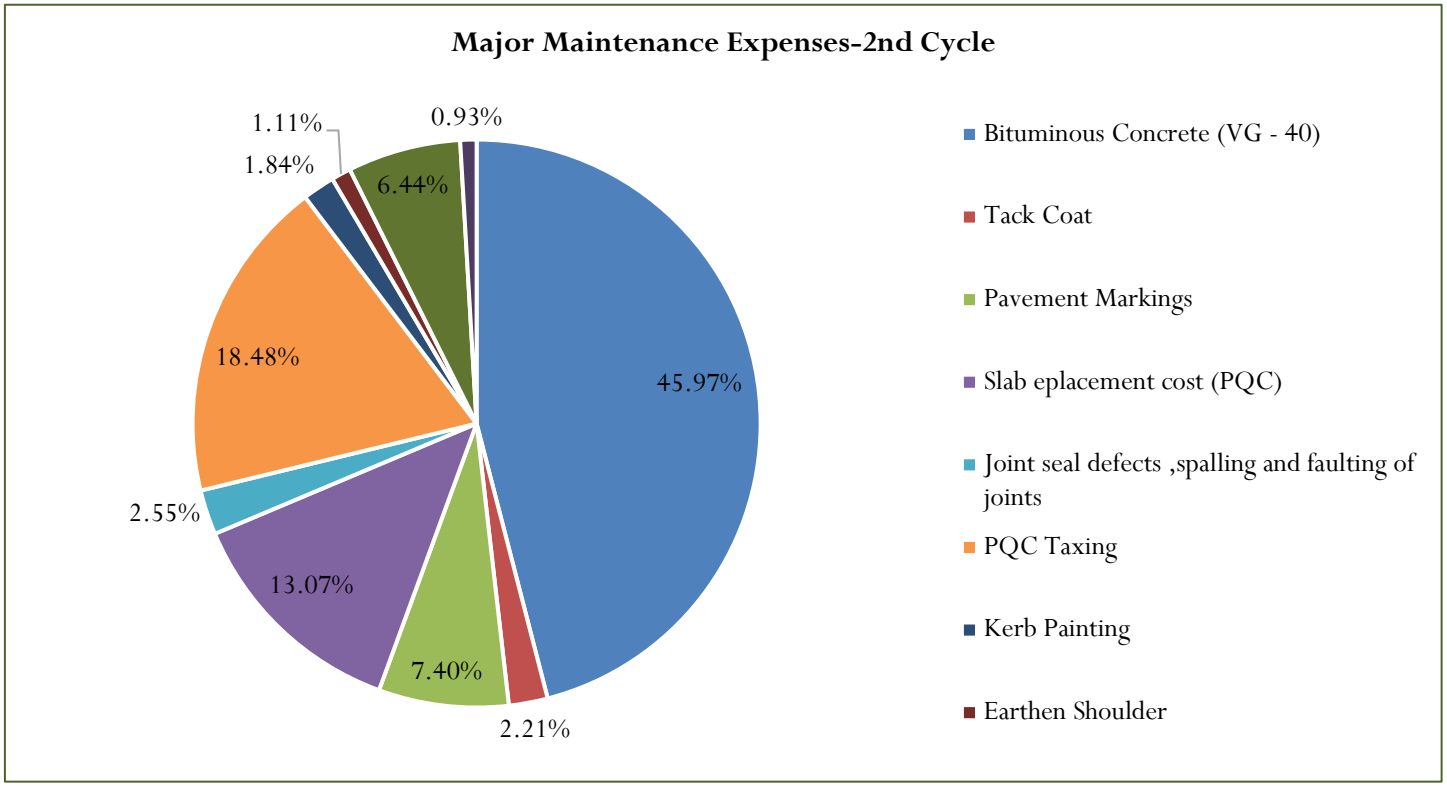


Figure 7-5: Major Maintenance Expenses 2nd Cycle

7.3.1 Major Maintenance expenses during O&M period

As per the Cube Tech estimate, the total Major Maintenance expense including the escalation is Rs.40.39 cr.

7.4 Projections of O&M Expenses

The O&M expenses for the entire Concession Period is presented in this section .

The following escalations are considered:

Table 7-5:Escalation Factors

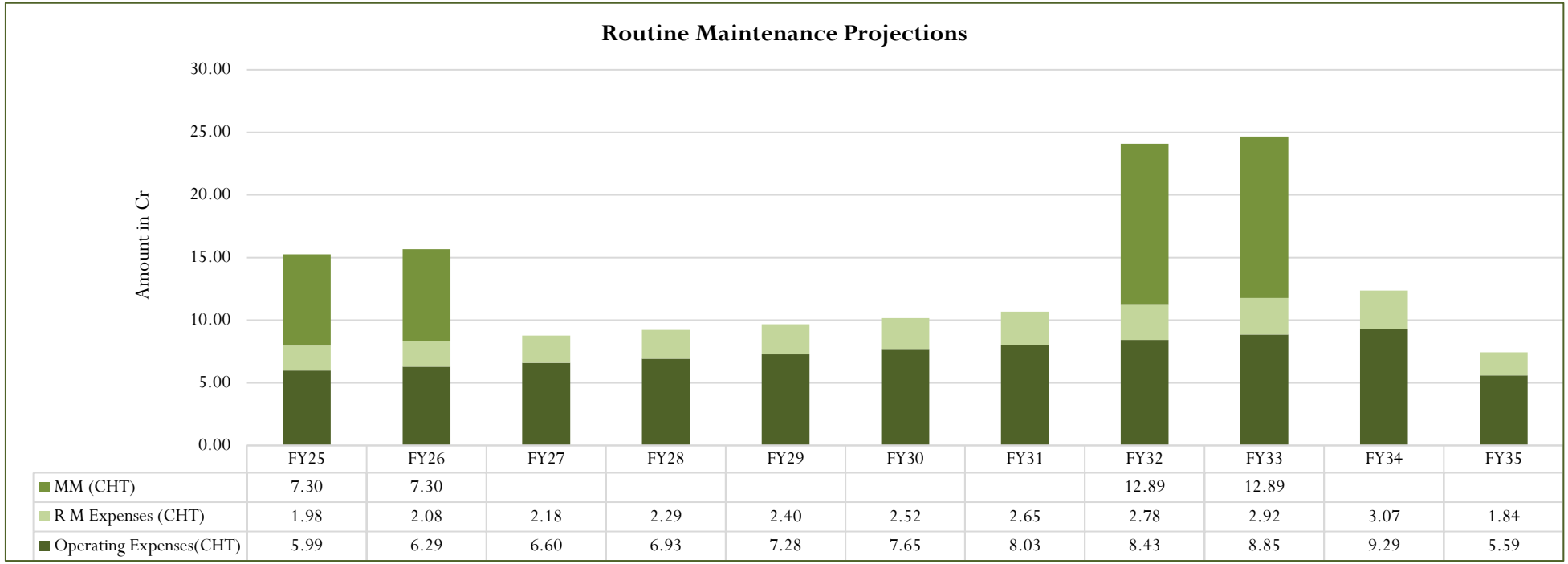
Items	Escalation
Operating Expenses	5.00%
Routine Maintenance	5.00%
Major Maintenance	5.00%

The Projections of total O& M expenses including Major Maintenance for 2 Cycles of the Project Company and CHT is given in the table below

Table 7-6: Projections of total O&M expenses of the Project during O&M period

Particulars	Total Expense (In Cr.)	FY25	FY26	FY27	FY28	FY29	FY30	FY31	FY32	FY33	FY34	FY35
Operating Expenses (CHT)	**80.93**	5.99	6.29	6.60	6.93	7.28	7.65	8.03	8.43	8.85	9.29	5.59
R M Expenses (CHT)	**26.73**	1.98	2.08	2.18	2.29	2.40	2.52	2.65	2.78	2.92	3.07	1.84
MM (CHT)	**40.39**	7.30	7.30						12.89	12.89		
O&M and MM (CHT)	**148.05**	15.27	15.67	8.79	9.22	9.69	10.17	10.68	24.10	24.66	12.36	7.43

The graph for the total cost Projections of expenses during O&M period given by the Cube Highways Technologies is shown in the figure below.



	FY25	FY26	FY27	FY28	FY29	FY30	FY31	FY32	FY33	FY34	FY35
MM (CHT)	7.30	7.30						12.89	12.89		
R M Expenses (CHT)	1.98	2.08	2.18	2.29	2.40	2.52	2.65	2.78	2.92	3.07	1.84
Operating Expenses(CHT)	5.99	6.29	6.60	6.93	7.28	7.65	8.03	8.43	8.85	9.29	5.59

Figure 7-6: O&M, RM and MM Expenses Projections

The total O&M cost including Major Maintenance estimated by the CHT is Rs.148.05 Cr.

ANNEXURES

Annexure I: Pavement Visual Condition Survey data

Remarks	Condition	From	To	Condition	Remarks
Under Construction	WIP	43+446	44+000	WIP	Under Construction
No Distress	Good	44+000	45+000	Good	No Distress
Under Construction	WIP	45+000	46+000	WIP	Under Construction
Under Construction	WIP	46+000	47+000	Good	No Distress
Under Construction	WIP	47+000	48+000	Good	01 Pothole
Under Construction	WIP	48+000	48+400	WIP	Under Construction
20m Honey Combing, 20m Raveling	Good	48+400	49+000	Good	No Distress
No Distress	Good	49+000	50+000	Good	No Distress
No Distress	Good	50+000	51+000	Good	20m Cracks
No Distress	Good	51+000	52+000	Good	No Distress
No Distress	Good	52+000	52+200	WIP	Under Construction
Under Construction	WIP	52+200	53+200	Good	No Distress
No Distress	Good	53+200	54+000	Good	No Distress
20m Cracks	Good	54+000	55+000	Good	20m Cracks
No Distress	Good	55+000	55+800	WIP	Under Construction
No Distress	Good	55+800	57+000	Good	No Distress
Under Construction	WIP	57+000	57+600	WIP	Under Construction
No Distress	Good	57+600	58+000	Good	No Distress
Under Construction	WIP	58+000	58+600	WIP	Under Construction
No Distress	Good	58+600	59+600	Good	No Distress
Under Construction	WIP	59+600	60+200	WIP	Under Construction
No Distress	Good	60+200	60+800	Good	50m Cracks
No Distress	Good	60+800	62+200	WIP	Under Construction
Under Construction	WIP	62+200	62+600	Good	No Distress
No Distress	Good	62+600	63+000	WIP	Under Construction

Remarks	Condition	From	To	Condition	Remarks
Under Construction	WIP	63+000	64+000	Good	20m Cracks
Under Construction	WIP	64+000	65+000	Good	No Distress
Under Construction	WIP	65+000	66+200	WIP	Under Construction
Edge crack	Good	66+200	67+200	WIP	Under Construction
Under Construction	WIP	67+200	68+000	WIP	Under Construction
Under Construction	WIP	68+000	69+400	Good	No Distress
No Distress	Good	69+400	70+000	WIP	Under Construction
No Distress	Good	70+000	71+000	WIP	Under Construction
No Distress	Good	71+000	72+000	Good	20m Cracks
No Distress	Good	72+000	72+800	WIP	Under Construction
Under Construction	WIP	72+800	73+000	Good	No Distress
Under Construction	WIP	73+000	73+600	Good	No Distress
No Distress	Good	73+600	74+600	Good	No Distress
No Distress	Good	74+600	75+400	WIP	Under Construction
Under Construction	WIP	75+400	76+400	Good	No Distress
No Distress	Good	76+400	77+600	WIP	Under Construction
Under Construction	WIP	77+600	78+200	Good	No Distress
No Distress	Good	78+200	79+000	WIP	Under Construction
Under Construction	WIP	79+000	80+000	WIP	Under Construction
Under Construction	WIP	80+000	81+400	WIP	Under Construction
No Distress	Good	81+400	82+000	Good	No Distress
No Distress	Good	82+000	83+000	Good	No Distress
No Distress	Good	83+000	84+000	Good	No Distress
Under Construction	WIP	84+000	85+000	WIP	Under Construction
Under Construction	WIP	85+000	86+000	WIP	Under Construction
Under Construction	WIP	86+000	87+000	WIP	Under Construction
Under Construction	WIP	87+000	88+000	WIP	Under Construction
No Distress	Good	88+000	88+200	Good	No Distress

Remarks	Condition	From	To	Condition	Remarks
Under Construction	WIP	88+200	89+000	WIP	Under Construction
Under Construction	WIP	89+000	90+000	WIP	Under Construction
Under Construction	WIP	90+000	91+000	WIP	Under Construction
Under Construction	WIP	91+000	92+000	WIP	Under Construction
Under Construction	WIP	92+000	93+000	WIP	Under Construction
Under Construction	WIP	93+000	93+226	WIP	Under Construction

Annexure II: Pavement Distress Survey

A pavement condition survey gives an indication of the serviceability of the road pavement and is vital in deciding the maintenance activities. Some methods to conduct this survey are the Visual Condition Survey method (manual), Network Survey Vehicle (NSV) method, etc. However, Visual Condition Survey was conducted in this Project.

In a visual condition survey, the technical experienced staff makes a traverse along the Project Stretch, observing the different types of distresses on the pavement surface, and observations are made on each distress type.

Distresses on rigid pavements includes

- Cracks – Single discrete crack, Longitudinal, Transverse, diagonal and Alligator cracks
- Corner break
- Punchout
- Scaling
- Raveling
- Polished Surface
- Popouts
- Joint seal defects
- Spalling of joints
- Faulting
- blow-up or Buckling

The cost for repair and rectification has been factored in the O&M estimation and the Concessionaire has taken up the rectification works.

Observations made during the visual condition survey are detailed below.

Longitudinal Cracks

Structural cracks like longitudinal cracks develop parallel to the traffic direction and extend through the depth of the bituminous pavement layer, which can be bottom-up or top-down crack.

Longitudinal cracks were observed at few locations of the Project Stretch. These cracks are proposed for route and seal, partial depth repair, full depth repair based on their severity. The Concessionaire has taken up the rectification work and same is part of residual completion cost/ annual O&M cost.

Figure 0-1: Longitudinal Cracks

Transverse Cracks

Structural cracks like transverse cracks develop perpendicular to the traffic direction and extend through the depth of the bituminous pavement layer.

Transverse cracks were observed at very few locations of the Project Stretch. The Concessionaire has taken up the rectification work and same is part of residual completion cost/ annual O&M cost.

Figure 0-2: Tranverse Cracks

Alligator Cracks

Alligator cracking also referred to as fatigue cracking or crocodile cracking, refers to a pattern of asphalt damage that resembles the scales on an alligator's skin. The cracks form co-joined, irregular "blocks' that are often four-sided, such as rectangles, but they can also have more sides and, on occasion, as few as three sides.

Alligator cracks were not observed at the Project Stretch.

Raveling

Ravelling is wearing away of the pavement surface due to loss of bitumen binder and dislodged aggregate particles. This distress indicates that either the bitumen binder has hardened appreciably, or a poor-quality mixture is present. In addition, ravelling may be caused by certain types of traffic, for example, tracked vehicles. Softening of the surface and dislodging of the aggregates due to oil spillage and weathering are also included under ravelling.

Ravelling was not observed at any locations of the Project Stretch.

Rutting

A rut is a surface depression of pavement in the wheel paths, and pavement uplift may occur along the sides of the rut. Rutting stems from a permanent deformation in any pavement layers or subgrade usually caused by consolidated or lateral movement of the materials due to traffic load.

Rutting was not observed at any locations of the Project Stretch.

Bleeding

A surface having a thin film of excess or free bituminous binder on it, which creates a shiny, glass like reflecting surface tending to become soft in hot weather and slippery in cold and wet weather, eventually developing low skid resistance is referred to as bleeding or fatty bituminous surface.

Bleeding was not observed at any locations of the Project Stretch.

Potholes

Potholes are small (or big, based on severity) bowl-shaped depressions on the pavement surface. In general, potholes are formed in later stages of highly ravelled or cracked pavement surface resulting in bowl-shaped depressions.

Potholes were not observed at any location of the Project Stretch.

Patches

The patch is an area of the pavement which have been repaired or replaced by new material to remove a certain defect on the pavement. The patch is considered a defect no matter how well it is performing, and some roughness is associated with this type of distress.

Potholes were not observed at any location of the Project Stretch.

Scaling

Scaling is local flaking or peeling of hardened concrete as a result of exposure to freezing and thawing. Generally, it starts as localized small patches, which later may merge and extend to expose large areas. Light scaling does not expose the coarse aggregate.

Scaling was observed at only one location of the Project Stretch. The Concessionaire has taken up the rectification work and same is part of residual completion cost/ annual O&M cost.

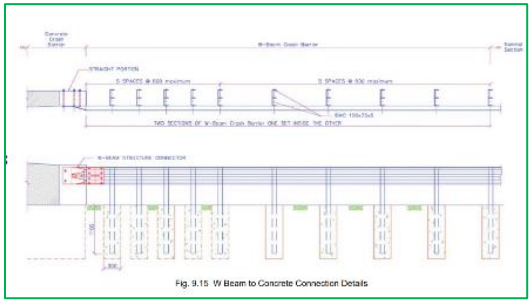
Figure: Scaling

Annexure III: Identified Safety Concerns along the Project Road

Keeping in view the scope of the assignment, safety concerns have been recorded on-site and reported in the table below. The remarks and recommendation column includes information on clauses of CA & applicable manual, any observations in the IE report/project documents, and our recommendations against the highlighted safety concern. The risk and priority of each safety concern are also included as per the following criteria given in line with IRC: SP:88-2019 (Manual on Road Safety Audit).

- Risk categories for identified safety concern: Very High, High, and Medium
- Priority level for recommendations: Essential, Highly Desirable and Desirable

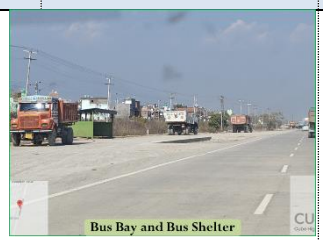
Table: Safety Observations along the Project Road

S. No.	Safety concern		Recommendation		Type of Concern
	Current Situation	Risk	Recommendation and Remarks	Priority	
1	**Safety Barrier**				
A	**Issue with connection between MBCB and Rigid barrier**	**Very High**		**Essential**	**Installation issue**
	Inadequate transition arrangements between MBCB and the Rigid barrier. During the site inspection, it was observed Fishplate at the transition between MBCB and the rigid crash barrier has not been provided at most of the locations along the Project Road. Also, post spacing in the transition arrangement section is not provided as per the provisions of the applicable manual. Improper connection of MBCB and Rigid Barriers In the transition arrangement to the rigid barrier, the number and spacing of posts vary to provide greater rigidity to the semi-flexible barriers. (5 posts at intervals of 0.9m c/c, and the next set of 5 posts at intervals of 0.6m c/c.)		As per the applicable manuals of CA, the transition arrangement between MBCB and Rigid Crash Barrier shall be provided as per Figure 9.2 of IRC: SP:84-2014 and Figure 9.15 of IRC: SP:73-2015.  Fig. 9.15 W Beam to Concrete Connection Details		

S. No.	Safety concern		Recommendation		Type of Concern
	Current Situation	Risk	Recommendation and Remarks	Priority	
B	**Improper start-end treatment of MBCB**	**Very High for the approach side and High for the departure side**		**Essential**	**Installation issue**
	As shown in the photograph, blunt face of MBCB is exposed to traffic. Such an arrangement poses a risk to fast approaching vehicles. If a vehicle collides with the start of the W-Beam barrier, it could penetrate the vehicle, causing potential harm to the passengers. Improper Start and End Treatment of MBCB		As per the applicable manuals of CA (Fig. 9.9 of IRC: SP:84-2014 and Fig 9.13 of IRC: SP:73-2015): *The end treatment on approach shall be Modified Eccentric Loader Terminal (MELT) arrangement and on the departure side it shall be Trailing Terminal (TT) arrangement.*		
C	**Damaged Metal beam crash barrier**	**-**		**-**	**No Issue**
	No issue was observed				
D	**Wrong overlapping of MBCB plates**	**-**		**-**	**No Issue**
	No issue was observed				
E	**Improper Arrangement of MBCB and Kerb**	**-**		**-**	**No Issue**
	No issue was observed				
F	**MBCB Setback distance**	**-**		**-**	**No Issue**
	Based on visual inspection, MBCB setback distance is adequate		No issue was observed		
G	**Height of Crash barriers**	**-**		**-**	**No Issue**
	Based on visual inspection, the height of crash barrier is adequate		No issue was observed		
H	**Welded connection of MBCB Plates**				**No Issue**
	No issue was observed				
I	**Wire Rope Barrier Setback distance**			**-**	**NA**
	NA		NA		

S. No.	Safety concern		Recommendation		Type of Concern
	Current Situation	Risk	Recommendation and Remarks	Priority	
J	**Wire Rope Barriers Distance from face of the kerb**			**-**	**NA**
	NA		NA		
K	**Start of RCC crash barrier w.r.t. grade separator**	**-**		**-**	**NA**
	Most of the structures are in the under-construction stage.				
L	**RCC crash barrier at Bridges**	**-**		**-**	**NA**
	Most of the structures are in the under-construction stage.				
2	**Pedestrian Guard Rail**				
A	**PGR and rigid barrier connection**	**-**		**-**	**NA**
	NA		NA		
3	**Pedestrian Facilities**	**-**		**-**	**NA**
	NA		NA		
4	**Median walls in b/w structures**	**-**		**-**	**NA**
	Most of the structures are in the under-construction stage.		NA		
5	**Highway Lighting**				
A	**Highway Lighting at the underside of the Grade separator**	**-**			**NA**
	Grade separator structures are under construction		NA		
B	**Highway Lighting Lux**	**-**		**-**	**NA**
	Currently, installation of highway lighting is in progress.		NA		

S. No.	Safety concern		Recommendation		Type of Concern
	Current Situation	Risk	Recommendation and Remarks	Priority	
	Highway lighting				
6	**Solar Blinker**				
A	**Height of solar blinkers**	-		-	**No Issue**
	During the site inspection, it was observed that the height of solar blinker is adequate.		No issue was observed		
B	**LED Traffic Beacons/Solar Blinkers arrangement**	-			**No Issue**
	No issue was observed				
7	**Nighttime visibility**	-		-	**NA**
	NA		NA		
8	**Sign Board**				
A	**Issue with an existing installation of sign boards (Damaged, faded, visibility, etc.,)**	-		-	**No Issue**
	As the Project Road has been in the construction stage, all the provided road furniture items seem to be effective, and there are no issues such as damage or fading, etc.				
9	**Object and Kerb Painting**	-		-	**No Issue**
	Based on visual inspection, the object painting provided is observed to be adequate.				
10	**Safety Measures at critical locations, i.e., Transverse Bar Marking**	-		-	**No Issue**
	As the Project Road is under construction, Traffic calming measures in terms of TBM and solar blinker installation work have been in progress along the Project Road.				
11	**Road Studs**	-		-	**No Issue**

S. No.	Safety concern		Recommendation		Type of Concern
	Current Situation	Risk	Recommendation and Remarks	Priority	
	The installation of road studs is in progress during the site inspection.				
12	**Road Delineator**	**-**			**NA**
	NA				
13	**Road Geometry**				
A	**Improper connections of Minor Roads**	**-**		**-**	**-**
	NA				
C	**Un-Authorized Median Openings (UMO)**	**-**		**-**	**No Issue**
	No issues are currently observed.				
14	**Landscaping and Tree Plantation**				
A	**Avenue plantation condition**	**-**		**-**	**No Issue**
	No issue was observed.		No issue was observed.		
B	**Median Plantation in No Plantation Zone**	**-**		**-**	
	-				
15	**Truck Lay Bays/Bus Bays/Wayside Amenities**				
A	**Truck Lay Bye Layout**	**-**		**-**	**No Issue**
	Two-truck lay-by construction work is in progress along the Project Road; the geometry of the same is adequate.				
B	**Bus Bays and Bus Shelters**	**-**		**-**	**Under construction**
	Bus-bay and Bus-shelters are under construction along the Project Road. 				
C	**Rest Areas / Wayside Amenities**	**High**		**-**	**NA**

S. No.	Safety concern		Recommendation		Type of Concern
	Current Situation	Risk	Recommendation and Remarks	Priority	
	NA				
16	**Other General Issues**				
A	**Water Stagnation**	**High**		**-**	**No Issue**
	No issue was observed				
B	**Un-authorized vehicle parking on shoulder**	**-**		**-**	**No Issue**
	-				
C	**Encroachment by temporary shops**	**-**		**-**	**No Issue**
	No issue was observed				
17	**High Transmission Line Vertical clearance**	**-**		**-**	**No Issue**
	No issue was observed				

Summary of identified road furniture quantities for safety enhancement along the Project Road

It may be noted that during the safety inspection, a few safety concerns that can be attributed to deviation from the applicable manual have been identified and presented in the Report. However, it is acknowledged that the site has been mostly constructed in accordance with the approved drawings. Also, the safety concerns highlighted in this report were not identified in any project communications, and IE MPRs were submitted for review. It shall be noted that the identified safety concerns may deteriorate the safe operation of the project over the years. To rectify these issues cost intensive measures would be required.

The cost for repair and rectification has been factored in the O&M estimation and the Concessionaire has taken up the rectification works. The Structures are found in sound and satisfactory condition.

The following points below provide a summary of recommendations based on the site visit and review of submitted documents that shall help in elevating the overall profile of Project Road.

- Installation of MBCB on either side of rigid crash barriers, at the base of overhead signs, and along high embankment sections *(Refer Sch-C, Clause 1.2 (ii) of CA).*
- Improving the connection between MBCB and rigid crash barriers, as well as the start/end treatments of MBCB, to enhance road safety.
- Review the provision of advanced directional signages along the Project Road *(Refer Sch-C, Clause 1.2(vii) of CA).*

- Installation of missing OHM to highlight hazards close to the travel path.
- Installation of retroreflective stickers on the Electricity poles and providing safety barriers if the poles cannot be shifted.
- Implement well designed traffic management plan at work zones.