CONCESSION AGREEMENT

FOR

(I) DESIGN, CONSTRUCTION, DEVELOPMENT, FINANCE, OPERATION AND MAINTENANCE OF KM 270.00 (THRISSUR) TO KM 316.70 (ANGAMALI)

AND

(II) IMPROVEMENT, OPERATION AND MAINTENANCE OF KM 316.700 (ANGAMALI) TO KM 342.00 (EDAPALLI) ON NH-47 TOGETHER CALLED THE "PROJECT" IN THE STATE OF KERELA ON BUILD, OPERATE & TRANSFER (BOT) BASIS.

(PROJECT REFERENCE NO:-NS2/BOT/KL-1)

BETWEEN

NATIONAL HIGHWAYS AUTHORITY OF INDIA
(MINISTRY OF SHIPPING, ROAD TRANSPORT & HIGHWAYS)
Government of India
G-5&6, SECTOR-10, DWARKA, NEW DELHI-110 075

AND

GURUVAYOOR INFRASTRUCTURE PRIVATE LIMITED
MCH NO.555, ARORA COLONY ROAD NO-3, BANJARA HILLS, HYDERABAD-500 034 (A.P)

ON

27TH MARCH,2006

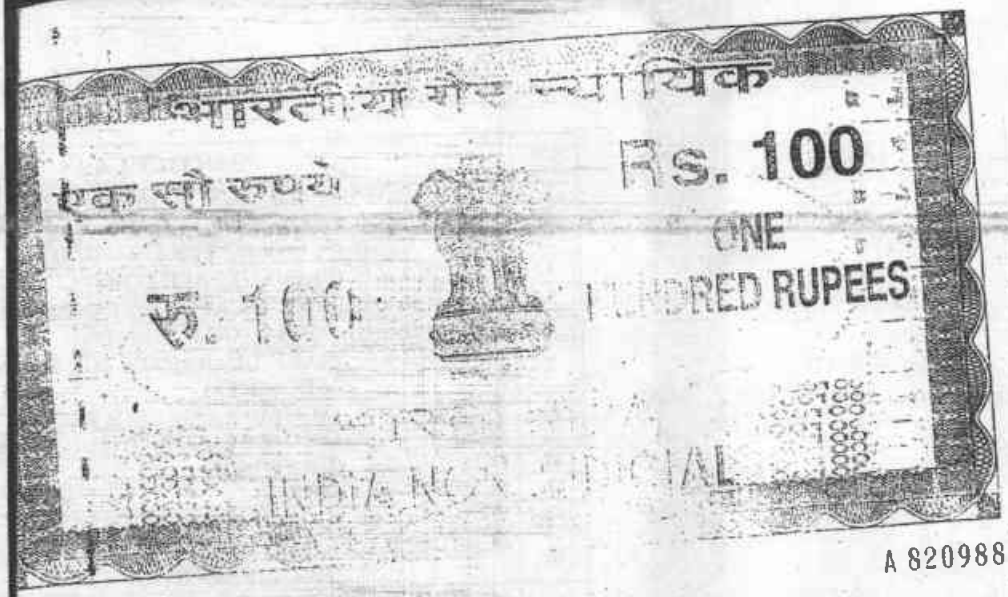
Volume 1 of 3

SUMMARY

Sr.No.	Particulars
1	Volume- I Concession Agreement, Schedules And SPV details for Guruvayoor Infrastructure Private Limited.
2	Volume- II RFP, Response to queries and Addendum for Guruvayoor Infrastructure Private Limited.
3	Volume- III Detailed Project Report For Guruvayoor Infrastructure Private Limited.

CONCESSION AGREEMENT

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	B	SCOPE OF THE PROJECT
	C	PROJECT FACILITIES
	D	SPECIFICATION & STANDARDS
	E	APPLICABLE PERMITS
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	V	VESTING CERTIFICATE
	W	PASSENGER CAR UNIT FACTORS
	X	REPORTING AND RECORD REQUIREMENTS



A 820988

दिल्ली DELHI

रियायत करार

यह करार 27 मार्च, 2006 को

1. भारतीय राष्ट्रीय राजमार्ग प्राधिकरण अधिनियम, 1988 के प्रावधानों के अंतर्गत गठित सांविधिक निकाय, भारतीय राष्ट्रीय राजमार्ग प्राधिकरण जिसका मुख्यालय जी-5 और जी-6, सेक्टर 10, द्वारका नई दिल्ली-110075 में है (जिसे इसमें इसके पश्चात् 'भाराराप्रा' कहा गया है जिसमें जब तक इसके संदर्भ अथवा अर्थ से असंगत न हो इसमें इसके प्रशासक उत्तराधिकारी और समनुदेशिती शामिल हैं) एक पक्ष,

और

2. कंपनी अधिनियम, 1956 के प्रावधानों के अंतर्गत निगमित गुरूवयूर इन्फ्रास्ट्रक्चर प्राइवेट लिमिटेड, कंपनी जिसका पंजीकृत कार्यालय एम सी एच न0 555, अरोड़ा कॉलोनी, रोड न0 3, बंजारा हिल्स, हैदराबाद-34 में है (जिसे इसमें इसके पश्चात् 'रियायतग्राही' अथवा ' कंपनी' कहा गया है जिसमें जब तक इसके संदर्भ अथवा अर्थ से असंगत न हो इसमें इसके उत्तराधिकारी और अनुमत एवजी शामिल हैं) दूसरा पक्ष, के बीच किया गया





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CONCESSION AGREEMENT

This Agreement is entered into on this the 17th day of March, 2006..... BETWEEN

1. **NATIONAL HIGHWAYS AUTHORITY OF INDIA**, a statutory body constituted under the provisions of the National Highways Authority of India Act, 1988, and having its principal office at G-5&6, Sector-10, Dwarka, New Delhi-110075 (hereinafter referred to as "NHAI" which expression shall unless repugnant to the context or meaning thereof including its administrators, successors and assigns) of One Part,

AND

2. **Guruvayoor Infrastructure Private Limited**, a company incorporated under the provisions of the Companies Act, 1956 and having its registered office at MCH No. 555, Arora Colony, Road No. 3, Banjara Hills, Hyderabad-500034 (hereinafter referred to as the "Concessionaire" or "Company" which expression shall unless repugnant to the context or meaning thereof include its successors and permitted substitutes) of the Other Part.

For Guruvayoor Infrastructure Pvt. Ltd.

(Shankar Shekhar)

Power of Attorney Holder

WHEREAS

A. The Government of India in the Ministry of Shipping, Road Transport and Highways, earlier Ministry of Road Transport & Highways, (hereinafter referred to as "MoSRT&H") had authorised NHAI for widening the existing 2 lane portion from Km 270.00 (Thrissur) - Km 316.70 (Angamali), covering 40Kms (There is a missing Chainage of 6.70 km), on National Highway No. 47 (NH-47) in the State of Kerela, to 4 lanes and Improvement, Operation and Maintenance of Km 316.70 (Angamali) to Km 342.0 (Edapalli) covering 25.30 Kms on NH-47 through a concession on Build, Operate and Transfer (BOT) basis and has by its Notification No 465(E) dated 26/04/2002 issued pursuant to Section 11 of the National Highways Authority of India Act, 1988 vested the said stretches of NH-47 in NHAI as set forth in the said Notification dated 26/04/2002.

B. NHAI had accordingly invited Proposals under a single stage process from bidders for qualification and prescribed the commercial terms and conditions for selection of a successful bidder under its Notice Inviting Proposals No NHAI/27th May 2005/Tech/NS2/BOT/Bids/2005 dated 27th May 2005 ("the Tender Notice"), inter alia, for Design, Construction, Development, Finance, Operation and Maintenance of "Km 270.00 (Thrissur) to Km 316.70 (Angamali) on NH 47 in the State of Kerela" and Improvement, Operation and Maintenance of Km 316.70 (Angamali) to Km 342.00 (Edapalli) on NH-47 referred to in Recital 'A' above on BOT basis subject to and on the terms and conditions contained in the Tender Notice.

C. NHAI has, pursuant thereto qualified M/S KMC Constructions Limited- SREI Infrastructure Finance Limited, the consortium comprising M/S KMC Constructions Limited & SREI Infrastructure Finance Limited (collectively the "Consortium") with KMC Constructions Limited as its Lead Member for undertaking, inter alia, the work referred to in Recital 'A' above on BOT basis.

D. [redacted] the Consortium requiring, inter alia, the execution of this Concession Agreement and submission of Performance Security for the performance of its obligations under this Concession Agreement.

E. Subsequently the Consortium has promoted and incorporated the Concessionaire as a limited liability company and provided its Performance Security to enter into this Concession Agreement pursuant to the LOA for undertaking, inter alia, the design, engineering, financing, procurement, construction, operation and maintenance of the

Project, as defined hereinafter on BOT basis as referred to in Recital 'A' and to fulfill other obligations of the Concessionaire pursuant to the LOA and has requested NHAI to accept the Concessionaire as the entity which shall undertake and fulfill and perform the obligations and exercise the rights of the Consortium under the LOA, including the obligation to enter into this Concession Agreement for the design, engineering, financing, procurement, construction, operation and maintenance of the Project on BOT basis.

F. NHAI has agreed to the said request of the Consortium and has accordingly agreed to enter into this Concession Agreement with the Concessionaire pursuant to the LOA for, inter alia, the design, engineering, financing, procurement, construction, operation and maintenance of the said Project Section on BOT basis.

G. It is deemed necessary and expedient to enter into this Agreement to record the terms of the said Agreement between the Parties.

NOW THEREFORE IN CONSIDERATION OF THE PREMISES AND THE MUTUAL COVENANTS HEREINAFTER CONTAINED, THE PARTIES HERETO HEREBY AGREE AND THIS AGREEMENT WITNESSETH AS FOLLOWS:

I DEFINITIONS AND INTERPRETATION

1.1 Definitions

In this Agreement, the following words and expressions shall, unless repugnant to the context or meaning thereof, have the meaning hereinafter respectively assigned to them:

"Accounting Year" means the financial year commencing from 1st April of any calendar year and ending on 31st March of the next calendar year.

"Additional Facilities" means the facilities which the Concessionaire may provide or procure for the benefit of the users of the Project Highway and which are (i) in addition to the Project Facilities, and (ii) not situated on the Site.

"Agreement" means this Agreement, the Schedules 'A' through 'X' and the Annexures and Drawings hereto, the Request for Proposal (RFP) document issued by NHAI dated 27th May 2005 and any amendments thereto made in accordance with the provisions contained in this Agreement,.

"Applicable Laws" means all laws, promulgated or brought into force and effect by GOI or Government of Kerela including regulations and rules made thereunder, and judgments,

decrees, injunctions, writs and orders of any court of record, as may be in force and effect during the subsistence of this Agreement.

"Applicable Permits" means all clearances, permits, authorizations, consents and approvals required to be obtained or maintained under Applicable Laws in connection with the design, engineering, financing, procurement, construction, operation and maintenance of the Project Highway during the subsistence of this Agreement.

"Appointed Date" means the date 180 days from signing of Concession Agreement.

"Arbitration Act" means the Arbitration and Conciliation Act, 1996 and shall include modifications to or any re-enactment thereof as in force from time to time.

"Associates" means in relation to either Party and/or Consortium Members, a person who controls, is controlled by, or is under the common control with such Party or Consortium Member. As used in this definition, the expression "control" means with respect to a person which is a corporation, the ownership, directly or indirectly, of more than 50% of the voting shares of such person, and with respect to a person which is not a corporation, the power to direct the management and policies of such person, whether by operation of law or by contract or otherwise.

"Bank" means a bank incorporated in India and having a minimum net worth of Rs.500 crores (Rupees five hundred crores) and having a branch in the proximity of the Project or at any other place acceptable to NHAI.

"Bid" means the documents in their entirety comprised in the bid submitted by the Bidder in response to the Tender Notice in accordance with the provisions thereof.

"Bid Security" means the security provided by the Bidder to NHAI along with the Bid in the sum of Rs 11.63 crores (Rupees Eleven Crores and Sixty Three Lakhs Only) in accordance with the Tender Notice and which is to remain in force until substituted by the Performance Security.

"Bidder" means the single entity/Consortium referred to in Recital 'C' above.

"COD" means the commercial operations date of the Project Highway and shall be the date on which the Independent Consultant has issued the Completion Certificate or the Provisional Certificate certifying Project Completion of the Project Highway in accordance with Article XVI of this Agreement.

"Capacity Augmentation" means creation of additional capacity in accordance with Article 8A of this Agreement to maintain the desired level of service to the users of Project facility.

"Change in Law" means the occurrence of any of the following after the date of this agreement:

i. the enactment of any new Indian law;

ii. the repeal, modification or re-enactment of any existing Indian law;

iii. the commencement of any Indian law which has not entered into effect until the date of this Agreement;

iv. a change in the interpretation or application of any Indian law by a court of record as compared to such interpretation or application by a court of record prior to the date of this Agreement; or

v. any change in the rates of any of the Taxes.

"Change of Scope" shall have the meaning ascribed thereto in Clause 17.1.

"Company" means the Company acting as the Concessionaire under this Agreement.

"Completion Certificate" means the Certificate issued by the Independent Consultant pursuant to Clause 16.4.

"Concession" shall have the meaning ascribed thereto in Article III.

"Concession Fee" shall have the meaning ascribed thereto in Article VII.

"Concession Period" means the period beginning from the Appointed Date and ending on the Termination Date.

"Concessionaire" means **Guruvayoor Infrastructure Private Limited**, and its successors and substitutes and assigns expressly approved in writing by NHAI.

"Consortium" shall have the meaning set forth in Recital 'C' above.

"Consortium Members" means as per the Bid in response to the RFP (i) KMC Constructions Limited having its registered office at MCH No. 555, Arora Colony, Road No. 3, Banjara

Hills, Hyderabad-34 and having 51.00% share in the Consortium, and SREI Infrastructure Finance Limited having its registered office at 'Vishwakarma', 86C Topsia Road (South) Kolkata 700 046 and having 10.00% share in the Consortium. KMC Constructions Limited is the Lead Member of the Consortium.

"Construction Period" means the period beginning from the Appointed Date and ending on the COD.

"Construction Works or Works" means all works and things necessary to complete the Project Highway for use of the traffic and other users thereof in accordance with this Agreement.

"Contractor" means the contractor or contractors, if any, with whom the Concessionaire has entered into all or any of the Project Agreements.

"Cure Period" means the period specified in this Agreement for curing any breach or default of any provision of this Agreement by the Party responsible for such breach or default and upon failing of which the Agreement may be terminated by the other Party.

"Damages" shall have the meaning ascribed thereto in Clause 1.2(p).

"Debt Due" means the aggregate of the following sums expressed in Indian Rupees or in the currency of debt, as the case may be, outstanding and payable to the Senior Lenders under the Financing Documents:

(i) the principal amount of the debt provided by the Senior Lenders under the Financing Documents for financing the Project (the "principal") which is outstanding as on the Termination Date but excluding any part of the principal that had fallen due for repayment one year prior to the Termination Date unless such repayment had been rescheduled with the prior consent of NHAI; and

(ii) all accrued interest, financing fees and charges payable on or in respect of the debt referred to in sub-clause (i) above upto the date preceding the Termination Date but excluding (a) any interest, fees or charges that had fallen due one year prior to the Termination Date, and (b) penal interest or charges, payable under the Financing Documents to any Senior Lender.

"Debt Service Payments" means the sum of all principal and interest payments due and payable in an Accounting Year to the Senior Lenders under the Financing Documents.

"Development Period" means the period from the date of this Agreement until the Appointed Date.

"Dispute" shall have the meaning set forth in Clause 39.1(a).

"Dispute Resolution Procedure" means the procedure for Dispute resolution set forth in Article XXXIX.

"Divestment Requirements" means the obligations of the Concessionaire and NHAI for and in respect of the Termination of this Agreement as set forth in Article XXXIII.

"Document" or "Documentation" means documentation printed or in written form, tapes, discs, drawings, computer programmes, writings, reports, photographs, cassettes, or expressed in any other written, audio or visual form.

"Drawings" means all the drawings, calculations and documents pertaining to the Project Highway as set forth in Schedule 'I' and shall include "as built" drawings of the Project Highway.

"DPR" means the Detailed Project Report in respect of the Project comprised of the following provided by NHAI to the bidders for the Project as part of bidding documents:

Volume I	-	Main Report
Volume II	-	Design Report
Volume III	-	Materials Report
Volume IV	-	Environment Management Plan
Volume VI	-	Standards & Specifications
Volume X	-	Drawings

"EPC Contract" means contract or contracts entered into by the Concessionaire with one or more Contractors for the design, engineering, procurement of materials and equipment, construction, and completion of the Project Highway in accordance with the provisions of this Agreement.

"Emergency" means a condition or situation that is likely to endanger the security of the individuals on or about the Project Highway including users thereof or which poses an immediate threat of material damage to any of the Project Assets.

"Encumbrances" means any encumbrances such as mortgage, charge, pledge, lien, hypothecation, security interest, assignment, privilege or priority of any kind having the effect of security or other such obligations and shall include without limitation any designation of loss payees or beneficiaries or any similar arrangement under any insurance policy pertaining to the Project Highway.

"Equity" means the sum expressed in Indian Rupees representing the equity share capital of the Company and shall include the funds advanced by any Member of the Consortium or by any of its Associates to the Concessionaire Company for meeting the equity component of the Total Project Cost. Provided, however, that for purposes of computing Termination Payments under this Agreement, Equity shall be reckoned as an amount that is arrived at after excluding from the equity share capital of the Company the following viz. (a) Equity Support, if any, and (b) the sum by which the capital cost of the Project Highway as stated by the Concessionaire for purposes of claiming Termination Payments exceeded the Total Project Cost.

"Escrow Account" means an Account which the Concessionaire shall open and maintain with a Bank in which all inflows and outflows of cash on account of capital and revenue receipts and expenditures shall be credited and debited, as the case may be, in accordance with the provisions of this Agreement.

"Escrow Agreement" shall have the meaning ascribed thereto in Clause 25.2.

"Exempted Vehicles" means

Vehicles –

(a) Defense Vehicles;
(b) Police vehicles;
(c) Fire fighting vehicles;
(d) Ambulances;
(e) Funeral vans;
(f) Post and Telegraph Department's vehicles;
(g) Central and State Government vehicles on duty
(h) Vehicles with "VIP" symbols or officially belonging to:-
   i. President of India,
   ii. Vice-President of India
   iii. Governor of a State and Lt. Governor of a Union Territory
   iv. A Foreign dignitary on State visit to India, and
   v. A Foreign Diplomat stationed in India using cars with "CD" / "CC" symbols

vi. Chairman of Rajya Sabha or Speaker of Lok Sabha or Chairman of a State Legislative Council or Speaker of a State Legislative Assembly or a Minister for the Union or State or Leader of Opposition in Lok Sabha or Rajya Sabha or State Legislatures having the Status of Cabinet Minister if he is sitting in the vehicle; Or

vii. Members of Parliament in the ruling country or a Member of Legislative Assembly of a State or a Member of Legislative Council of a State, in the respective State if he produces his Identity Card issued by the Parliament or concerned Legislature of a State as the case may be.

viii. Belonging to winner of Gallantry awards such as Param Vir Chakra, Ashok Chakra, Maha Vir Chakra, Kirti Chakra, Vir Chakra and Shaurya Chakra, if such awardee produces his photo Identity Card duly authenticated by the Competent Authority for such award

(i) Different class of defence personnel and vehicle carrying cargo meant for them in accordance with Indian Tolls (Army and Air Force) Act, 1901, Rules including any amendments thereto.

"Fee" means the charge levied on and payable for a vehicle crossing the toll plaza while using the Project Highway or part thereof in accordance with the Fee Notification and this Agreement.

"Fee Notification" means the Notification to be issued by GOI in exercise of the powers conferred by Section 8A of the NH Act, 1956 in respect of the levy and collection of the Fees, substantially as per the format in Schedule 'G' , 30 days prior to the COD.

"Financial Close" means the date on which the Financing Documents providing for funding by the Senior Lenders have become effective and the Concessionaire has immediate access to such funding under the Financing Documents.

"Financing Documents" means the documents executed by the Concessionaire in respect of financial assistance to be provided by the Senior Lenders by way of loans, guarantees, subscription to non-convertible debentures and other debt instruments including loan agreements, guarantees, notes, debentures, bonds and other debt instruments, security agreements, and other documents relating to the financing (including refinancing) of the Project and includes amendments or modifications made in accordance with Clause 9.1(iv).

"Force Majeure" or "Force Majeure Event" shall mean an act, event, condition or occurrence specified in Article XXIX.

"GOI" means the Government of India.

"GOK" means the Government of the State of Kerela.

"Good Industry Practice" means those practices, methods, techniques, standards, skills, diligence and prudence which are generally and reasonably expected of and accepted internationally from a reasonably skilled and experienced operator engaged in the same type of undertaking as envisaged under this Agreement and acting generally in accordance with the provisions of the NH Act, and would mean good engineering practices in the design, engineering, construction and project management and which would be expected to result in the performance of its obligations by the Concessionaire and in the operation and maintenance of the Project Highway in accordance with this Agreement, Applicable Laws, Applicable Permits, reliability, safety, environment protection, economy and efficiency.

"Governmental Agency" means GOI, Government of Kerela or any ministry, department, commission, board, authority, instrumentality or agency, under the control of GOI or Government of Kerela having jurisdiction over all or any part of the Project Highway or the performance of all or any of the services or obligations of the Concessionaire under or pursuant to this Agreement.

"Indemnifying Party" means the Party obligated to indemnify the other Party pursuant to Article XXXVII.

"Independent Consultant" shall have the meaning ascribed thereto in Clause 20.1.

"Indirect Political Event" shall have the meaning ascribed thereto in Clause 29.3.

"Lenders' Representative" means the person(s) duly authorised by the Senior Lenders to deal with the Parties to the Agreement with regard to the issues arising out of and contained in this Agreement.

"Local Traffic" shall have the meaning ascribed thereto in Schedule 'G'.

"Maintenance Manual" shall have the meaning ascribed to it in Clause 18.2.

"Maintenance Programme" shall have the meaning ascribed to it in Clause 18.3.

"Material Adverse Effect" means material adverse effect of any act or event on the ability of either Party to perform any of its obligations under and in accordance with the provisions of this Agreement

"Material Breach" means a breach by either Party of any of its obligations in this Agreement which shall be deemed to have a Material Adverse Effect on the Project and which it shall have failed to cure within the Cure Period.

"NHAI Representative" means such person or persons as may be authorized in writing by NHAI to act on its behalf under this Agreement and shall include any person or persons having authority to exercise any rights or perform and fulfill any obligations of NHAI under this Agreement.

"Net Cash Flow" means in any Accounting Year revenue income less tax payments, O&M Expense, Concession Fee, Negative Grant and Debt Service Payments to Senior Lenders.

"Non Political Event" shall have the meaning ascribed thereto in Clause 29.2.

"O&M" means the operation and maintenance of the Project Highway during the Operations Period and includes but is not limited to functions of maintenance, collection and appropriation of Fees and performance of other services incidental thereto.

"O&M Contract" means the Operation and Maintenance Contract that may be entered into between the Concessionaire and the O&M Contractor for O&M of the Project Highway.

"O&M Contractor" means the person or entity with whom the Concessionaire has entered into an O&M Contract for discharging O&M functions for and on behalf of the Concessionaire.

"O&M Expense" means expenses incurred by or on behalf of the Concessionaire duly certified by its Statutory Auditors or by NHAI, as the case may be, for all regularly scheduled and reasonably anticipated O&M during Operations Period, including, without limitation (a) all cost of salaries and other employee compensation and contract fee payable to the O&M Contractor, if any (b) cost of materials, supplies, utilities and other services (c) premia for insurance (d) all franchise, excise, property and other similar taxes and all costs and fees incurred in order to obtain and maintain all Applicable Permits necessary for the O&M of the Project Highway at its full design capacity, (e) all repair, replacement and maintenance costs of the Project Highway, and (f) all other expenditures required to be incurred under Applicable Law or under Applicable Permits necessary for the operation and maintenance of the Project Highway according to the Specifications and Standards at its full design capacity.

"O&M Works" means all works necessary to keep the Project Highway in operation during the Operations Period.

"Operations Period" means the period commencing from COD and ending on the Termination Date.

"PCU" shall have the meaning ascribed to the passenger car unit in the 'Indian Roads Congress', Publication No.IRC-64, 1990, a true copy of which is at Schedule 'W', and for the purposes of this Agreement refers only to such PCUs which pay Fees in accordance with the Fee Notification.

"Parties" means the parties to this Agreement collectively and "Party" shall mean any of the Parties to this Agreement individually.

"Performance Security" shall have the meaning ascribed in the RFP

"Political Event" shall have the meaning ascribed thereto in Clause 29.4.

"Preliminary Notice" shall have the meaning attributed thereto in Clause 32.1.2.

"Project" means the development, design, financing, procurement, engineering and construction, operation and maintenance of the Project Highway in accordance with the provisions of this Agreement and shall include all works relating to or in respect of the Project Highway as described in Article II.

"Project Agreements" means this Agreement, the Financing Documents, the EPC Contract, if any, the O&M Contract, if any, the Tolling Contract, if any, and any other agreements or contracts entered into by the Concessionaire with NHAI or others relating to the Project during the subsistence of this Agreement.

"Project Assets" means all physical and other assets relating to and forming part of the Project Highway including but not limited to (i) rights over the Site in the form of license, right of way or otherwise, (ii) tangible assets such as civil works including the foundation, embankments, pavements, road surface, interchanges, bridges, approaches to bridges and flyovers, road overbridges, drainage works, lighting facilities, traffic signals, sign boards, milestones, toll plazas, equipment for the collection of tolls or relating to regulation of traffic, electrical works for lighting on the Project Highway, telephone and other communication systems and equipment for the Project, rest areas, administration and maintenance depots, relief centers, service facilities etc. (iii) Project Facilities situated on

the Site (iv) the rights of the Concessionaire under the Project Agreements, (v) financial assets, such as security deposits for electricity supply, telephone etc. (vi) insurance proceeds and (vii) Applicable Permits and authorizations relating to or in respect of the Project Highway, but does not include Additional Facilities.

"Project Completion" shall have the meaning ascribed thereto in Clause 15.1.

"Project Completion Schedule" means the progressive Project Milestone set forth in Schedule 'H' for the realization of the Project Highway complete in all respects by the Scheduled Project Completion Date.

"Project Facilities" means all the amenities and facilities situated on the Site, as described in Schedule 'C'.

""Project Highway" means the NH-47 stretch from km 270.00 to km 342.00 and includes (i) widening the existing 2 lane portion from km 270.00 to km 316.70, covering 40 km (There is a missing Chainage of 6.70 km), Thrissur-Angamali, on National Highway No. 47 (NH-47) in the State of Kerela to 4 lanes and (ii) improvement, operations and maintenance of km 316.70 to km 342.00 covering 25.30 km of Angamali-Edapalli Section of NH-47 in the State of Kerela (Other project scope) and shall include the Project Assets and the Project Facilities to be designed, engineered, built and improved on Site and to be operated and maintained during the Concession Period in accordance with the provisions of this Agreement.

"Provisional Certificate" shall have the meaning ascribed to it in Clause 16.5.

"Punch List" shall have the meaning ascribed to it in Clause 16.5 and if applicable shall include:

(i) plantation of avenue trees along the edge of the RoW and other landscaping works within RoW
(ii) completion of work on Provision of Unlined Roadside Drains
(iii) lining of roadside drains in identified stretches
(iv) construction of rest areas, as approved
(v) completion of Fencing Works of RoW
(vi) turfing on embankment slopes in identified sections
(vii) pointing to Stone Masonry works in identified Cross Drainage Structures
(viii) stone Pitching at identified locations

"RBI" means the Reserve Bank of India as constituted and existing under the Reserve Bank of India Act, 1946 including any statutory modification or replacement thereof, and its successors etc.

"RFP" shall mean the Request for Proposal dated 27th May 2005 for 4/6 laning of 15 Projects on North – South & East –West Corridors (NHDP – Phase II) in the States of Utter Pradesh, Kerela, Karnataka, Tamil Nadu and Kerala issued by the NHAI and any Addendum(s) thereto

"Realizable Fee" means all the Fees due and realizable under this Agreement but does not include Fees that the Concessionaire has not been able to realise after due diligence and best efforts.

"Revenue Shortfall Loan" shall have the meaning ascribed to it in Clause 24.1.

"Rs." Or "Rupees" means the lawful currency of the Republic of India.

"SBI PLR" means the prime lending rate per annum for loans with 1(one) year maturity as fixed from time to time by the State Bank of India, and in the absence of such rate, the average of the prime lending rates for loans with 1(one) year maturity fixed by the Bank of India and the Indian Overseas Bank and failing that any other arrangement that substitutes such prime lending rate as mutually agreed between the Parties.

"Scheduled Project Completion Date" shall have the meaning set forth in Clause 15.3.

"Senior Lenders" means the financial institutions, banks, funds and agents or trustees of debenture holders, Non- Banking Financial Companies or other major lending agencies approved by Reserve Bank of India including their successors and assignees, who have agreed to guarantee or provide finance to the Concessionaire under any of the Financing Documents for meeting costs of all or any part of the Project and who hold pari passu charge on the Concession granted by this Agreement.

"Site" means the real estate licensed by NHAI to the Concessionaire under and in accordance with this Agreement on which the Project Highway is situated.

"Specifications and Standards" means the specifications and standards relating to the quality, capacity and other requirements for the Project Highway as set forth in Schedule 'D' and any modifications thereof, or additions as included in the design and engineering for the Project Highway submitted by the Concessionaire to and expressly approved by NHAI.

"State Support Agreement" means the agreement to be entered into between the Government of Kerela, NHAI and the Concessionaire substantially in the form set forth in

Schedule 'R' for provision of support, backup and services required from Government of Kerela for the performance of Concessionaire's obligations under this Agreement.

"Statutory Auditors" means an independent, recognized and reputable firm of Chartered Accountants duly licensed to practice in India acting as independent statutory auditors of the Concessionaire under the provisions of the Companies Act, 1956 including any statutory modification or re-enactment or replacement thereof, for the time being in force, and appointed in accordance with Clause 28.2.

"Subordinated Debt" means any borrowings by the Concessionaire subordinated to the financial assistance provided by the Senior Lenders for meeting the Total Project Cost but does not include any interest thereon.

"Subsistence Revenue Level" means the total amount of Fee revenue that is required by the Concessionaire in an Accounting Year to meet the sum of (a) the O&M Expense subject to an annual ceiling of 2.0 % (two percent) of the Total Project Cost in the first operations year, to be revised each year to reflect the variations in the WPI in each subsequent years and (b) Debt Service Payments due to the Senior Lenders in an Accounting Year.

"Substitution Agreement" means the agreement referred to in Article XXXV and to be entered into among the Concessionaire, NHAI and the Senior Lenders in the form set forth in Schedule 'U' providing, inter alia, for the substitution of the Concessionaire by any other person subject to and in accordance with the provisions of this Agreement and the Substitution Agreement.

"Taxes" means any Indian taxes on corporate income, Sales tax, excise duties, customs duties and local taxes and any impost of like nature (whether Central, State or local) charged, levied or imposed on the goods, materials, equipment and services incorporated in and forming part of the Project Highway, on the construction, operation and maintenance thereof and on the Project Assets, but excluding any interest, penalties and other sums in relation thereto imposed on any account whatsoever.

"Termination" means the expiry or termination of this Agreement and the Concession hereunder.

"Termination Date" means the date on which this Agreement and the Concession hereunder expires pursuant to the provisions of this Agreement or is terminated by a Termination Notice.

"Termination Notice" means the communication issued in accordance with this Agreement by any one Party to the other Party terminating this Agreement.

"Termination Payment" means the amounts payable by NHAI to the Concessionaire under this Agreement upon the Termination of this Agreement and shall consist of payments relating to Debt Due, Subordinated Debt and Equity, as the case may be, and such other amounts as are expressly provided for under this Agreement. Provided, however, that for purposes of determining Termination Payments to be made by NHAI under this Agreement, the capital cost of the Project Highway shall at all times be reckoned as an amount not exceeding the Total Project Cost and the liability of NHAI to make such Termination Payments relating to Debt Due, Subordinated Debt and Equity shall be determined as if such capital cost was restricted to Total Project Cost.

"Tests" mean the tests to be carried out as set forth in and in accordance with Schedule 'J' to determine the Project Completion and its certification by the Independent Consultant for commencement of commercial operation of the Project Highway.

"Toll Plaza" means the structures and barriers erected on the Project Highway for the purpose of regulating the entry/exit of vehicles in accordance with the provisions of this Agreement.

"Tolling Contract" means the contract, if any, entered into by the Concessionaire with the Tolling Contractor for operation of the Toll Plazas including collection of Fees for and on behalf of the Concessionaire.

"Tolling Contractor" means the person, if any, with whom the Concessionaire has entered into a Tolling Contract for operation of Toll Plazas and collection of Fees for and on behalf of the Concessionaire.

"Total Project Cost" means the lowest of the following:

a. a sum of Rs 3125.4 million;
b. actual capital cost of the Project upon completion of the Project Highway as certified by the Statutory Auditors; or
c. total project cost as set forth in Financing Documents.

Provided further that if part of the Total Project Cost is funded in foreign currency, in accordance with the Financing Package, then the rate of exchange shall be determined as on the date of Bid, and the Total Project Cost shall be computed as if such foreign currency were converted with reference to such exchange rate. In the event of Termination of this

Agreement requiring NHAI to make Termination Payments, the liability of NHAI shall be determined on basis of the rate of exchange prevailing on the date of Termination Notice and the amounts payable by NHAI for Debt Due and Subordinated Debt, as the case may be, shall be computed accordingly.

"Value Additions" shall have the meaning attributed to it in Clause 17.5.

"Vesting Certificate" shall have the meaning attributed to it in Clause 33.4.

"WPI" means the wholesale price index published by the Ministry of Industry, GOI and shall include any index, which substitutes the WPI.

1.2 In this Agreement, unless the context otherwise requires,

(a) any reference to a statutory provision shall include such provision as is from time to time modified or re-enacted or consolidated so far as such modification or re-enactment or consolidation applies or is capable of applying to any transactions entered into hereunder;

(b) references to Indian law shall include the laws, acts, ordinances, rules, regulations, or bye laws which have the force of law in any State or Union Territory forming part of the Union of India;

(c) the words importing singular shall include plural and vice versa, and words denoting natural persons shall include partnerships, firms, companies, corporations, joint ventures, trusts, associations, organizations or other entities (whether or not having a separate legal entity);

(d) the headings are for convenience of reference only and shall not be used in and shall not affect the construction or interpretation of this Agreement;

(e) terms and words beginning with capital letters and defined in this Agreement shall have the meaning ascribed thereto herein and the terms and words defined in the Schedules and used therein shall have the meaning ascribed thereto in the Schedules;

(f) the words "include" and "including" are to be construed without limitation;

(g) references to "construction" include, unless the context otherwise requires, investigation, design, engineering, procurement, delivery, transportation,

installation, processing, fabrication, testing, commissioning and other activities incidental to the construction;

(h) any reference to any period of time shall mean a reference to that according to Indian Standard Time;

(i) any reference to day shall mean a reference to a calendar day;

(j) any reference to month shall mean a reference to a calendar month;

(k) the Schedules to this Agreement form an integral part of this Agreement and will be in full force and effect as though they were expressly set out in the body of this Agreement;

(l) any reference at any time to any agreement, deed, instrument, licence or document of any description shall be construed as reference to that agreement, deed, instrument, license or other document as amended, varied, supplemented, modified or suspended at the time of such reference provided that this clause shall not operate so as to increase liabilities or obligations of NHAI hereunder or pursuant hereto in any manner whatsoever;

(m) references to Recitals, Articles, Clauses, Sub-clauses, Paragraphs, or Schedules in this Agreement shall, except where the context otherwise requires, be deemed to be references to Recitals, Articles, Clauses, Sub-clauses, paragraphs, and Schedules of or to this Agreement;

(n) any agreement, consent, approval, authorisation, notice, communication, information or report required under or pursuant to this Agreement from or by any Party or the Independent Consultant shall be valid and effectual only if it is in writing under the hands of duly authorised representative of such Party or the Independent Consultant, as the case may be, in this behalf and not otherwise;

(o) any reference to any period commencing "from" a specified day or date and "till" or "until" a specified day or date shall include both such days or dates;

(p) the damages payable by either Party to the other of them as set forth in this Agreement, whether on per diem basis or otherwise, are mutually agreed genuine pre-estimated loss and damage likely to be suffered and incurred by the Party

entitled to receive the same and are not by way of penalty or liquidated damages (the "Damages"); and

(q) unless otherwise expressly provided in this Agreement any Documentation required to be provided or furnished by the Concessionaire to NHAI and/or the Independent Consultant shall be provided free of cost and in three copies and if NHAI and/or the Independent Consultant are required to return any such Documentation with their comments and/or approval, they shall be entitled to retain two copies thereof.

1.3 Measurements and Arithmetic Conventions

All measurements and calculations shall be in metric system and calculations done to 2 decimal places, with the third digit of 5 or above being rounded up and below 5 being rounded down.

1.4 Priority of contract documents and errors/discrepancies

1.4.1 The several documents forming this Agreement are to be taken as mutually explanatory to one another and, unless otherwise expressly provided elsewhere in this Agreement, the priority of the following documents shall in the event of any conflict between them be in the order they are set out:

(i) this Agreement

(ii) all other documents forming part of this Agreement

i.e. document at (i) above shall prevail over the documents at (ii) above.

1.4.2 In case of ambiguities or discrepancies within this Agreement the following shall apply:

(i) Between two Clauses of this Agreement, the provisions of the specific clause relevant to the issue under consideration shall prevail over those in other Clauses;

(ii) Between the Clauses and the Schedules, the Clauses shall prevail save as otherwise expressly set forth in Clause 1.4.1;

(iii) Between DPR issued alongwith RFP and the Schedules, the latter shall prevail;

(iv) Between the written description on the Drawings and the Specifications and Standards, the latter shall prevail;

(v) Between the dimension scaled from the Drawing and its specific written dimension, the latter shall prevail;

(vi) Between any value written in numerals and that in words, the latter shall prevail.

II SCOPE OF PROJECT

2.1 The Project shall be executed on the Site, which is described in Schedule 'A' of this Agreement. The scope of the Project shall include performance and execution by the Concessionaire of all design, engineering, financing, procurement, construction, completion, operation and maintenance of the Project Highway as described in Schedule 'B' and Schedule 'C' of this Agreement. It shall include widening the existing 2 lane portion from Km 270.00 (Thrissur) - Km 316.70 (Angamali) on NH-47 in the State of Kerela to 4 lanes and Improvement, Operation and Maintenance of Km 316.70 (Angamali) to Km 342.0 (Edapalli) on NH-47 in accordance with the Specifications and Standards set forth in Schedule 'D' and operation and maintenance thereof in accordance with Schedule 'L'. It shall also include the performance and fulfillment of other obligations by the Concessionaire under this Agreement.

The Concessionaire shall undertake its obligations at its own cost and risk.

CHAPTER – II

GRANT OF CONCESSION

III. GRANT OF CONCESSION

3.1 Subject to and in accordance with the terms and conditions set forth in this Agreement, NHAI hereby grants to the Concessionaire and the Concessionaire hereby accepts the Concession for a period of 20 (twenty) years commencing from the Appointed Date, including the exclusive right, licence and authority during the subsistence of this Agreement to implement the Project and the Concession in respect of the Project Highway.

3.2 Subject to and in accordance with the terms and conditions set forth in this Agreement, the Concession hereby granted shall entitle the Concessionaire to enjoy, and oblige the Concessionaire to undertake the following in accordance with the provisions of this Agreement, the Applicable Laws and the Applicable Permits:

i to develop, design, engineer, finance, procure, construct, operate and maintain the Project Highway during the Concession Period;

ii upon completion of the Project Highway and during the Operations Period to manage, operate & maintain the Project Highway and regulate the use thereof by third parties;

iii levy, demand, collect and appropriate the Fees from vehicles and persons liable to payment of Fees for using the Project Highway or any part thereof and refuse entry of any vehicle to the Project Highway if the due Fee is not paid;

iv perform and fulfill all of the Concessionaire's obligations under this Agreement;

v bear and pay all expenses, costs and charges incurred in the fulfillment of all the Concessionaire's obligations under this Agreement ;and

vi not assign or create any lien or Encumbrance on the Concession hereby granted on the whole or any part of the Project Highway nor transfer, lease or part possession therewith save and except as expressly permitted by this Agreement or the Substitution Agreement.

3.3. The Concession Period shall commence on the Appointed Date and shall end on the Termination Date.

IV. CONDITIONS PRECEDENT

4.1 Conditions Precedent

Save and except as provided in Articles IV, V and XXII, the rights and obligations of the Concessionaire under this Agreement are subject to the satisfaction in full of the following conditions precedent to be fulfilled on or before Financial Close unless any such condition has been waived as provided in Clause 4.2:

(a) Concessionaire shall have obtained all such Applicable Permits as listed in Schedule 'E' unconditionally or if subject to conditions then all such conditions have been satisfied in full and such Applicable Permits are and shall be kept in full force and effect for the relevant period during the subsistence of this Agreement;

(b) the Concessionaire shall have been granted way leaves required in connection with the Project including:

(i) existing rights of way for the alignment of the Project Highway free from all Encumbrances;
(ii) rights of way from public roads to the Site; and
(iii) permission/licence to enter upon and utilise the Site for the construction pursuant to and in accordance with this Agreement.

(c) The Concessionaire shall have obtained all Central Government clearances and permits under the applicable laws relating to environmental protection and conservation from the Ministry of Environment and Forest.

(d) Deleted

(e) certified true copies of all Project Agreements, in particular, the Financing Documents, the EPC Contract, O&M Contract, if any and the Tolling Contract, if any, as well as the shareholders funding agreement have been delivered by the Concessionaire to NHAI;

(f) the Performance Security in full has been provided by the Concessionaire to NHAI in accordance with the RFP and the same is in full force and effect;

(g) all of the representations and warranties of the Concessionaire set forth in Article XI are true and correct as on date of this Agreement and as on the Appointed Date;

(h) NHAI shall have received from the Concessionaire copies (certified as true copies by an authorised officer of the Concessionaire) of the constitutional documents of the Concessionaire;

(i) NHAI shall have received copies (certified as true copies by a Director of the Concessionaire) of all resolutions adopted by the Board of Directors of the Concessionaire authorising the execution, delivery and performance by the Concessionaire of this Agreement and each of the Project Agreements;

(j) NHAI shall have received from the Indian legal counsel of the Concessionaire a legal opinion with respect to the authority of the Concessionaire to enter into this Agreement and the Project Agreements and the Financing Documents and the enforceability of the provisions thereof; and

4.2 Any of the conditions precedent set forth in Clause 4.1, save and except condition of Sub-clause (b) and (c) thereof, may be waived fully or partially by NHAI at anytime in its sole discretion.

4.3 **Obligation to Satisfy the Conditions Precedent.**

The Concessionaire shall make all reasonable endeavors to procure the satisfaction in full of the Conditions Precedent set out in Clause 4.1 above and NHAI shall make all reasonable endeavor to procure fulfillment of the conditions set forth in Sub-clauses (b), (c) and (d) of Clause 4.1. Each Party shall bear its respective cost and expense of satisfying such Condition Precedent unless otherwise expressly provided.

4.4 If the Conditions Precedent set forth in Clause 4.1 have not been satisfied on or before the Financial Close and the NHAI has not waived, fully or partially, such conditions under Clause 4.1, NHAI may, notwithstanding anything to the contrary contained in this Agreement, terminate this Agreement in accordance with provisions of Clause 32.2 without being liable in any manner whatsoever to the Concessionaire and forfeit the Performance Security by way of Damages, provided that where NHAI does not fulfill its obligations under Clause 4.3 and terminates this Agreement under this Clause 4.4, it shall refund the Performance Security.

V. PERFORMANCE SECURITY

5.1 The Concessionaire for due and faithful performance of its obligations during the construction period has provided to NHAI, Bank Guarantee No. 2005/306 dated 28th

October 2005 and its amendments dated 12th January 2006 and 28th February 2006 for Rs.9, 37,50,000 and Bank guarantee no 2005/307 dated 28th October 2005 and its amendments dated 12th January 2006 and 28th February 2006 for Rs. 6,25,00,000/- being 5 % of the Total Project Cost, from Andhra Bank, valid upto 28th February 2009 and 31st August 2006 respectively. The Performance Security shall be reduced to 3% of the Total Project Cost after achievement of the Financial Close by the Concessionaire. The Concessionaire further agrees and undertakes to keep the bank guarantee valid and enforceable till the COD subject to Clause 5.2 below. The Performance Security shall be released by NHAI to the Concessionaire upon issuance of the Completion Certificate by the Independent Consultant.

5.2 In the event of the Concessionaire being in default in the due and faithful performance of its obligations under this Agreement and failing to remedy such default within the Cure Period, the NHAI shall without prejudice to its other rights and remedies hereunder be entitled to encash and appropriate the Performance Security as Damages for such default. Upon such encashment and appropriation of the Performance Security, NHAI shall grant a period of 15 (fifteen) days to the Concessionaire to provide fresh Performance Security and the Concessionaire shall within the time so granted furnish to NHAI such Performance Security failing which NHAI shall be entitled to Terminate this Agreement under clause 32.2. The provision set forth in Clause 5.2 and this Clause 5.3 shall apply mutatis-mutandis to such fresh Performance Security.

5.3 Notwithstanding anything to the contrary contained in clause 5.3, upon furnishing of fresh Performance Security in accordance with clause 5.2, the Concessionaire shall be granted an additional period of 60 (Sixty) days as Cure Period for remedying the defaults and complying with his obligations under this Agreement. In the event of the Concessionaire continuing to be in breach of the provisions of this Agreement after such Cure Period, NHAI shall be entitled to terminate this Agreement under the provisions of Clause 32.2.

VI. FEES

6.1 The Concessionaire shall be entitled during the Operations Period to levy, collect and appropriate the Fees from the users of the Project Highway at the Toll Plaza pursuant to and in accordance with the Fee Notification. NHAI undertakes to arrange to publish the Fee Notification substantially in the form set forth in Schedule 'G' 30 days prior to the anticipated COD, as informed by the Concessionaire, who shall provide NHAI with at least 90 days notice of the anticipated COD. Provided, however, that such Fee shall be rounded off to the nearest five rupees for ensuring ease of payment and collection.

6.2 The Concessionaire can adopt alternative toll location with due approval of NHAI and Independent Consultant. However the distance between any two consecutive Toll Plazas, including Toll plazas in adjacent packages, shall not be normally less than (50) kms.

6.3 The Concessionaire acknowledges that the Fee Notification, inter alia, provides for annual revision in the Fees linked to the extent of variation in WPI as per the Fee Notification, and hereby confirms that save and except as provided in the Fee Notification, the Concessionaire is not entitled to and shall not seek any relief whatsoever from NHAI, GOI or GOK on account of increase or otherwise in WPI or on any other account except in accordance with the express provisions of this Agreement.

6.4 deleted

6.5 The Concessionaire shall not collect any Fees from Local Traffic in excess of the discounted rates as Specified in the Schedule 'G'. It shall issue appropriate passes as per Schedule 'G' or make refunds in a manner that minimizes the inconvenience to local traffic consistent with the Concessionaire's need to prevent any leakage of Fees. For carrying out provisions of this Clause, the Concessionaire shall formulate, publish and implement an appropriate scheme in accordance with Schedule 'G' and carry out such modifications and improvements to such scheme as may reasonably be suggested by NHAI or required by local circumstances from time to time in conformity with the objectives of this Agreement.

6.6 The Concessionaire shall not collect any Fees in relation to Exempted Vehicles.

6.7 The Fees collected by the Concessionaire or NHAI or NHAI's nominee pursuant hereto shall be deposited in the Escrow Account and appropriated in accordance with the provisions of Article XXV.

6.8 The Concessionaire may delegate its right to collect Fees to the O&M Contractor or the Tolling Contractor or to any other person provided, however, that notwithstanding such delegation, the Concessionaire shall be and remain solely liable and responsible for the collection of Fees in accordance with this Agreement and its deposit into the Escrow Account.

VII CONCESSION FEE

7.1 In consideration of the grant of Concession under this Agreement, the Concession Fee payable by the Concessionaire to the NHAI shall be Re.1.00 (Rupee One) per year during the term of this Agreement.

7.2 The Concession Fee shall be paid in advance within 90 (ninety) days of the commencement of the year, for which it is due and payable.

VIII ADDITIONAL TOLLWAY

8.1 Notwithstanding anything to the contrary contained in this Agreement, any of NHAI, GOI or Government of Kerela may construct and operate either itself or have the same, inter alia, built and operated on BOT basis or otherwise any Expressway or other toll road, not being a bye-pass, between, inter alia, (Km 270.00 (Thrissur) – 342.00 (Edapalli) (the "Additional Tollway") provided that such Additional Tollway shall not be opened to traffic before expiry of 8 (eight) years from the Appointed Date. Provided, however, that any such facility that is more than 120% of the length of the Project Highway or where the toll fees is more than 133% of the applicable toll fees for the Project Highway shall not be considered as an Additional Tollway. Provided further that such facility shall bypass at least one Toll Plaza of the Project Highway

8.2 In the event of NHAI, GOI or Government of Kerela, as the case may be, constructing or permitting construction of any Additional Tollway as set forth in the Clause 8.1, and the Additional Tollway is commissioned at any time after 8 (eight) years from the Appointed Date, then the Concession Period shall be increased by half the number of years by which such commissioning precedes the expiry of the Concession Period.

8.3 Upon commissioning of the Additional Tollway, the Concessionaire shall continue to levy and collect the Fee under this Agreement and shall not offer any discounts or reductions in such Fee except with the prior written consent of NHAI. Provided, however, that any such discounts or reductions that the Concessionaire had offered to any general or special class of users or vehicles for a continuous period of three years prior to the commissioning of the Additional Tollway may continue in the same form and manner after the commissioning of such Additional Tollway.

VIII A CAPACITY AUGMENTATION

Notwithstanding anything contrary contained any where in this Agreement to the provisions here below, the following are prescribed.

8A.1 The NHAI may, following a detailed traffic study conducted by it, at any time after 8 years following COD decide to augment/increase the capacity of the Project (Capacity Augmentation) with a view to provide the desired level of service to the users of the Project Facility.

8A.2 The NHAI shall invite proposals from eligible Persons for Capacity Augmentation. The Concessionaire shall have option to submit its proposal for Capacity Augmentation.

8A.3 The bid document for Capacity Augmentation shall specify a Termination Payment to be made to the Concessionaire in case the Concessionaire chooses not to submit its proposal or fails or declines to match the preferred offer as mentioned in clause 8A.5 below.

8A.4 In case the Concessionaire after participating in the bidding procedure, fails to give the lowest offer, the Concessionaire shall be given the first right of refusal to match the preferred offer. If the Concessionaire matches the preferred offer, the Parties shall enter into a suitable agreement supplemental to this Agreement to give effect to the changes in scope of the Project, Concession Period and all other necessary and consequential changes. In such an event the Concessionaire shall pay to the bidder who had made the lowest offer sum of Rs. 10 lakhs (Ten Lakhs) towards bidding costs incurred by such bidder.

8A.5 In case the Concessionaire (i) chooses not to submit its proposal for Capacity Augmentation or (ii) is not the preferred bidder and also fails or declines to match the preferred offer, NHAI shall be entitled to terminate this Agreement upon payment to the Concessionaire of the Termination Payment.

8A.6 The Termination Payment referred to in the preceding clauses 8A.3 & 8A.5 above shall be the amount equivalent to the amount of Termination Payment set out in Clause 32.4.2

VIII B ADDITIONAL HIGHWAY

Deleted

CHAPTER –III

OBLIGATIONS AND UNDERTAKINGS

IX. OBLIGATIONS OF THE CONCESSIONAIRE

9.1 The Concessionaire shall at its own cost and expense observe, undertake, comply with and perform, in addition to and not in derogation of its obligations elsewhere setout in this Agreement, the following:

(i) make, or cause to be made, necessary applications to the relevant Governmental Agencies with such particulars and details, as may be necessary for obtaining all Applicable Permits, and obtain such Applicable Permits in conformity with the Applicable Laws;

(ii) notify to NHAI forthwith the occurrence of Financial Close; submit to NHAI certified true copies of each of the Project Agreements within 7 (seven) days of their execution;

(iii) not make any replacement, amendment or modifications to any of the Project Agreements without the prior written consent of NHAI, where such replacement, amendment or modification has or may have the effect of increasing or imposing any financial liability or obligation on NHAI in any manner, and where such amendment or modification is made without such consent, not to enforce such amendment or modification nor permit enforcement thereof against NHAI in any manner whatsoever;

give NHAI not less than 30 (thirty) days written notice prior to entering into, amending or replacing any Project Agreement so as to enable NHAI to provide its consent or offer its comments, if any thereon which, if made, shall be duly considered and given effect to by the Concessionaire before entering into, amending or replacing such Project Agreement;

(iv) remove promptly from the Project Highway all surplus construction machinery and materials, waste materials (including, without limitation, hazardous materials and waste water), rubbish and other debris (including without limitation accident debris) and shall keep the Site in a neat and clean condition and in conformity with the Applicable Laws and Applicable Permits;

(v) procure, as required, the appropriate proprietary rights, licenses, agreements and permissions for materials, methods, processes and systems used or incorporated into the Project Highway;

(vi) provide all assistance to the Independent Consultant as it may require for the performance of its duties and services;

(vii) provide to NHAI reports on regular basis during the Construction Period and the Operations Period in the form and manner set forth in this Agreement and Schedule 'X';

(viii) obtain and maintain in force on and from the Appointed Date all insurance in accordance with the provisions of this Agreement and Good Industry Practice;

(ix) acquire such real estate, as the Concessionaire may deem appropriate for the Additional Facilities and to indemnify and save harmless and defend GOI, NHAI, and Government of Kerela from and against all proceedings, claims, demands, costs, expenses, losses and damages arising out of or relating to the securing of rights to use such real estate by the Concessionaire or any person claiming through or under the Concessionaire;

(x) undertake Debt Service Payments in accordance with the Financing Documents;

(xi) levy and collect Fees from users of the Project Highway at the rates set forth in the Fee Notification and in accordance with this Agreement and regulate the traffic on the Project Highway in accordance with the Applicable Laws;

(xii) ensure and procure that each Project Agreement contains provisions that entitle NHAI to step into such agreement in its discretion in place and substitution of the Concessionaire in the event of Termination of this Agreement on account of default or breach by the Concessionaire;

(xiii) appoint, supervise, monitor and control the activities of Contractors under their respective Project Agreements as may be necessary;

(xiv) make reasonable efforts to maintain harmony and good industrial relations among the personnel employed in connection with the performance of the Concessionaire's obligations under this Agreement;

(xv) comply with all Applicable Permits and Applicable Laws in the performance of the Concessionaire's obligations under this Agreement including those being performed by any of the Contractors;

(xvi) develop, implement and administer a surveillance and safety program for the Project Highway, the users thereof, and the Contractors personnel engaged in the provision of any services under any of the Project Agreements including correction of safety violations and deficiencies, and taking of all other actions necessary to provide a safe environment in accordance with Schedule 'S', Applicable Laws and Good Industry Practice;

(xvii) take all reasonable precautions for the prevention of accidents on or about the Project Highway and provide all reasonable assistance and emergency medical aid to accident victims;

(xviii) not to place or create and nor permit any Contractor or other person claiming through or under the Concessionaire to create or place any Encumbrance or security interest over all or any part of Site or the Project Assets, or on any rights of the

Concessionaire therein or under this Agreement, save and except as expressly set forth in this Agreement;

(xix) make its own arrangements for quarrying, and observe and fulfill the environmental and other requirements under the Applicable Laws and Applicable Permits at Concessionaire's own cost and expense;

(xx) be responsible for safety, soundness and durability of the Project Highway including other structures forming part thereof and their compliance with the Specifications and Standards;

(xxi) not claim or demand possession or control of any roads, structures or real estate which do not form part of the Project Highway; after receiving possession of the Site or part thereof, ensure that such Site remains free from all encroachments and take all steps necessary to remove encroachments, if any

(xxii) make payment to Police department or any Government Agency, if required, for provision of such services as are not provided in the normal course or are available on payment;

(xxiii) indemnify the NHAI against all actions, suits, claims, demands and proceedings and any loss or damage or cost or expense that may be suffered by them on account of anything done or omitted to be done by the Concessionaire in connection with the performance of its obligations under this Agreement;

(xxiv) comply with the Divestment Requirements and hand over the Project Highway to NHAI upon Termination of the Agreement.

(xxviii) work in optimizing the use of existing Right of Way handed over to them.

(xxix) make all necessary arrangements for accomplishing the tasks of physical removal of the encroachments at his own cost.

(xxx) obtain all the necessary environmental clearances, cut the trees and carry out compensatory afforestation, as per the applicable state laws, at his own cost excluding clearances pertaining to the Project Highway passing through protected forest or sanctuary or other similar features.

(xxxi) carry out shifting of utility services.

(xxxii) obtain all necessary clearances/permits, except General Arrangement Drawings (GADs), from Railways in respect of construction of ROB/RUB and carry out all necessary tasks to accomplish construction of ROB/RUB at its own cost.

(xxxiii) liase with Government of Kerela for implementation of the Rehabilitation and Resettlement plan; and

(xxxiv) to keep in full force and effect the Performance Security deposited pursuant to the RFP.

(xxxv) shall assist NHAI / Government Agency in performing functions under Control of National Highways (Land & Traffic) Act, 2002 to the extent directed by NHAI / Government Agency. Provided, however, the obligations, functions and all such acts already covered under this Agreement shall be governed by this Agreement.

(xxxvi) enter into the State Support Agreement with NHAI and the Government of Kerela;

9.2 Subject to the terms and conditions of this Agreement the Concessionaire shall at its cost and expense:

(i) undertake the design, engineering, procurement and construction and financing of the Project Highway in accordance with this Agreement;

(ii) operate and maintain the Project Highway at all times in conformity with this Agreement including but not limited to the Specifications and Standards set forth in Schedule 'D', Schedule 'L', the Maintenance Programme and Good Industry Practice.

9.3 The Concessionaire shall, before commencement of construction of the Project Highway:

(i) submit to NHAI with due regard to Project Completion Schedule as set forth in Schedule 'H' and Scheduled Project Completion Date, its design, engineering and construction time schedule and shall formulate and provide CPM/PERT charts for the completion of the said activities;

(ii) finalise the design and detailed engineering basis;

(iii) have requisite organisation and designate and appoint a Project manager and such other managers, officers and representatives as it may deem appropriate to supervise the Project and to deal with the NHAI Representative and be responsible for all necessary exchanges of information required pursuant to this Agreement; and

(iv) undertake, do and perform such acts, deeds and things as may be necessary or required for construction and Project completion under and in accordance with this Agreement.

9.4 In respect of the Concessionaire's obligations with respect to the Drawings of the Project Highway as set forth in Schedule 'I', the following shall apply:

(i) The Concessionaire shall prepare and submit with reasonable promptness and in such sequence as is consistent with the Project Completion Schedule, three copies

each of all Drawings to NHAI and the Independent Consultant for review and comments.

(ii) By forwarding the Drawings for review and comment to NHAI, the Concessionaire represents that it has determined and verified that the design and engineering including field construction criteria related thereto is in conformity with the Specifications, Standards and quality set forth in this Agreement for and in respect of the Project Highway.

(iii) Within 30 (thirty) days of the receipt of the Drawings, NHAI shall review the same and convey its comments/observations to the Concessionaire with particular reference to the conformity or otherwise with the Specifications and Standards set forth in this Agreement. It is expressly agreed that notwithstanding any review and comment/observations of NHAI on any Drawings or failure of NHAI to provide comments/ observations thereon, NHAI shall not be liable for the same in any manner whatsoever and the Concessionaire shall remain solely responsible for and shall not be relieved or absolved in any manner whatsoever of its obligations, duties and liabilities as set forth in this Agreement. The Concessionaire shall not be obliged to await the comments/observations of NHAI on the Drawings submitted pursuant hereto beyond the period set forth hereinabove.

(iv) If the comments/observations of NHAI indicate that the Drawings are not in conformity with the Specifications and Standards set forth in this Agreement, such Drawings shall be revised by the Concessionaire to the extent necessary and resubmitted to NHAI for review, observations and comments. NHAI shall give its observations and comments, if any, within 15 (fifteen) days of the receipt of such revised Drawings provided, however, that any observations or comments of NHAI or failure of NHAI to give any observations or comments on such revised drawings shall not relieve or absolve the Concessionaire of its obligation to conform to such Specifications and Standards.

(v) The Concessionaire shall be responsible for delays in Project Completion Schedule caused by reasons of any Drawings not being in conformity with the Specifications and Standards, and the Concession Period shall not be extended in any manner whatsoever on account of submission or revision of any Drawings.

(vi) Within 90 (ninety) days of the COD, the Concessionaire shall furnish NHAI with "as built" Drawings reflecting the Project Highway as actually designed, engineered and constructed, including without limitation on "as built" survey illustrating the

layout of the Project Highway and setback lines, if any, of the buildings and structures forming part of Project Facilities.

9.5 The Concessionaire shall submit to NHAI the drafts of the Project Agreements including in particular the EPC Contract, the Financing Documents, the O&M Contract and the Tolling Contract for its review. NHAI shall have the right but not the obligation to provide its comments and observations, if any, in respect of the Project Agreements within 30 (thirty) days of the receipt thereof by NHAI and the Concessionaire shall consider all such comments/observations. Any such comments/observations by NHAI on any Project Agreements or the failure to provide such comments shall not relieve or absolve in any manner whatsoever the Concessionaire of its obligations, duties and liabilities under this Agreement nor shall it make NHAI and/or Independent Consultant liable to the Concessionaire in any manner whatsoever and shall be without prejudice to the rights of NHAI hereunder.

9.6 During the Construction Period, the Concessionaire shall be responsible for maintaining the Site including the existing two lanes of the Project Highway as also the existing section of the National Highway which is proposed to be bypassed as part of the Project Highway, at its own cost and expense. During this period, the Concessionaire shall modify, repair or otherwise make improvements to the existing two lanes before expiry of six months from the Appointed Date so that the existing two lanes comply with requirements provided in Schedule 'L' and at least 2 (two) lanes of the Project Highway are ordinarily open to traffic at all times. The Concessionaire shall promptly undertake all such repairs and maintenance works as may be necessary to keep the Project Highway traffic-worthy and safe during the Construction Period.

9.7 The Concessionaire shall, at all times, afford access to the Site to the authorised representatives of NHAI, Senior Lenders, and the Independent Consultant and to the persons duly authorised by any Governmental Agency having jurisdiction over the Project, including those concerned with safety, security or environmental protection to inspect the Project Highway and to investigate any matter within their authority and upon reasonable notice, the Concessionaire shall provide to such persons reasonable assistance necessary to carry out their respective duties and functions with minimum disruption to the construction, operation and maintenance of the Project Highway consistent with the purpose for which such persons have gained such access to the Site.

X. OBLIGATIONS OF NHAI

10.1 NHAI agrees to observe, comply and perform the following:

(i) enable access to the Site, free from Encumbrances, in accordance with this Agreement

(ii) permit peaceful use of the Site by the Concessionaire as licensee under and in accordance with the provisions of this Agreement without any let or hindrance from NHAI or persons claiming through or under it;

(iii) assist and provide all reasonable support to the Concessionaire in obtaining Applicable Permits;

(iv) upon written request from the Concessionaire, assist the Concessionaire in obtaining access to all necessary infrastructure facilities and utilities, including water, electricity and telecommunication facilities at rates and on terms no less favourable to the Concessionaire than those generally available to commercial customers receiving substantially equivalent services;

(v) Make reasonable endeavors in not allowing erection or placement of barriers by Government of Kerela or any Governmental Agency on the Project Highway except on account of any law and order situation or upon national security considerations;

(vi) enter into the State Support Agreement with the Concessionaire and the Government of Kerela;

(vii) assist the Concessionaire in obtaining necessary assistance to regulate traffic on the Project Highway subject to and in accordance with the Applicable Laws;

(viii) assist the Concessionaire in obtaining Police assistance from Government of Kerela against payment of prescribed costs and charges, if any, for traffic regulation, patrolling and provision of security on the Project Highway;

(ix) operate and maintain the Project Highway during the Development Period, at its own cost and expense, in a manner that the level of service is at no time inferior to the level prevailing on the date when bids were received for this Concession; and

(x) Observe and comply with its obligations set forth in this Agreement.

(xi) take all necessary steps towards accomplishment of acquisition of additional land and its handing over to the Concessionaire as per Clause 13.5 NHAI shall bear the cost of additional land.

(xii) coordinate with Government of Kerela authorities for completing the legal requirements and maintaining law and order during removal of encroachments by the Concessionaire.

(xiii) provide necessary support to the Concessionaire in obtaining necessary clearances/permissions/permits in respect of environmental clearances, tree cutting, compensatory afforestation, shifting of all types of utility services, construction of ROB/RUB on Railway lines and rehabilitation and resettlement.

(xiv) bear all expenses as per the demand note raised by the concerned government or other concerned agencies in respect of shifting of all types of utility services and rehabilitation and resettlement. Obtain approvals from Railways for GADs for construction of ROB/RUB on Railway lines.

(xv) NHAI will arrange to issue fee notification substantially in the form of Schedule 'G'.

XI. REPRESENTATIONS AND WARRANTIES

11.1 Representations and Warranties of the Concessionaire

The Concessionaire represents and warrants to NHAI that:

(i) It is duly organized, validly existing and in good standing under the laws of the jurisdiction of its incorporation;

(ii) It has full power and authority to execute, deliver and perform its obligations under this Agreement and to carry out the transactions contemplated hereby;

(iii) It has taken all necessary corporate and other action under Applicable Laws and its constitutional documents to authorize the execution, delivery and performance of this Agreement;

(iv) It has the financial standing and capacity to undertake the Project;

(v) This Agreement constitutes its legal, valid and binding obligation enforceable against it in accordance with the terms hereof;

(vi) It is subject to civil and commercial laws of India with respect to this Agreement and it hereby expressly and irrevocably waives any immunity in any jurisdiction in respect thereof;

(vii) All the information furnished in the Bid is, and shall be, true and correct as on the Appointed Date and COD and the Balance Sheet and Profit and Loss Account of the Concessionaire for each of its Accounting Years after the Appointed Date furnished to NHAI shall give true and fair view of the affairs of the Concessionaire;

(viii) It shall furnish a copy of the audited accounts of the Company within 120 (one hundred twenty) days of the close of its each Accounting Year after the Appointed Date and any material change subsequent to the date of such accounts shall be notified to NHAI by the Concessionaire within 30 (thirty) days of its occurrence and warrants that the accounts and the information furnished as aforesaid shall be true and correct;

(ix) The execution, delivery and performance of this Agreement will not conflict with, result in the breach of, constitute a default under or accelerate performance required by any of the terms of the Memorandum and Articles of Association of the Concessionaire or any Member of the Consortium or any Applicable Laws or any covenant, agreement, understanding, decree or order to which, it is a Party or by which it or any of its properties or assets is bound or affected;

(x) There are no actions, suits, proceedings, or investigations pending or, to the Concessionaire's knowledge, threatened against it at law or in equity before any court or before any other judicial, quasi judicial or other authority, the outcome of which may result in the breach of or constitute a default of the Concessionaire under this Agreement or which individually or in the aggregate may result in any Material Adverse Effect on its business, properties or assets or its condition, financial or otherwise, or in any impairment of its ability to perform its obligations and duties under this Agreement;

(xi) It has no knowledge of any violation or default with respect to any order, writ, injunction or any decree of any court or any legally binding order of any Governmental Agency which may result in any Material Adverse Effect or

impairment of the Concessionaire's ability to perform its obligations and duties under this Agreement;

(xii) It has complied with all Applicable Laws and has not been subject to any fines, penalties, injunctive relief or any other civil or criminal liabilities which in the aggregate have or may have Material Adverse Effect on its financial condition or its ability to perform its obligations and duties under this Agreement;

(xiii) The aggregate holding of Consortium Members and their Associates as the case may be in the issued and paid up equity share capital of the Concessionaire shall not be less than (a) 51% (fifty one percent) during the Construction Period and for 3 (three) years following COD, and (b) 26% (twenty six per cent) during the balance remaining Operations Period. Also in the case of Consortium, M/s KMC Constructions Limited, the Lead Member would commit to hold a minimum equity stake equal to 51% of the aggregate shareholding of the Consortium in the issued and paid up equity share capital of the Concessionaire at all times during the Concession Period. M/s SREI Infrastructure Finance Limited who is the other Consortium Members, commit to hold a minimum equity stake equal to 10% of the aggregate shareholding of the Consortium in the in the issued and paid up equity share capital of the Concessionaire at all times during the Concession period;

(xiv) Each Consortium Member was and is duly organised and existing under the laws of the jurisdiction of its incorporation and has full power and authority to consent to and has validly consented to and requested NHAI to enter into this Agreement with the Concessionaire pursuant to the LOA and has agreed to and unconditionally accepted the terms and conditions set forth in this Agreement;

(xv) All rights and interests of the Concessionaire in and to the Project Highway shall pass to and vest in NHAI on the Termination Date free and clear of all liens, claims, and Encumbrances without any further act or deed on the part of the Concessionaire or NHAI and that none of Project Assets including materials, supplies or equipment forming part thereof shall be acquired by the Concessionaire subject to any agreement under which a security interest or other lien or Encumbrance is retained by any person save and except as expressly provided in this Agreement;

(xvi) No representation or warranty by the Concessionaire contained herein or in any other document furnished by it to NHAI, or to any Governmental Agency in relation to Applicable Permits contains or will contain any untrue statement of material fact or omits or will omit to state a material fact necessary to make such representation

or warranty not misleading; and

(xvii) It warrants that no sums, in cash or kind, have been paid or will be paid by or on behalf of the Concessionaire, to any person by way of fees, commission or otherwise for securing the Concession or entering into this Agreement or for influencing or attempting to influence any officer or employee of NHAI, GOI or Government of Kerela in connection therewith.

(xviii) It warrants that it has deposited the Performance Security in accordance with the RFP and undertakes to keep the same or any replacements therefor in full force and effect in accordance with the provisions of this Agreement

11.2 Representations and Warranties of NHAI.

NHAI represents and warrants to the Concessionaire that:

(i) NHAI is duly organised and validly existing under the laws of India;

(ii) NHAI has full power and authority to execute, deliver and perform its obligations under this Agreement and to carry out the transactions contemplated hereby;

(iii) NHAI has taken all necessary action to authorise the execution, delivery and performance of this Agreement;

(iv) This Agreement constitutes its legal, valid and binding obligation enforceable against it in accordance with the terms hereof; and

(v) NHAI is subject to civil and commercial laws of India with respect to this Agreement and it hereby expressly and irrevocably waives any sovereign immunity in any jurisdiction in regard to matters set forth in this Agreement.

भारतीय राष्ट्रीय राजमार्ग प्राधिकरण
(सड़क परिवहन और राजमार्ग मंत्रालय)
National Highways Authority of India
(Ministry of Road Transport & Highways)
G-5 & 6, SECTOR-10, DWARKA, NEW DELHI-110045

PHONE : 91-11-25074100/25074200
Fax : 91-11-25093507/25093514
Extn. : 2223/2318/2468/2553

Most Immediate

No.11013/1/2004/MF Dated : September 15, 2004

CIRCULAR

Sub: Re-confirmation of bank guarantees.

It has been noticed that no uniform practice is followed in the matter of obtaining confirmation of the bank guarantees submitted to the Project Implementation Units and the technical divisions in the HQs. Instances of submission of forged bank guarantees have also been noticed. In order to ensure that the bank guarantees submitted to the NHAI for various purposes are valid and genuine, it has been decided that all the bank guarantees which have been submitted to the NHAI should be re-confirmed from the issuing branch as well as their controlling branch. All PDs / officers-in/charge of PIU/GM are required to ensure this confirmation is obtained within seven days. They may also obtain the assistance from the nearest PIU to the issuing branch as well as its controlling office while seeking reconfirmation.

(Anand Bordia)
Member (F)

To

All Project Directors
All General Managers in HQs

(v) This Agreement constitutes its legal, valid and binding obligation enforceable against it in accordance with the terms hereof;

(vi) It is subject to civil and commercial laws of India with respect to this Agreement and it hereby expressly and irrevocably waives any immunity in any jurisdiction in respect thereof;

(vii) All the information furnished in the Bid is, and shall be, true and correct as on the Appointed Date and COD and the Balance Sheet and Profit and Loss Account of the Concessionaire for each of its Accounting Years after the Appointed Date furnished to NHAI shall give true and fair view of the affairs of the Concessionaire;

(viii) It shall furnish a copy of the audited accounts of the Company within 120 (one hundred twenty) days of the close of its each Accounting Year after the Appointed Date and any material change subsequent to the date of such accounts shall be notified to NHAI by the Concessionaire within 30 (thirty) days of its occurrence and warrants that the accounts and the information furnished as aforesaid shall be true and correct;

(ix) The execution, delivery and performance of this Agreement will not conflict with, result in the breach of, constitute a default under or accelerate performance required by any of the terms of the Memorandum and Articles of Association of the Concessionaire or any Member of the Consortium or any Applicable Laws or any covenant, agreement, understanding, decree or order to which, it is a Party or by which it or any of its properties or assets is bound or affected;

(x) There are no actions, suits, proceedings, or investigations pending or, to the Concessionaire's knowledge, threatened against it at law or in equity before any court or before any other judicial, quasi judicial or other authority, the outcome of which may result in the breach of or constitute a default of the Concessionaire under this Agreement or which individually or in the aggregate may result in any Material Adverse Effect on its business, properties or assets or its condition, financial or otherwise, or in any impairment of its ability to perform its obligations and duties under this Agreement;

(xi) It has no knowledge of any violation or default with respect to any order, writ, injunction or any decree of any court or any legally binding order of any Governmental Agency which may result in any Material Adverse Effect or

impairment of the Concessionaire's ability to perform its obligations and duties under this Agreement;

(xii) It has complied with all Applicable Laws and has not been subject to any fines, penalties, injunctive relief or any other civil or criminal liabilities which in the aggregate have or may have Material Adverse Effect on its financial condition or its ability to perform its obligations and duties under this Agreement;

(xiii) The aggregate holding of Consortium Members and their Associates as the case may be in the issued and paid up equity share capital of the Concessionaire shall not be less than (a) 51% (fifty one percent) during the Construction Period and for 3 (three) years following COD, and (b) 26% (twenty six per cent) during the balance remaining Operations Period. Also in the case of Consortium, M/s KMC Constructions Limited, the Lead Member would commit to hold a minimum equity stake equal to 51% of the aggregate shareholding of the Consortium in the issued and paid up equity share capital of the Concessionaire at all times during the Concession Period. M/s SREI Infrastructure Finance Limited who is the other Consortium Members, commit to hold a minimum equity stake equal to 10% of the aggregate shareholding of the Consortium in the in the issued and paid up equity share capital of the Concessionaire at all times during the Concession period;

(xiv) Each Consortium Member was and is duly organised and existing under the laws of the jurisdiction of its incorporation and has full power and authority to consent to and has validly consented to and requested NHAI to enter into this Agreement with the Concessionaire pursuant to the LOA and has agreed to and unconditionally accepted the terms and conditions set forth in this Agreement;

(xv) All rights and interests of the Concessionaire in and to the Project Highway shall pass to and vest in NHAI on the Termination Date free and clear of all liens, claims, and Encumbrances without any further act or deed on the part of the Concessionaire or NHAI and that none of Project Assets including materials, supplies or equipment forming part thereof shall be acquired by the Concessionaire subject to any agreement under which a security interest or other lien or Encumbrance is retained by any person save and except as expressly provided in this Agreement;

(xvi) No representation or warranty by the Concessionaire contained herein or in any other document furnished by it to NHAI, or to any Governmental Agency in relation to Applicable Permits contains or will contain any untrue statement of material fact or omits or will omit to state a material fact necessary to make such representation

or warranty not misleading; and

(xvii) It warrants that no sums, in cash or kind, have been paid or will be paid by or on behalf of the Concessionaire, to any person by way of fees, commission or otherwise for securing the Concession or entering into this Agreement or for influencing or attempting to influence any officer or employee of NHAI, GOI or Government of Kerela in connection therewith.

(xviii) It warrants that it has deposited the Performance Security in accordance with the RFP and undertakes to keep the same or any replacements therefor in full force and effect in accordance with the provisions of this Agreement

11.2 Representations and Warranties of NHAI.

NHAI represents and warrants to the Concessionaire that:

(i) NHAI is duly organised and validly existing under the laws of India;

(ii) NHAI has full power and authority to execute, deliver and perform its obligations under this Agreement and to carry out the transactions contemplated hereby;

(iii) NHAI has taken all necessary action to authorise the execution, delivery and performance of this Agreement;

(iv) This Agreement constitutes its legal, valid and binding obligation enforceable against it in accordance with the terms hereof; and

(v) NHAI is subject to civil and commercial laws of India with respect to this Agreement and it hereby expressly and irrevocably waives any sovereign immunity in any jurisdiction in regard to matters set forth in this Agreement.

XII. DISCLAIMER

12.1 The Concessionaire acknowledges that prior to the execution of this Agreement, the Concessionaire has after a complete and careful examination made an independent evaluation of the traffic volumes, Specifications and Standards, Site and all the information provided by NHAI and has determined to the Concessionaire's satisfaction the nature and extent of such difficulties, risks and hazards as are likely to arise or may be faced by the Concessionaire in the course of performance of its obligations hereunder.

12.2 The Concessionaire acknowledges and hereby accepts the risk of inadequacy, mistake or error in or relating to any of the matters set forth in Clause 12.1 above and hereby confirms that NHAI shall not be liable for the same in any manner whatsoever to the Concessionaire, the Consortium Members or their Associates.

CHAPTER – IV
PROJECT DEVELOPMENT AND OPERATIONS

XIII. USE AND DEVELOPMENT OF THE SITE

13.1 NHAI hereby grants to the Concessionaire for the Development Period access to the Site for carrying out such surveys, investigations, soil tests, design, engineer, procure, construct, operate and maintain the Project Highway including the Project Facilities in accordance with Clause 13.2 below and the provisions of this Agreement as the Concessionaire may deem necessary at the Concessionaire's cost, expense and risk without causing disruption in the traffic on the existing lanes of the Project Highway.

13.2 NHAI hereby grants to the Concessionaire for the Concession Period the right and licence to enter upon all real estate comprised in the Site as briefly described in Schedule 'A' and to survey, design, engineer, procure, construct, operate and maintain the Project Highway including the Project Facilities in accordance with the provisions of this Agreement. Such right and licence of the Concessionaire to the use the Site shall be subject to:

13.2.1 Any existing utilities on, under or above the Site are kept in continuous satisfactory use, if necessary by the use of suitable temporary or permanent diversions with the authority of the controlling body of that utility;

13.2.2 Any existing roads or right of ways are kept in continuous satisfactory use, if necessary, by the use of suitable temporary or permanent diversions with the authority of the controlling

body of that road or right of way. For any diversion or construction, of temporary roads, NHAI will assist the Concessionaire in acquiring the right of way;

13.2.3 The rights of the road users to use the road in accordance with this Agreement;

13.2.4 A right of access by the NHAI itself and any of its agents to perform their obligations and rights under the Concession Agreement or any other functions that they have, and to conduct any study or trial for the purpose of research;

13.3 The license and the right to use the Site shall be granted for the purpose of carrying out the functions placed upon the Concessionaire under the Agreement and not for any other purposes;

13.4 The Concessionaire shall bear all costs and charges for special and temporary rights of way required by it in connection with access to the Site. The Concessionaire shall obtain at its cost such facilities on or outside the Site as may be required by it for the purposes of the Project Highway and the performance of its obligations under this Agreement.

13.5.1 Existing right of way

Existing right of way shall be made available to the Concessionaire pursuant hereto by NHAI free from all Encumbrances and without the Concessionaire being required to make any payment to NHAI on account of any costs, expenses and charges for the use of such Sites for the duration of the Concession Period save and except as otherwise expressly provided in this Agreement. NHAI shall procure for the Concessionaire access to the entire existing right of way for construction of main carriageway, free of Encumbrances, on or before the Appointed Date.. Provided, however, that if NHAI does not enable such access to any part or parts of the existing right of way for any reason other than a Force Majeure Event or breach of this Agreement by the Concessionaire, NHAI shall pay to the Concessionaire Damages at the rate of Rs. 1,000 (Rupees one thousand) per month per 1,000 (one thousand) sq. meters or part thereof if such area is required by the Concessionaire for Construction Works. Such Damages shall be raised to Rs. 2,000 (Rupees two thousand) per month after COD if such area is essential for the smooth and efficient operation of the Project Highway. Provided further that the Completion Certificate or the Provisional Certificate, as the case may be, for the Project Highway shall not be affected or delayed as a consequence of such parts of the existing right of way remaining under construction after the Scheduled Project Completion Date.

13.5.2 **Additional right of way**

Additional right of way for construction of main carriageway shall be made available to the Concessionaire as per the handing over schedule mentioned herein free from all encumbrance and without the Concessionaire being required to make any payment to NHAI on account of any costs, expenses and charges for the use of such additional right of way for the duration of the Concession Period. 50% (fifty percent) of Additional Right of way for construction of main carriageway on or before 6 (six) months from the Appointed Date, balance 50% (fifty percecnt) of the Additional right of way for construction of main carriageway on or before 12 (twelve) months from the Appointed Date. Additional right of ways for service roads and other facilities shall be handed over to the Concessionaire on or before 18 (eighteen) months from the Appointed Date. On or after the Appointed Date, the Concessionaire shall commence, undertake and complete all Construction Works on the Project Highway in accordance with this Agreement. Provided, however, that if NHAI does not enable such access to any part or parts of the Additional right of way for any reason other than a Force Majeure Event or breach of this Agreement by the Concessionaire as per the schedule mentioned herein, NHAI shall pay to the Concessionaire Damages at the rate of Rs. 1,000 (Rupees one thousand) per month per 1,000 (one thousand) sq. meters or part thereof if such area is required by the Concessionaire for Construction Works. Such Damages shall be raised to Rs. 2,000 (Rupees two thousand) per month after COD if such area is essential for the smooth and efficient operation of the Project Highway. Provided further that the Completion Certificate or the Provisional Certificate, as the case may be, for the Project Highway shall not be affected or delayed as a consequence of such parts of the existing right of way remaining under construction after the Scheduled Project Completion Date.

13.6 Construction of the Project Highway shall be undertaken by the Concessionaire in conformity with the Project Completion Schedule 'H' and the Project milestones set forth in Schedule 'H' for completion of the Project Highway on or before the Scheduled Project Completion Date. If the Concessionaire fails to achieve any such Project milestone other than Project Completion, within a period of 90 (ninety) days from the date set forth in Schedule "H' then it shall pay Damages to NHAI at the rate of Rs.1,000,000 (Rs. One million) per day until such milestone is achieved. NHAI may either recover such Damages from the Performance Security or demand payment thereof from the Concessionaire. The Concessionaire shall make such payment within 7 (seven) days of receiving such demand from NHAI and any delay in making such payment shall attract interest @ SBI PLR plus two per cent. In the event the Concessionaire achieves Project completion as per Scheduled Project Completion Date as set forth in Schedule 'H', such damages paid by the Concessionaire to NHAI shall be refunded by NHAI within 90 (ninety) days from the date

of written request from the Concessionaire without any interest thereon, provided that the Scheduled Project Completion Date as set forth in Schedule 'H' has not been extended from the date defined at the time of the signing of this Concession Agreement for any reason. If the Concessionaire fails to achieve Project completion as per the Scheduled Project Completion Date as set forth in Schedule 'H', then it shall pay damages to NHAI as per Article XV.

XIV. MONITORING AND SUPERVISION OF CONSTRUCTION

14.1 During the Construction Period, the Concessionaire shall furnish to NHAI and the Independent Consultant monthly progress reports of actual progress of the Construction Works comprised in the Project Highway and shall give all such other relevant information as may be required by NHAI and/or the Independent Consultant.

14.2 The Independent Consultant shall inspect the Construction Works and the Project Highway at least once a week during the Construction Period and make out an Inspection Report of such inspection (the "Inspection Report"). It shall send a copy of its Inspection Report to NHAI and the Concessionaire. The Concessionaire shall take necessary action to remedy the lapses, if any, stated in the Inspection Report for ensuring compliance with the provisions of this Agreement. Such inspection or submission of Inspection Report by the Independent Consultant shall not relieve or absolve the Concessionaire of its obligations and liabilities hereunder in any manner whatsoever.

14.3 For the purposes of determining that Construction Works are being undertaken in accordance with Specifications and Standards and Good Industry Practice, the Independent Consultant shall undertake day to day supervision of the Works along with the quality control consultant of the Concessionaire in accordance with Schedule 'O' of this Agreement. The Independent Consultant shall also require the Concessionaire to carry out such Tests at such time and frequency and in such manner as may be necessary in accordance with Good Industry Practice for quality assurance. The Concessionaire shall with due diligence carry out, or cause to be carried out, all such Tests in accordance with the instructions of the Independent Consultant and furnish the results of such Tests forthwith to the Independent Consultant. The Concessionaire shall promptly carry out such remedial measures as may be necessary to cure the defects or deficiencies, if any, indicated in such Test results and furnish a report to the Independent Consultant in this behalf.

14.4 If the Independent Consultant or NHAI shall reasonably determine that the rate of progress of the Construction of the Project Highway is such that the Project Completion is not feasible on or before the Scheduled Project Completion Date by the Concessionaire, it sh

so notify the Concessionaire about the same and the Concessionaire shall within 15 (fifteen) days thereof notify the NHAI and the Independent Consultant about the steps it proposes to take to expedite progress and the period within which it shall achieve COD.

14.5 (a) Upon recommendation of the Independent Consultant or suo-moto, NHAI may by written notice require the Concessionaire to suspend forthwith the whole or any part of the Construction Works if in the reasonable opinion of the NHAI such work is being carried on in a manner which threatens the safety of the works or of the users of the Project Highway.

(b) The Concessionaire, shall upon instructions of the NHAI pursuant to sub-clause (a) above suspend the Construction Works or any part thereof for such time and in such manner as may be specified by NHAI and subject to sub-clause (c) below, the costs incurred during such suspension to properly protect and secure the Construction Works or such part thereof as is necessary in the opinion of the Independent Consultant ("Preservation Costs"), shall be borne by the Concessionaire.

(c) If the suspension pursuant to Sub-clause (a) above, is caused by:

(i) any reason other than default or breach of this Agreement by the Concessionaire including breach of any of the obligations of the Concessionaire under this Agreement, the Preservation Costs shall be borne by NHAI;

(ii) reason of default or breach of this Agreement by NHAI the Preservation Costs shall be borne by NHAI; or

(iii) reason of any Force Majeure Event, the Preservation Costs shall be borne by the Concessionaire save and except to the extent otherwise expressly provided in Article XXIX.

(d) If suspension of Construction Works is for reasons not attributable to the Concessionaire, the Independent Consultant shall determine any extension to the Project Completion Schedule, the Scheduled Project Completion Date and the Concession Period, to which the Concessionaire is reasonably entitled and shall notify NHAI accordingly. NHAI shall extend the Project Completion Schedule, the Scheduled Project Completion Date and the Concession Period in accordance with the recommendations of the Independent Consultant.

XV. COMPLETION

15.1 The Project shall be deemed to be complete and open to traffic only when the Completion Certificate or the Provisional Certificate is issued in accordance with the provisions of Article XVI (the "Project Completion").

15.2 COD of the Project shall be the date on which the Independent Consultant has issued the Completion Certificate or the Provisional Certificate, as the case may be, under this Agreement and the Concessionaire shall not levy and collect any Fee until it has received such Completion Certificate or the Provisional Certificate.

15.3 The Concessionaire guarantees that the Project Completion shall be achieved in accordance with the provisions of this Agreement on a date not later than 30 (thirty) months from the Appointed Date ("Scheduled Project Completion Date").

15.4 If the Project Completion is not achieved by the Scheduled Project Completion Date for any reason other than conditions constituting Force Majeure or for reasons attributable to NHAI or any Governmental Agency, the Concessionaire shall pay to NHAI as weekly Damages for delay in the achievement of the COD, an amount calculated at the rate of 0.01% (point zero one per cent) of the Total Project Cost per week or part thereof.

15.5 If the COD does not occur within 12 (twelve) months from the Scheduled Project Completion Date, NHAI shall be entitled to Terminate this Agreement in accordance with the provisions of Clause 32.2.

XVI. TESTS

16.1 All Tests including but not limited to load test on structures shall be conducted in accordance with Schedule 'J' and the Applicable Laws and Applicable Permits. NHAI shall designate a NHAI Representative to witness and observe the Tests. All Tests shall be held in accordance with the schedule notified by the Concessionaire to the Independent Consultant and the NHAI Representative who may either witness the Tests themselves or designate their representatives for this purpose, if they choose.

16.2 The Independent Consultant shall monitor the results of the Tests to determine the compliance of the Project Highway with the Specifications and Standards. The Concessionaire shall provide to the Independent Consultant and the NHAI with copies of all Test data including detailed Test results.

16.3 At least 30 (thirty) days prior to the likely completion of the Project Highway the Concessionaire shall notify the Independent Consultant and NHAI of the same and shall give notice of its intent to conduct any final Tests. The Concessionaire shall give to NHAI and the Independent Consultant at least 10 (ten) days' prior notice of the actual date on which it intends to commence the Tests and at least 7 (seven) days' prior notice of the commencement date of any subsequent Tests. The Independent Consultant shall have the right to suspend or delay any Test if it is reasonably anticipated or determined during the course of the Test that the performance of the Project Highway or any part thereof does not meet the Specifications and Standards.

16.4 Upon the Independent Consultant determining the Tests to be successful in respect of any stretch referred to in Clause 16.3 having been satisfied that such stretch of the Project Highway can be legally, safely and reliably placed in commercial operations, the Independent Consultant shall forthwith issue to the Concessionaire and NHAI a Certificate in respect of such stretch substantially in the form set forth in Schedule 'K' (the "Completion Certificate") after approval from NHAI and upon Completion Certificate having been issued in respect of all stretches referred to in Clause 16.3 issue a final Completion Certificate certifying the Project Completion.

16.5 Independent Consultant may at the request of the Concessionaire issue a provisional certificate of completion ("Provisional Certificate") after approval from NHAI, if the Tests are successful in respect of any stretch referred to in Clause 16.3 and such stretch of the Project Highway can be legally, safely and reliably placed in commercial operation though certain works or things forming part thereof are not yet complete. In such an event such Provisional Certificate shall have appended thereto a list of outstanding items signed jointly by the Independent Consultant and the Concessionaire ("Punch List"). Such Punch List shall be drawn up in consultation with NHAI, and NHAI may at its discretion through Independent Consultant may add or delete any items forming part of the Punch List at any time before issue of the Provisional Certificate. All Punch List items shall be completed by the Concessionaire within 120 (one hundred twenty) days from the date of issue of such Provisional Certificate. In case of any delay in completion of the Punch List items beyond the aforesaid period of 120 (one hundred twenty) days, NHAI shall, without prejudice to its rights under this Agreement, including Termination thereof, be entitled to undertake the completion of the Punch List items, based on the cost estimated by the Independent Consultant, at the risk and cost of the Concessionaire and to recover the same from the Concessionaire. In addition to recovery of the aforesaid cost of completion of the Punch List items by NHAI, a sum equal to 200% (two hundred percent) of such cost, subject to a minimum of Rs. 1,000,000 (Rs. One million) shall also be recovered by NHAI from the Concessionaire as Penalty. NHAI shall have the right and the Concessionaire hereby

expressly grants to NHAI the right to recover the same directly from the Escrow Account and for that purpose the Concessionaire hereby expressly authorizes NHAI and hereby gives irrevocable instructions to the Escrow Bank to make payment from the Escrow Account in accordance with the instructions of NHAI under this Clause. Upon completion of all Punch List items to the satisfaction of the Independent Consultant, the Independent Consultant shall issue the Completion Certificate to the Concessionaire after approval from NHAI. Failure to complete the Punch List items in the manner set forth in this Clause 16.5 shall entitle NHAI to Terminate this Agreement in accordance with the provisions of Clause 32.2.

16.6 If the Independent Consultant certifies to NHAI and the Concessionaire that it is unable to issue the Completion Certificate or Provisional Certificate because of events or circumstances which excuse the performance of the Concessionaire's obligations in accordance with this Agreement and as a consequence thereof the Tests could not be held or had to be suspended, the Concessionaire shall re-schedule the Tests and hold the same as soon as reasonably practicable.

16.7 Upon receipt of a report from the Independent Consultant or after conducting its own review or inspection, if NHAI is not satisfied with the results of any Tests, it shall within 7 (seven) days thereof notify the Concessionaire of its reasons to conclude that the Completion Certificate should not be issued, in which case the Concessionaire shall promptly take such action as will achieve such satisfaction. Such procedure shall be repeated as necessary after rectification and remedy of reasons/ causes by the Concessionaire on account of which the Tests were unsuccessful, until the Completion Certificate or Provisional Certificate has been issued in accordance with this Agreement by the Independent Consultant.

16.8 The Concessionaire shall bear all the expenses relating to Tests under this Agreement. Provided, however, that if the NHAI Representative requires any Test to be conducted which is not specified in this Agreement and such Test is not necessary in the opinion of the Independent Consultant, then the expenses on such Test shall be reimbursed by NHAI to the Concessionaire.

XVII. CHANGE OF SCOPE

17.1 NHAI may, notwithstanding anything to the contrary contained in this Agreement, require provision of such addition /deletion to the works and services on or about the Project Highway, during the Construction Period, which are beyond the scope of the Project as contemplated by this Agreement ("Change of Scope"), provided such changes do not require any increase/ reduction in expenditure exceeding 10 %(ten per cent) of the Total Project Cost and do not adversely affect the COD. All such changes shall be made by NHAI

by an order (the "Change of Scope Order") issued in accordance with the procedure set forth in this Article XVII.

17.2 **Procedure for Change of Scope**

(a) NHAI shall whenever it desires provision of addition/deletion of works and services referred to in Clause 17.1, issue to the Concessionaire a notice of change of scope (the "Change of Scope Notice").

(b) Upon receipt of such Change of Scope Notice, the Concessionaire shall with in 15 days provide to NHAI and the Independent Consultant such information as is necessary and reasonable together with preliminary documentation in support of the following:

(i) the impact, if any, which the Change of Scope is likely to have on the Project Completion Schedule if the work is required to be carried out before COD, and

(ii) the cost implications to the Concessionaire of complying with such Change of Scope Notice The rates shall be worked out based on the concerned State PWD (NH) current schedule of rates based on MOSRTH data book. In case an item is not covered under the above-mentioned schedule of rates, the rate of such item shall be worked out on the basis of the prevailing market rate so far as found reasonable and competitive by the IC..

(iii) the options suggested for implementing the proposed Change of Scope and the effect, if any, each such option would have on the costs and time for the implementation thereof including a detailed breakdown by work classifications. Provided, however, that the cost of providing such information shall be reimbursed to the Concessionaire by NHAI to the extent such costs are certified to be reasonable by the Independent Consultant.

(c) If NHAI desires, after receipt of information set forth in sub-clause (b) to proceed with the Change of Scope, it shall convey the desired option (with or without modification) to the Concessionaire by issuing a Change of Scope Order with in 30(Thirty) days from the date of recommendation made by Independent Consultant and thereupon the Parties shall make good faith efforts to mutually agree upon the costs and time for implementing of the same. Upon reaching an agreement relating to such costs and time, NHAI shall issue a written confirmation of the Change of Scope and thereupon the Concessionaire shall proceed with performance of such order with NHAI making monthly payments for such works based on the physical progress and as approved and certified by Independent

Consultant. In the event, the Parties are unable to agree, NHAI may, by issuing a confirmation in writing of such Change of Scope Order, require the Concessionaire to proceed with the performance of the Change in Scope Order pending resolution of such dispute.

17.3 A Change of Scope Order will be effective and binding upon issuance of a confirmation of such Change of Scope Order by NHAI. Notwithstanding a dispute regarding cost and time for implementation of such Change of Scope Order, the Concessionaire shall proceed with the performance of such Change of Scope Order promptly following NHAI's confirmation pursuant to Clause 17.2 (c). Pending resolution of such dispute, NHAI shall either pay to the Concessionaire, if the Change of Scope Order involves increase in Bill of Quantities or recover from the Concessionaire if the said Change of Scope Order involves decrease in Bill of Quantities, an amount equal to the costs that are certified by the Independent Consultant to be reasonable plus/minus (as the case may be) one-half the difference between the amount certified by the Independent Consultant and the amount claimed by the Concessionaire with final adjustments to be made, in accordance with the resolution of dispute under the Dispute Resolution Procedure. In case NHAI has to make payment it shall do so within 60 (sixty) days from the date of receipt of duly verified claims as per procedure given in this Clause. In case NHAI has to recover from the Concessionaire, the amount will be recovered directly from the Escrow Account and for that purpose the Concessionaire hereby expressly authorizes NHAI and hereby gives irrevocable instructions to Escrow Bank to make payment from the Escrow Account in accordance with instructions of NHAI under this clause.

17.4 All claims by the Concessionaire pursuant to this Article XVII shall be supported by such documentation as is reasonably sufficient for NHAI/IC to determine the accuracy thereof, including invoices from Contractors and certification of such claims by the Statutory Auditors.

17.5 NHAI may request further improvements to the Project Assets and Project Highway, subject to a limit of 20% of the Project Cost, during the Operations Period in the form of a Change of Scope order that are required to make the Project Highway comply with the latest Specifications and Standards, and other requirements set forth in this Agreement, Good Industry Practice, Applicable laws and Applicable Permits during the entire Operations Period ("Value Additions"). The cost of such Value Additions shall be borne by NHAI and such costs shall be computed and the work for such Value Additions shall be carried out in the manner as set forth in this Article 17.

XVIII. OPERATION AND MAINTENANCE

18.1 The Concessionaire shall operate and maintain the Project Highway by itself, or through O&M Contractors and if required, modify, repair, improve to the Project Highway to comply with Specifications and Standards, and other requirements set forth in this Agreement, Good Industry Practice, Applicable laws and Applicable Permits and manufacturer's guidelines and instructions with respect to toll systems, and more specifically:

(i) permitting safe, smooth and uninterrupted flow of traffic during normal operating conditions;

(ii) charging, collecting and retaining the Fees in accordance with this Agreement;

(iii) minimizing disruption to traffic 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 maintaining liaison procedures with emergency services;

(iv) undertaking routine maintenance including prompt repairs of potholes, cracks, concrete joints, drains, line marking, lighting and signage;

(v) undertaking major maintenance such as resurfacing of pavements, repairs to structures, repairs and refurbishment of tolling system and hardware and other equipment;

(vi) carrying out periodic preventive maintenance to Project Highway including tolling system;

(vii) preventing with the assistance of concerned law enforcement agencies unauthorised entry to and exit from the Project Highway;

(viii) preventing with the assistance of the concerned law enforcement agencies encroachments on the Project Highway including Site and preserve the right of way of the Project Highway;

(ix) maintaining a public relations unit to interface with and attend to suggestions from users of the Project Highway, the media, Government Agencies, and other external agencies; and

(x) adherence to the safety standards set out in Schedule 'S'.

18.2 The Concessionaire shall in consultation with the Independent Consultant prepare not later than 180 (one hundred and eighty) days before the Scheduled Project Completion Date, the repair and maintenance manual (the "Maintenance Manual") for the regular and periodic maintenance, and shall ensure and procure that at all times during the Operations Period, the Project Highway is maintained in a manner that it complies with the Specifications and Standards and the minimum maintenance requirements set forth in Schedule 'L'. The Concessionaire shall supply, at least two months before the COD, 10 (ten) copies of the Maintenance Manual to NHAI and 3 (three) copies each to Government of Kerela and Independent Consultant. Copies of the Maintenance Manual shall also be made available by the Concessionaire for public inspection during office hours at a conspicuous place adjacent to each Toll Plaza on the Project Highway.

18.3 Not later than forty five (45) days before the beginning of each Accounting Year, the Concessionaire, shall in consultation with the Independent Consultant prepare and provide to NHAI, its proposed programme of preventive and other scheduled maintenance of the Project Highway subject to the minimum maintenance requirements set forth in Maintenance Manual and in Schedule 'L' necessary to maintain the Project Highway at all times in conformity with the Specifications and Standards (the "Maintenance Programme"). Such Maintenance Programme shall include but not be limited to the following:

(i) intervals and procedures for the carrying out of inspection of all elements of the Project Highway;
(ii) criteria to be adopted for deciding maintenance needs;
(iii) preventive maintenance schedule;
(iv) intervals at which the Concessionaire shall carry out periodic maintenance;
(v) intervals for major maintenance and the scope thereof; and
(vi) lane closures schedule for each type of maintenance (length and time).

18.4 Maintenance shall include replacement of equipment/consumables, horticultural maintenance and upkeep of all Project Assets in good order and working condition. Maintenance shall not include the extension of any existing pavements, bridges, structures and other civil works unless part of the Project.

18.5 The Concessionaire shall keep the carriageways, rest areas and other Project Facilities and Toll Plazas in a clean, tidy and orderly condition free of litter and debris.

18.6 During the Operations Period, the Concessionaire shall not carry out any material modifications to the Project Highway save and except where such (i) modification is required by Good Industry Practice, or (ii) modification is necessary for the Project Highway to operate in conformity with the Specifications and Standards prescribed under this Agreement. Provided that the Concessionaire shall notify NHAI of the proposed modifications along with details thereof at least fifteen days before commencing work on such modifications and shall reasonably consider such suggestions as NHAI may make within 15 (fifteen) days of receipt of such details by NHAI.

18.7 The Concessionaire shall be responsible for the maintenance of the approach roads to and underpasses and overpasses upto 100 mtrs from the Project Highway in accordance with Good Industry Practice.

18.8 Safety, Vehicle Breakdown and Accident

18.8.1 In the case of unsafe conditions, vehicle breakdowns and accidents, the Concessionaire shall follow the relevant operating procedures, which shall include the setting up of temporary traffic cones and lights as well as the removal of obstruction and debris expeditiously. Such procedures shall be in accordance with Applicable Laws, Applicable Permits and provisions of this Agreement.

18.8.2 The Concessionaire shall ensure that any diversion or interruption of traffic is remedied without delay. The Concessionaire's responsibility for rescue operations on the Project Highway shall be limited to the removal of vehicles or debris or any other obstruction, which may endanger or interrupt the smooth traffic flow on the Project Highway.

18.8.3 The Concessionaire shall ensure that safety standards specified in Schedule 'S' are strictly complied with in the event of any lane closure or diversion of traffic. Compliance with Schedule 'S' will be monitored by the Independent Consultant and a breach by the Concessionaire of its obligations in respect of this Schedule identified by the Independent Consultant shall be notified immediately and is required to be cured within 24 hours of its notification notwithstanding inspection, reporting procedures outlined elsewhere in this Agreement. In addition, each notified breach shall lead to the award of a penalty point to the Concessionaire. A total of five penalty points in any continuous period of 365 days shall constitute a Material Breach of this Agreement.

18.9 Emergency De-commissioning

18.9.1 If, in the reasonable opinion of the Concessionaire there exists an emergency which warrants decommissioning and closure to traffic of whole or any part of the Project Highway, the Concessionaire shall be entitled to de-commission and close the whole or the relevant part of the Project Highway to traffic for so long as such emergency and the consequences thereof warrant, provided however that such emergency decommissioning will be notified to NHAI promptly. NHAI may issue directions to the Concessionaire for dealing with such situations and the Concessionaire shall abide by such directions.

18.9.2 The Concessionaire shall re-commission the Project Highway or the affected part thereof as quickly as practicable after the circumstances leading to its de-commissioning and closure have ceased to exist.

18.10 The Concessionaire shall not close any lane of the Project Highway for undertaking maintenance or repair works except with the prior written approval of the NHAI which may delegate its authority to the Independent Consultant. Such approval shall be sought by the Concessionaire through a written request to be made at least 7 (seven) days before the proposed closure of lane and shall be accompanied by particulars indicating the nature and extent of repair works, the length and section required to be closed and the period of closure. The Concessionaire shall also furnish particulars indicating the minimum time required for completing such repair works. Within 5 (five) days of receiving such request, NHAI or the Independent Consultant, as the case may be, shall grant permission with such modifications as it may deem necessary. Upon receiving such permission, the Concessionaire shall be entitled to close the lane in accordance with such permission and re-open it within the period stipulated in such permission. For any delay in re-opening such lane during the first Operations Year, the Concessionaire shall pay Damages to NHAI calculated at the rate of Rs.10,000 (Rs. Ten thousand), per day or part thereof for every stretch of 100 (one hundred) meters or part thereof in each lane until such time the stretch has been re-opened for traffic. These damages of Rs.10,000 (Rupees ten thousand) shall be applicable in the first Operations year and shall be revised by WPI in each subsequent Operations year. Provided, however, that these provisions shall not apply to Emergency decommissioning under Clause 18.9.

18.11 Save and except as otherwise be expressly provided in this Agreement, if the Project Highway including Construction Works or any part thereof shall suffer any loss or damage during the Concession Period, from any cause whatsoever, the Concessionaire shall, at its cost and expense rectify and remedy such loss or damage or forthwith in a manner so as to make the Project Highway conform in every respect to the Specifications and Standards, quality and performance as prescribed by this Agreement.

18.12 In the event the Concessionaire does not maintain and/ or repair the Project Highway or a part thereof upto and in accordance with the Specifications and Standards and/or in accordance with the Maintenance Programme or the Maintenance Manual, and shall have failed to commence remedial works within 30 (thirty) days of receipt of notice in this behalf from NHAI or the Independent Consultant, or the O&M Inspection Report, as the case may be, NHAI shall, without prejudice to its rights under this Agreement, including Termination thereof, be entitled to undertake the repair and maintenance of the Project Highway at the risk and cost of the Concessionaire and to recover the same from the Concessionaire. In addition to recovery of the aforesaid cost of repair and maintenance by NHAI, a sum equal to 25% (twenty five per cent) of such cost shall also be recovered by NHAI from the Concessionaire as Damages. NHAI shall have the right and the Concessionaire hereby expressly grants to NHAI the right to recover the same directly from the Escrow Account and for that purpose the Concessionaire hereby expressly authorises NHAI and hereby gives irrevocable instructions to the Escrow Bank to make payment from the Escrow Account in accordance with the instructions of NHAI under this Clause.

18.13 In the event NHAI does not exercise its option to undertake the required repair and maintenance after expiry of the 30 (thirty) days period stipulated in Clause 18.12 it shall recover Damages from the Concessionaire for default in operating and maintaining the Project Highway in conformity with this Agreement. Such Damages shall be payable after the aforesaid period of 30 (thirty) days and until the default is cured. The amount of Damages shall be calculated for each day of default at the higher of the following, namely (a) Rs.10,000 (Rs. Ten thousand), and (b) 0.1% (zero point one per cent) of the cost of such repair as estimated by the Independent Consultant. Recovery of such Damages shall be without prejudice to the rights of NHAI under this Agreement, including Termination thereof.

18.14 If the Concessionaire commences any works for curing any defects or deficiencies in the Project Highway, it shall complete such works expeditiously in accordance with Good Industry Practice. If such works are carried out in a manner that results in a delay of more than 30 (thirty) days as compared to the time required in accordance with Good Industry Practice, NHAI shall recover Damages from the Concessionaire as if a default had occurred under Clause 18.13.

18.15 The Concessionaire shall not be considered in breach of its obligations under this Agreement if any part of the Project Highway is not available to traffic after the COD on account of any of the following for the duration thereof:

(i) an event of Force Majeure:

(ii) measures taken to ensure the safe use of the Project Highway except when unsafe conditions on the road occurred because of failure of the Concessionaire to perform its obligations under this Agreement; or

(iii) compliance with a request from NHAI or the directions of any Governmental Agency the effect of which is to close all or any part of the Project Highway.

Notwithstanding the above, the Concessionaire shall keep all unaffected parts of the Project Highway open to traffic and use provided they can be safely operated and kept open to traffic.

XIX MONITORING AND SUPERVISION DURING OPERATION

19.1 The Concessionaire shall undertake periodic (at least once every calendar month but once every week during monsoons) inspection of the Project Highway to determine the condition of the Project Highway including its compliance or otherwise with the Maintenance Manual, the Maintenance Programme, Specifications and Standards and the maintenance required and shall submit reports of such inspection ("Maintenance Reports") to NHAI and the Independent Consultant.

19.2 The Independent Consultant shall review the Maintenance Reports and inspect the Project Highway at least once a month during the Operations Period and make out an Inspection Report of such inspection (the "O&M Inspection Report"). The Independent Consultant shall send a copy of its O&M Inspection Report to NHAI and the Concessionaire. The Concessionaire shall within 30 (thirty) days of the receipt of the O&M Inspection Report remedy the defects and deficiencies, if any, set forth in such O&M Inspection Report and submit its report in respect thereof to the Independent Consultant and NHAI within the said 30 (thirty) days period. Where the remedying of such defects or deficiencies is likely to take more than 30 (thirty) days in accordance with Good Industry Practice, the Concessionaire shall undertake the works in accordance with such practice and submit progress reports of such works every fortnight. The O&M Inspection Report may also require the Concessionaire to undertake such tests as may be specified by the Independent Consultant for the purpose of determining that the Project Highway is at all times in conformity with the Specifications and Standards. The Concessionaire shall undertake such Tests without any delay and furnish a copy of the results thereof to the Independent Consultant and NHAI along with a written statement specifying in reasonable detail the measures, if any, that it proposes to undertake for curing the defaults or deficiencies indicated in such results. Such inspection or submission of O&M Inspection Report by the

Independent Consultant or submission of O&M Inspection Compliance Report by the Concessionaire shall not relieve or absolve the Concessionaire of its obligations and liabilities hereunder in any manner whatsoever.

19.3 NHAI may inspect the Project Highway at any time for a review of the compliance by the Concessionaire with its maintenance obligations under this Agreement.

19.4 The Concessionaire shall furnish to NHAI within 7 (seven) days of completion of each calendar month during the Operations Period, a statement of Fees in the form set forth in Schedule 'M' (the "Monthly Fee Statement").

XX. INDEPENDENT CONSULTANT

20.1 NHAI shall appoint a consulting engineering firm or body corporate in accordance with the selection process set forth in Schedule 'N' to be the Independent Consultant to undertake and perform the duties, work, services and activities set forth in Schedule 'O'. In addition NHAI, at any time during the Concession Period at its own cost, may appoint a Technical Auditor in the nature of a Proof Consultant to review the work carried out by the Independent Consultant.

20.2 The appointment of the Independent Consultant pursuant to Clause 20.1 shall initially be for a period of 48 (forty eight) months from the date of its appointment. The date of such appointment shall be no later than 120 (one hundred twenty) days from the date of this Agreement. After the expiry of the aforesaid appointment, NHAI shall appoint for a term of maximum 3 (three) years as Independent Consultant such Firm as it may deem appropriate in accordance with Schedule 'N' as amended from time to time in consultation with the Concessionaire and who may or may not be the same Firm, who was Independent Consultant during the initial term. NHAI may in its discretion thereafter renew such appointment or appoint another Firm as per the provisions contained in Schedule 'N' out of the list determined pursuant to Schedule 'N', as NHAI may deem appropriate to be the Independent Consultant for a term of three years at a time.

20.3 The Independent Consultant shall report to NHAI about their work, services, and activities pursuant hereto through regular periodic reports (at least once every month) as the situation may warrant. Such report of Independent Consultant shall include but not be limited to the matters and things set forth in said Schedule 'O'.

20.4 The remuneration, cost and expenses of the Independent Consultant shall be paid by NHAI. One-half of such remuneration, cost and expenses shall be reimbursed by the

Concessionaire to NHAI within 15 (fifteen) days of receiving a statement of expenditure from NHAI. In case the Concessionaire does not reimburse the remuneration, cost and expenses of the Independent Consultant to NHAI within 15 (fifteen) days of receiving a statement of expenditure from NHAI, NHAI shall have the right and the Concessionaire hereby expressly grants to NHAI the right to recover the same directly from the Escrow Account and for that purpose the Concessionaire hereby expressly authorizes NHAI and hereby gives irrevocable instructions to the Escrow Bank to make payment from the Escrow Account in accordance with the instructions of NHAI under this Clause.

20.5 NHAI may terminate the appointment of the Independent Consultant at any time subject to appointment of their replacement by another Independent Consultant in accordance with this Article XX.

20.6 If the Concessionaire has reason to believe that the Independent Consultant is not discharging its duties in a fair, efficient and diligent manner, it may make a written representation to NHAI, stating its reasons in detail, seeking termination of the appointment of the Independent Consultant. Upon receipt of such representation, NHAI shall hold a tripartite meeting with the Concessionaire and Independent Consultant for amicable resolution of the dispute. If the dispute remains unresolved, it shall be resolved in accordance with the Dispute Resolution Procedure. In case the appointment of Independent Consultant is terminated under this Clause, it shall be replaced by another Independent Consultant in accordance with this Article XX.

20.7 If either party disputes any advice, instruction or award of the Independent Consultant, the dispute shall be resolved in accordance with the Dispute Resolution Procedure.

XXI. TRAFFIC SAMPLING

21.1 For the purpose of determination and/or verification of the actual traffic on the Project Highway, NHAI shall, in addition to inspection of Concessionaire's records, be entitled to undertake traffic sampling at such frequency and in such manner as NHAI may deem appropriate including in the manner as set forth in Schedule 'P' hereto. The Concessionaire shall provide all facilities and assistance as NHAI may reasonably require for undertaking such traffic sampling.

21.2 If the data collected from traffic sampling undertaken pursuant to Clause 21.1 demonstrates that actual traffic is more than the traffic according to the records of the Concessionaire, the actual traffic for the purposes of this Agreement shall be deemed to be the traffic as determined by such NHAI traffic sampling pursuant to this Article XXI.

21.3 The Concessionaire may, in consultation with NHAI, commission an independent agency to conduct traffic sampling under this Article. The report of such agency shall be furnished to NHAI for such use as it may deem fit.

21.4 In the event of any dispute arising as to the actual traffic on the Project Highway the same shall be resolved in accordance with the Dispute Resolution Procedure under this Agreement.

CHAPTER - V
FINANCING ARRANGEMENTS

XXII. FINANCIAL CLOSE

22.1 The Concessionaire shall provide to NHAI, a copy of the Financing Package furnished by it to the prospective Senior Lenders. As and when such Financing Package is approved by the Senior Lenders, with or without modifications, a copy of the same shall be furnished by the Concessionaire to NHAI forthwith.

22.2 Notwithstanding anything to the contrary contained in this Agreement, the Concessionaire covenants with NHAI that it shall achieve Financial Close within 180 (one hundred eighty) days from the date of this Agreement. If the Concessionaire shall fail to achieve Financial Close within the said 180 (one hundred eighty) days period, the Concessionaire shall be entitled to a further period of 180 (one hundred eighty) days subject to an advance weekly payment by the Concessionaire to NHAI of a sum of Rs.100,000 (Rupees one hundred thousand) per week or part thereof for any delay beyond the said 180 (one hundred eighty) day period, as Damages on account of such delay in achieving Financial Close within the said 180 (one hundred eighty) day period by the Concessionaire.

22.3 Notwithstanding anything to the contrary contained in this Agreement, NHAI shall be entitled to terminate this Agreement forthwith, without being liable in any manner whatsoever to the Concessionaire, by a communication in writing to the Concessionaire pursuant to Clause 32.2 if the Concessionaire shall have failed to pay in advance the Damages to NHAI under and in accordance with Clause 22.2 above.

22.4 Notwithstanding anything to the contrary contained in this Agreement, if the Financial Close shall not occur within 360 (three hundred sixty) days as set forth in Clause 22.2 above, all rights, privileges, claims and entitlements, if any, of the Concessionaire under or arising out of this Agreement shall be deemed to have been waived by and to have ceased with the concurrence of the Concessionaire, and the Concession Agreement shall be deemed to have been terminated by mutual agreement of the Parties.

22.5 Upon Termination of this Agreement under any of the above Clause 22.2, 22.3, 22.4, NHAI shall be entitled to encash the Performance Security, as the case may be, and appropriate the proceeds thereof as Damages.

XXIII. NEGATIVE GRANT/ GRANT

The Concessionaire agrees to provide to NHAI cash payment (the "Negative Grant") equal to the sum, set forth in the Bid of the Bidder and accepted by NHAI in accordance with the provisions of this Article XXIII.

23.1 The Negative Grant shall be paid by Concessionaire as proposed by the Concessionaire in its Bid as set forth below:

For Negative Grant (Rs in crores) Rs. 215.00 Crores

Concession Year	1	2	3	4	5	6	7	8	9	10	11	12	13
Negative Grant (upto 13th year of the Concession Period)	15	0	0	0	0	0	0	0	40	40	40	40	40

Negative Grant shall be paid in advance within 90 days of the commencement of the year for which it is due and payable.

23.2 Subject to provisions of the Clause 23.4, the Grant shall be applied by the Concessionaire for meeting the capital cost of the Project and shall be treated as part of the shareholders' funds ("the Equity Support").

23.3 Deleted

23.4 Deleted

23.5 Deleted

23.6 Deleted

23.7 Deleted

23.8 Deleted

XXIV. REVENUE SHORTFALL LOAN

24.1 If the Realisable Fees in any Accounting Year during the Concession Period shall fall below the Subsistence Revenue Level as a result of an Indirect Political Event, or a Political Event as set forth in Article XXIX, NHAI agrees to provide to the Concessionaire such shortfall support, by way of a loan ("Revenue Shortfall Loan") with interest thereon @ SBI PLR per annum. Provided, however, that any reserves of the Concessionaire and any sums received or likely to be received by the Concessionaire through insurance claims (except insurance payments for physical loss used to carry out requisite repairs) or payments by NHAI under Article XXIX shall first be deducted and only the balance remaining shall be disbursed as the Revenue Shortfall Loan.

24.2 For the purposes of claiming disbursements on account of Revenue Shortfall loan pursuant to Clause 24.1 above in any Accounting Year, the Concessionaire shall:

(a) Submit a detailed account of the Indirect Political Event or the Political Event, as the case may be, and its impact on total revenues of the Concessionaire as soon as feasible and submit weekly reports thereafter;

(b) Provide to NHAI, the Schedule of Debt Service Payments under the Financing Documents for the Accounting year for which Revenue Shortfall Loan are claimed;

(c) Provide to NHAI the details of O&M Expense budget for such Accounting Year and the expenditure incurred in that year out of such budget;

(d) Within 15 (fifteen) days of the close of each Accounting Year in which the shortfall referred to in Clause 24.1 shall occur, provide a certificate from the Statutory Auditors of the Concessionaire certifying the Subsistence Revenue Level, the Realisable Fees and the Revenue Shortfall Loan requirement after deducting reserves of the Concessionaire, if any; and

(e) Submit a written request to NHAI under the hands of a Director of the Concessionaire requesting for disbursement of the Revenue Shortfall Loan to the Concessionaire by payment thereof into the Escrow Account.

24.3 Upon the receipt of the request and documents as set forth in Clause 24.2 above and provided the same is not found by NHAI to be wrong or incorrect, NHAI shall disburse the Revenue Shortfall Loan within 30 days (thirty) thereof.

24.4 In the event Realisable Fees during the first six months of an Accounting Year shall fall as a result of an Indirect Political Event or a Political Event and the amount of such Realisable Fees is less than the Debt Service Payments due for the first six months of such Accounting

Year, NHAI shall upon request provide an advance to the Concessionaire for meeting the shortfall in such Debt Service Payments. For claiming such advance, the Concessionaire shall make a demand to NHAI accompanied by a certificate from the Statutory Auditors setting forth the Realisable Fees during the first six months of the Accounting Year, the reserves of the Concessionaire and the outstanding amount on account of Debt Service Payments due in the first six months of such year. The Statutory Auditors shall also certify the amount of advance required by the Concessionaire from NHAI for meeting such Debt Service Payments after deducting such Realisable Fees and the reserves of the Concessionaire. Within 15 (fifteen) days of receiving such demand, NHAI shall disburse the advance due to the Concessionaire at an interest rate equal to SBI PLR. Not later than 15 (fifteen) days after completion of such Accounting Year, the Concessionaire shall either refund such advance with interest to NHAI or adjust it against such Revenue Shortfall Loan as may be due to the Concessionaire under this Article.

24.5 The Revenue Shortfall Loan disbursed by NHAI pursuant hereto and the interest thereon shall be repaid by the Concessionaire in a sum equal to 50% (fifty per cent) of the Net Cash flow of the Concessionaire as and when made and such repayments shall be made in one or more years as necessary.

24.6 Notwithstanding anything to the contrary contained in Clause 24.5, the Concessionaire shall repay the entire Revenue Shortfall Loan and interest thereon at least two years before the expiry of the Concession Period. If any sum remains due or outstanding from the Concessionaire under this Article XXIV at any time during a period of two years preceding the Termination Date, it shall constitute a Concessionaire Event of Default under Article XXXII and NHAI shall be entitled to Terminate this Agreement under Clause 32.2.

XXV. ESCROW ACCOUNT

25.1 The Concessionaire shall within 60 days from the date of this Agreement open and establish the Escrow Account with a Bank (the "Escrow Bank") and all funds constituting the Financing Package for meeting the Total Project Cost shall be credited to such Escrow Account. During Operations Period all Fees collected by the Concessionaire from the users of the Project Highway shall be exclusively deposited therein. In addition, all Fees collected by NHAI in exercise of its rights under this Agreement during the Concession Period and all disbursements or payments by NHAI pursuant hereto shall also, subject to the rights of deductions and appropriations therefrom of NHAI under this Agreement, be deposited by NHAI in the Escrow Account.

25.2 Disbursements from Escrow Account

25.2.1 The Concessionaire shall give, at the time of the opening of the Escrow Account, irrevocable instructions by way of an Escrow Agreement substantially in form set forth in Schedule 'Q' (the "Escrow Agreement") to the Escrow Bank instructing, inter alia, that the deposits into the Escrow Account shall subject to Clause 25.2.3, be appropriated in the following order every month and if not due in a month then appropriated proportionately in such month and retained in the Escrow Account and paid out therefrom in the month when due unless otherwise expressly provided in the instruction letter:

(i) All taxes due and payable by the Concessionaire;

(ii) All expenses in connection with and relevant to the Construction of Project Highway by way of payment to the EPC Contractor and such other persons as may be specified in the Financing Documents;

(iii) O&M Expenses including Fees collection expenses incurred by the Concessionaire directly or through O&M Contractor and/or Tolling Contractor, if any, subject to the items and ceiling in respect thereof as set forth in the Financing Documents but not exceeding 1/12 (one twelth) of the annual liability on this account;

(iv) The whole of the expense on completion of Punch List items incurred by NHAI.

(v) The whole or part of the expense on repair work or O&M Expense including Fees collection expenses incurred by NHAI;

(vi) All Concession Fees and any Negative Grant due to NHAI from the Concessionaire under this Agreement;

(vii) Reimbursements of expenditure incurred by NHAI, if any, for payment of insurance premia, etc., which are otherwise Concessionaire's responsibility, on account of failure on part of the Concessionaire to keep such insurance(s) effective and in force.

(viii) Monthly proportionate provision of Debt Service Payments due in an Accounting Year and payment of Debt Service Payments in the month when due;

(ix) One-half of such remuneration, cost and expenses of the Independent Consultant in case the Concessionaire does not reimburse the remuneration, cost and expenses of the Independent Consultant to NHAI within 15 (fifteen) days of receiving a statement of expenditure from NHAI.

(x) Any payments and Damages due and payable by the Concessionaire to NHAI pursuant to this Agreement, including repayment of Revenue Shortfall Loans, recovery due to reduction in the scope of work, penalty for non completion of Punch List items, penalty for O&M expenses incurred by NHAI; and

(xi) Balance in accordance with the instructions of the Concessionaire.

25.2.2 The Concessionaire shall not in any manner modify the order of payment specified in this clause 25.2 except with the prior written approval of NHAI.

25.2.3 Deleted.

25.3 Notwithstanding anything to the contrary contained in the Escrow Agreement and subject to the provisions contained in Clauses 33.5 and Article XXXIV, upon Termination of this Agreement, all amounts standing to the credit of the Project Escrow Account shall be appropriated and dealt with in the following order:

(a) all Taxes due and payable by the Concessionaire;

(b) all Concession Fees (including Negative Grant) due and payable to NHAI under this Agreement;

(c) all accrued Debt Service Payment;

(d) any payments and Damages due and payable by the Concessionaire to NHAI pursuant to this Agreement, including Termination claims, Recovery due to reduction in Scope of Work and repayment of Revenue Shortfall Loans;

(e) all accrued O&M Expenses;

(f) any other payments required to be made under this Agreement; and balance, if any, on the instructions of the Concessionaire.

25.3.1 Not withstanding anything to the contrary contained in this agreement, any termination payments made by NHAI into the Escrow account shall not be appropriated therefrom for any purpose whatsoever, until the Vesting Certificate has been issued by NHAI. Provided, however, that this restriction shall not apply to appropriation in favour of the Senior Lenders to the extent of debt due.

25.3.2 From the date, which is two years prior to the expiry of the Concession period, a sum equal to the fees realizable during the last two years of the Concession period for a traffic volume calculated at the rate of 10,000 (ten thousand) PCUs per day per year, or, a higher sum

estimated by the Independent Consultant for renewal works, shall not withstanding anything to the contrary contained in this Agreement, be retained in the Escrow Account provided that if a Bank Guarantee of an equivalent sum in the form and content acceptable to NHAI has been furnished by the Concessionaire to NHAI, no such retention shall be made. If following the second Inspection, it is agreed or determined that no renewal works are required, then within 14 days of such agreement, 50 % of the sums thus retained shall be released from the Escrow account to the Concessionaire. Within 14 days after the issue of Vesting Certificate (in accordance with Article XXXIII of the Concession agreement) the sums thus retained shall be released from the Escrow account to the Concessionaire.

25.4 The instructions contained in the Escrow Agreement shall remain in full force and effect until the obligations set forth in Clause 25.3 have been discharged.

XXVI. STATE SUPPORT AGREEMENT

26.1 The Concessionaire acknowledges that for the performance of its obligations under this Agreement, it requires support and certain services from Government of Kerela. The nature and scope of such support and services required by the Concessionaire from Government of Kerela are fully described in the draft State Support Agreement set forth at Schedule 'R'.

26.2 The Concessionaire acknowledges its obligation to enter into the State Support Agreement and accordingly the Concessionaire agrees and undertakes to enter into at its cost and expense the State Support Agreement with NHAI and Government of Kerela substantially in form and content as set forth in Schedule 'R'.

XXVII. INSURANCE

27.1 Insurance during the Construction Period: The Concessionaire shall effect and maintain, or cause to be effected and maintained, at no cost to NHAI during the Construction Period such insurances upto such maximum sums as may be required under and in accordance with the Financing Documents, Applicable Laws and such insurance as the Concessionaire may reasonably consider necessary or desirable in accordance with Good Industry Practice, which shall include, but not limited to (a) Contractor's All Risk, including design defect, (ii) Workmen Compensation, (iii) Construction Plant and Machinery, (iv) Advance Loss of Profits and (v) Third Party Liability. The Concessionaire shall also effect and maintain such insurance as may be necessary for mitigating the risks that may devolve on NHAI as a consequence of any act of omission by the Concessionaire during the Construction Period.

27.2 Insurance during the Operations Period: Not later than 4 months prior to the anticipated Completion of the Project Highway, the Concessionaire shall obtain and maintain at no cost to NHAI during the Operations Period in respect of the Project Highway and its operations such insurance as may be required under any of the Financing Documents, Applicable Laws and such insurance as the Concessionaire may reasonably consider necessary or desirable in accordance with Good Industry Practice, including but limited to (i) Standard Fire and Special Perils, (ii) Business Interruption, (iii) General Public Liability, (iv) Construction Plant and Machinery, (v) Accident (vi) Automobile and (vii) Workmen Compensation. Provided, however, the level of insurance to be maintained after satisfaction of Senior Lenders' dues in full, shall be determined on the same principles as applicable for determining the level of Insurance prior to such date. This level shall be agreed with NHAI within 120 days of date of this Agreement.

For the sake of brevity, the aggregate of the maximum sums insured under the insurance taken out by the Concessionaire pursuant to this Article XXVII are herein referred to as the "Insurance Cover".

27.3 Evidence of Insurance Cover: All insurance obtained by the Concessionaire in accordance with this Article XXVII shall be maintained with insurer or reinsurers, and on terms consistent with Good Industry Practice. Within thirty days of obtaining any insurance cover, the Concessionaire shall furnish to NHAI, copies of certificates of insurance, copies of the insurance policies signed by an authorised representative of the insurer and copies of all premia payment receipts in respect of such insurance received from each insurance carrier, and such insurance will not be cancelled, changed or not renewed until the expiration of at least 45 (forty five) days after written notice of such cancellation, change of non-renewal has been received by NHAI.

27.4 Remedy on Failure to Insure: If the Concessionaire shall fail to effect and keep in force the insurance for which it is responsible pursuant hereto, NHAI shall have the option to keep in force any such insurance, and pay such premia and recover the costs thereof from the Concessionaire, or for the purposes of computation of payments to the Concessionaire pursuant to Article XXIX treat the insurance cover i.e. the maximum sums which such insurance was providing for had it been in force and effect as being deemed to have been received by the Concessionaire.

27.5 Waiver of Subrogation: All insurance policies supplied by the Concessionaire shall include a waiver of any right of subrogation of the insurers thereunder against, inter alia, NHAI, and its assigns, subsidiaries, affiliates, employees, insurers and underwriters and of any right of the insurers of any set-off or counterclaim or any other deduction, whether by attachment or otherwise, in respect of any liability of any such person insured under any such policy.

27.6 Concessionaire Waiver: The Concessionaire hereby further releases, assigns and waives any and all rights of recovery against, inter alia, the NHAI, and its affiliates, subsidiaries, employees, successors, permitted assigns, insurers and underwriters, which the Concessionaire may otherwise have or acquire in or from or in any way connected with any loss covered by policies of insurance maintained or required to be maintained by the Concessionaire pursuant to this Agreement (other than third party liability insurance policies) or because of deductible clauses in or inadequacy of limits of any such policies of insurance.

27.7 Application of Insurance Proceeds: The proceeds from all insurance claims, except life and injury, shall be paid to the Concessionaire by credit to the Escrow Account (unless otherwise required by the Financing Documents) who shall, subject to its obligations under the Financing Documents, and notwithstanding anything contained in Article XXV, apply such proceeds for any necessary repair, reconstruction, reinstatement, replacement, improvement, delivery or installation of the Project Highway.

XXVIII. ACCOUNTS AND AUDIT

28.1 The Concessionaire shall maintain full accounts of all Fees including Realisable Fees and other revenues derived/collected by it from and on account of use of the Project Highway and of O&M Expenses and other costs paid out of the Project Escrow Account and shall provide copies of the said accounts duly audited and certified by the Concessionaire's Statutory Auditors within 120 (one hundred twenty) days of the close of each Accounting Year to which they pertain, during the subsistence of this Agreement. Such audited accounts shall form the basis of various payments by either Party under this Agreement. The Concessionaire shall also furnish, within one week of its publication, a certified copy of the audited accounts and annual report published by the Company under the Applicable Laws.

28.2 The Concessionaire shall appoint and have during the subsistence of this Agreement as its Statutory Auditors a firm of Chartered Accountants duly licensed to practice in India out of the mutually agreed list of 10 (ten) independent and reputable firms of Chartered Accountants in India (the "List of Chartered Accountants"). The criteria for preparing the List of Chartered Accountants are set forth in Schedule 'T'. Subject to a 30 days notice to NHAI and the replacement Statutory Auditors being appointed from the List of Chartered Accountants, the Concessionaire may terminate the appointment of any Statutory Auditor appointed in accordance with this Article. The fees and expenses of the Statutory Auditors shall be borne by the Concessionaire.

28.3 On or before the fifteenth day of May each Year, the Concessionaire shall provide for the preceding Accounting Year a statement duly audited by its Statutory Auditors giving summarized vehicle/user wise information on (i) the traffic count for each category of vehicles using the Project Highway and liable for payment of Fees therefore, and (ii) Fees charged and the amount of Fees received, Realizable Fees and other revenues derived from the Project Highway and such other information as NHAI may reasonably require.

28.4 Notwithstanding anything to the contrary contained in this Agreement, NHAI shall have the right but not the obligation to appoint at its cost another firm of chartered accountants from the List of Chartered Accountants (the "Additional Auditor") to audit and verify all those matters, expense, costs, realisations and things which the Statutory Auditors of the Concessionaire, are required to do, undertake or certify pursuant to this Agreement.

28.5 Where a Grant has been provided, NHAI shall have the right to appoint for the duration of the Construction Period as Concurrent Auditor a firm of Chartered Accountants from the List of Chartered Accountants (the "Concurrent Auditor") who shall undertake concurrent audit of the Concessionaire during the Construction Period. The charges and expenses of such Concurrent Auditor shall be borne by the NHAI. After such Construction Period, NHAI may at its option have concurrent audit done at such time and for such period as NHAI may deem appropriate at its cost and expenses.

28.6 In the event of their being any difference between the finding of the Additional Auditor or the Concurrent Auditor, as the case may be, and the certification provided by the Statutory Auditors of the Concessionaire, such Auditors shall meet to resolve such differences and if they are unable to resolve the same such disputed certification shall be resolved by recourse to the Dispute Resolution Procedure.

CHAPTER – VI
FORCE MAJEURE

XXIX. FORCE MAJEURE

29.1 Force Majeure Event: As used in this Agreement, a Force Majeure Event shall mean occurrence in India of any or all of Non Political Event, Indirect Political Event and/or Political Event as defined in Clauses 29.2, 29.3, and 29.4 respectively hereinafter which prevent the Party claiming Force Majeure (the "Affected Party") from performing its obligations under this Agreement and which act or event is (i) beyond the reasonable control and not arising out of the fault of the Affected Party, (ii) the Affected Party has been unable to overcome such act or event by the exercise of due diligence and reasonable efforts, skill and care, including through expenditure of reasonable sums of money and (iii) has a Material Adverse Effect on the Project.

29.2 Non Political Force Majeure Events: For purposes of Clause 29.1 Non-Political Events shall mean one or more of the following acts or events:

(i) acts of God or events beyond the reasonable control of the Affected Party which could not reasonably have been expected to occur, exceptionally adverse weather conditions, lightning, earthquake, cyclone, flood, volcanic eruption or fire (to the extent originating from a source external to the Site or beyond design specifications for the Construction Works) or landslide;

(ii) radioactive contamination or ionizing radiation;

(iii) strikes or boycotts (other than those involving the Concessionaire, Contractors or their respective employees/ representatives or attributable to any act or omission of any of them) interrupting supplies and services to the Project Highway for a period exceeding a continuous period of 7 (seven) days in an Accounting Year, and not being an Indirect Indian Political Event set forth in Clause 29.3 hereof;

(iv) any failure or delay of a Contractor but only to the extent caused by another Non-Political Event and which does not result in any offsetting compensation being payable to the Concessionaire by or on behalf of such Contractor;

(v) Any judgement or order of any court of competent jurisdiction or statutory authority in India made against the Concessionaire in any proceedings for reasons other than failure of the Concessionaire to comply with any Applicable Law or Applicable Permits or on account of breach thereof, or of any contract, or enforcement of this Agreement or exercise of any of its rights under this Agreement by NHAI or any

judgement or order of any court of competent jurisdiction or statutory authority in India made against the NHAI in any proceedings for reasons other than failure of the NHAI to comply with any Applicable Law or Applicable Permits or on account of breach thereof, or of any contract, or enforcement of this Agreement or exercise of any of its rights under this Agreement by Concessionaire;

(vi) Any event or circumstance of a nature analogous to any of the foregoing.

29.3 Indirect Political Force Majeure Events: For purposes of Clause 29.1, Indirect Political Event shall mean one or more of the following acts or events:

(i) an act of war (whether declared or undeclared), invasion, armed conflict or act of foreign enemy, blockade, embargo, riot, insurrection, terrorist or military action, civil commotion or politically motivated sabotage which prevents collection of Fees by the Concessionaire for a period exceeding a continuous period of 7 (seven) days in an Accounting Year;

(ii) industry wide or state wide or India wide strikes or industrial action which prevent collection of Fees by the Concessionaire for a period exceeding a continuous period of 7 (seven) days in an Accounting Year; or

(iii) any public agitation which prevents collection of Fees by the Concessionaire for a period exceeding a continuous period of 7 (seven) days in an Accounting Year.

29.4 Political Force Majeure Events: For purposes of Clause 29.1, Political Event shall mean one or more of the following acts or events by or on account of GOI, NHAI, Government of Kerela or any other Governmental Agency:

(i) Change in Law, only when provisions of Article XXXVI cannot be applied;

(ii) expropriation or compulsory acquisition by any Governmental Agency of any Project Assets or rights of the Concessionaire or of the Contractors; or

(iii) unlawful or unauthorised or without jurisdiction revocation of, or refusal to renew or grant without valid cause any consent or approval required by the Concessionaire or any of the Contractors to perform their respective obligations under the Project Agreements (other than a consent the obtaining of which is Condition Precedent) provided that such delay, modification, denial, refusal or revocation did not result

from the Concessionaire's or any Contractor's inability or failure to comply with any condition relating to grant, maintenance or renewal of such consents or permits.

29.5 Effect of Force Majeure Event before Financial Close: Upon the occurrence of any Force Majeure Event prior to Financial Close as set forth in Article XXII, the following shall apply:

(a) There shall be no Termination except as provided in Clause 29.8;

(b) The date for achieving Financial Close shall be extended by the period for which such Force Majeure event shall subsist; and

(c) The Parties shall bear their respective costs and no Party shall be required to pay to the other Party any costs arising out of such Force Majeure Event.

29.6 Effect of Force Majeure Event after Financial Close: Upon occurrence of any Force Majeure Event after Financial Close, the following shall apply:

(a) There shall be no Termination of this Agreement except as provided in Clause 29.8;

(b) Where the Force Majeure Event occurs before COD, the dates set forth in the Project Completion Schedule, and the Concession Period shall be extended by the period for which such Force Majeure Event shall subsist;

(c) Where a Force Majeure Event occurs after COD, the Concessionaire shall continue to make all reasonable efforts to collect Fees, but if he is unable to collect Fees during the subsistence of such Force Majeure Event, the Concession Period shall be extended by the period for which collection of Fees remains suspended on account thereof; and

(d) Costs arising out of or concerning such Force Majeure Event shall be borne in accordance with the provisions of Clause 29.7.

29.7 Allocation of costs during subsistence of Force Majeure: Subject to the provisions of clause 29.6, upon occurrence of a Force Majeure Event after Financial Close, the costs arising out of such event shall be allocated as follows:

(a) When the Force Majeure Event is a Non Political Event, the Parties shall bear their respective costs and neither Party shall be required to pay to the other Party any costs arising out of any such Force Majeure Event;

(b) Where the Force Majeure Event is an Indirect Political Event, the costs attributable to such Force Majeure Event and directly relating to the Project (the "Force Majeure Costs") shall be borne by the Concessionaire to the extent of the Insurance Claims, and to the extent such Force Majeure Costs exceed the Insurance Claims , one half of the same to the extent actually incurred and duly certified by the statutory Auditors of Concessionaire shall be reimbursed by NHAI to the Concessionaire in one lump sum or paid in three equal annual installments with interest @ SBI PLR plus two percent; and

(c) Where the Force Majeure Event is a Political Event, the Force Majeure Costs to the extent actually incurred and certified by the Statutory Auditors of Concessionaire shall be reimbursed by NHAI to the Concessionaire in one lump sum or paid in three equal annual installments with interest @ SBI PLR plus two percent, provided that no Force Majeure Costs shall be payable by NHAI if the Concession Period is increased under Clause 29.6.

For avoidance of doubt, Force Majeure Costs shall not include loss of Fee revenues or any debt repayment obligations but shall include interest payments on such debt, O&M Expenses and all other costs directly attributable to the Force Majeure Event.

29.8 Termination Notice: If a Force Majeure Event subsists for a period of 180 (one hundred eighty) days or more within a continuous period of 365 (three hundred sixty five) days, either Party may in its sole discretion terminate this Agreement by giving 30 (thirty) days Termination Notice in writing to the other Party without being liable in any manner whatsoever, save as provided in Clause 29.9.

29.9 Termination Payment for Force Majeure Events: Upon Termination of this Agreement pursuant to Clause 29.8, Termination Payment to the Concessionaire shall be made in accordance with the following:

(a) If the Termination is on account of a Non Political Event, the Concessionaire shall be entitled to receive from NHAI by way of Termination Payment an amount equal to 90% of the Debt Due and the entire Subordinated Debt less due insurance claims, if any. Provided that in the event some insurance claims are not admitted, then 90% of such claims shall qualify for being included in the computation of Debt Due.

(b) If the Termination is on account of an Indirect Political Event, the Concessionaire shall be entitled to receive from NHAI by way of Termination Payment an amount equal to:

(i) the total Debt Due, less due insurance claims, if any. Provided, however, that if all or any of the insurance claims are not admitted and paid, then 80% (eighty per cent) of such unpaid claims shall qualify for being included in the computation of Debt Due, plus

(ii) the outstanding Subordinated Debt, plus

(iii) 110% (one hundred ten per cent) of the Equity (subscribed in cash and actually spent on the Project but excluding the amount of Equity Support referred to in Article XXIII) if such Termination occurs at any time during three years commencing from the Appointed Date and for each successive years thereafter, such amount shall be adjusted every year to fully reflect the changes in WPI during such year, and the adjusted amount so arrived at shall be reduced every year by 7.5% (seven and half per cent) per annum.

(c) If the Termination of this Agreement is on account of a Political Event, the Concessionaire shall be entitled to receive from NHAI by way of Termination Payment an amount equal to:

(i) the total Debt Due, plus

(ii) 120% (one hundred twenty per cent) of the Subordinated Debt plus

(iii) 150% (one hundred fifty per cent) of the Equity (subscribed in cash and actually spent on the Project but excluding the amount of Equity Support referred to in Article XXIII) the if such Termination occurs at any time during three years commencing from the Appointed Date and for each successive year thereafter, such amount shall be adjusted every year to fully reflect the changes in WPI during such year, and the adjusted amount so arrived at shall be reduced every year by 7.5% (seven and half per cent) per annum.

29.10 Dispute Resolution: In the event that the Parties are unable to agree in good faith about the occurrence or existence of a Force Majeure Event, such dispute shall be finally settled in accordance with the Dispute Resolution Procedure, provided however that the burden of

proof as to the occurrence or existence of such Force Majeure Event shall be upon the Party claiming relief and/or excuse on account of such Force Majeure Event.

29.11 Liability for other losses, damages etc: Save and except as expressly provided in this Article XXIX, neither Party hereto shall be liable in any manner whatsoever to the other Party in respect of any loss, damage, cost, expense, claims, demands and proceedings relating to or arising out of occurrence or existence of any Force Majeure Event or exercise of any right pursuant to this Article XXIX.

29.12 Duty to Report: The Affected Party shall discharge the following obligations in relation to reporting the occurrence of a Force Majeure Event to the other Party:

(a) The Affected Party shall not claim any relief for or in respect of a Force Majeure Event unless it shall have notified the other Party in writing of the occurrence of the Force Majeure Event as soon as reasonably practicable, and in any event within 7 (seven) days after the Affected Party knew, or ought reasonably to have known, of its occurrence and the probable material effect that the Force Majeure Event is likely to have on the performance of its obligations under this Agreement.

(b) Any notice pursuant to this Clause 29.12 shall include full particulars of:

(i) the nature and extent of each Force Majeure Event which is the subject of any claim for relief under this Article XXIX with evidence in support thereof;

(ii) the estimated duration and the effect or probable effect which such Force Majeure Event is having or will have on the Affected Party's performance of its obligations under this Agreement;

(iii) the measures which the Affected Party is taking or proposes to take, to alleviate the impact of such Force Majeure Event; and

(iv) any other information relevant to the Affected Party's claim.

(c) For so long as the Affected Party continues to claim to be affected by such Force Majeure Event, it shall provide the other Party with regular (and not less than weekly) written reports containing information as required by this Clause 29.12, and such other information as the other Party may reasonably request the Affected Party to provide.

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29.13 Excuse from performance of obligations: If the Affected Party is rendered wholly or partially unable to perform its obligations under this Agreement because of a Force Majeure Event, it shall be excused from performance of such of its obligations to the extent it is unable to perform on account of such Force Majeure Event provided that:

(a) The suspension of performance shall be of no greater scope and of no longer duration than is reasonably required by the Force Majeure Event;

(b) The Affected Party shall make all reasonable efforts to mitigate or limit damage to the other Party arising out of or as a result of the existence or occurrence of such Force Majeure Event and to cure the same with due diligence, and

(c) When the Affected Party is able to resume performance of its obligations under this Agreement, it shall give to the other Party written notice to that effect and shall promptly resume performance of its obligations hereunder.

CHAPTER – VII

SUSPENSION AND TERMINATION

XXX. MATERIAL BREACH AND SUSPENSION

30.1 If the Concessionaire shall be in Material Breach of this Agreement NHAI, shall be entitled in its sole discretion and without prejudice to its other rights and remedies under this Agreement including its right of Termination hereunder, to (i) suspend all or any of the rights of the Concessionaire under this Agreement including the Concessionaire's right to collect and appropriate all Fees and other revenues from the Project Highway, and (ii) exercise the rights of the Concessionaire under this Agreement itself or authorise any other person to exercise the same during such suspension. Such suspension by NHAI shall be by a communication in writing to the Concessionaire and shall be effective forthwith upon the issue thereof to the Concessionaire. Any Fees or revenues collected by or on behalf of NHAI during such suspension shall be deposited in the Escrow Account to the exclusion of the Concessionaire. Provided, however, that the period of such suspension under this Article XXX shall not exceed 120 (one hundred twenty) days.

30.2 Subject to clause 30.1, NHAI shall have the right to utilise the proceeds of Fees and other revenues for meeting the costs incurred by NHAI to remedy and rectify the cause of such suspension and for defraying the O&M Expenses during such suspension period. Provided, however, that if the Concessionaire is making diligent efforts to remedy and rectify such cause, then NHAI shall allow the Concessionaire reasonable time and opportunity for such remedy or rectification.

30.3 The suspension of the rights of the Concessionaire by NHAI pursuant to Clause 30.1 above shall be revoked by NHAI forthwith upon the Concessionaire having remedied the Material Breach during such suspension period to the satisfaction of NHAI unless in the meantime this Agreement has been terminated by NHAI in accordance with Article XXXII.

30.4 At any time during the period of suspension under this Article XXX, the Concessionaire may in writing notify to NHAI that it does not intend to cure the breach or default that had caused such suspension. Within 7 (seven) days of receipt of such notice, NHAI shall terminate this Agreement as if a Material Breach of this Agreement had occurred on account of a Concessionaire Event of Default.

XXXI. COMPENSATION FOR BREACH OF AGREEMENT

31.1 In the event of Concessionaire being in material default of this Agreement and such default is cured before Termination, the Concessionaire shall pay to NHAI as compensation, all

direct additional costs suffered or incurred by NHAI arising out of such material default by the Concessionaire, in one lumpsum within 30 (thirty) days of receiving the demand or at the Concessionaire's option in 3 (three) equal semi-annual installments with interest @ SBI PLR plus 2% (two per cent).

31.2 In the event of NHAI being in material default of this Agreement and such default is cured before Termination, NHAI shall pay to the Concessionaire as compensation, all direct additional costs suffered or incurred by the Concessionaire arising out of such material default by NHAI, in one lumpsum within 30 (thirty) days of receiving the demand or at NHAI's option in 3 (three) equal semi-annual installments with interest @ SBI PLR plus 2% (two per cent).

XXXII. TERMINATION

32.1 Termination for the Concessionaire Event of Default.

32.1.1 Concessionaire Event of Default

The following events shall constitute an event of default by the Concessionaire (a "Concessionaire Event of Default") unless such Concessionaire Event of Default has occurred as a result of NHAI Event of Default or a Force Majeure Event;

(1) The Concessionaire fails to achieve Financial Close in accordance with the provisions of Article XXII;

(2) The Concessionaire fails to achieve any Project milestone other than Scheduled Project Completion Date within the period set forth in Schedule 'H' and fails to cure such default within a period of 180 (one hundred and eighty) days from the date of its occurrence.

(3) The Concessionaire is in Material Breach of this Agreement;

(4) The Concessionaire commits default in complying with any of the terms and conditions of this Agreement, save and except those defaults in respect of which Cure Period has been expressly provided in this Agreement and fails to remedy or rectify the same within the period provided in a notice in this behalf from NHAI which shall:

(i) require the Concessionaire to remedy the breach or breaches referred to in

such notice within 1 (one) month (or such longer period as may be agreed by the NHAI at its absolute discretion); or

(ii) permit the Concessionaire to put forward within 15 days of such notice a reasonable programme for the remedying of the breach or breaches, such programme to specify in reasonable detail the manner in which such breach or breaches is or are proposed to be remedied and the latest date by which it is proposed that such breach or all such breaches shall be remedied.

(5) The Concessionaire creates any Encumbrance, charges or lien in favour of any person save and except as otherwise expressly permitted under Clause 35.2;

(6) The shareholding of the Consortium Members falls below the minimum prescribed under Clause 11.1 (xiii) and the Concessionaire does not suo moto cure such default within 90 (ninety) days of its occurrence;

(7) The transfer, pursuant to law of either (a) the rights and/or obligations of the Concessionaire under any of the Project Agreements, or (b) all or material part of the assets or undertaking of the Concessionaire except where such transfer in the reasonable opinion of NHAI does not affect the ability of the Concessionaire to perform, and the Concessionaire has the financial and technical capability to perform, its material obligations under the Project Agreements;

(8) A resolution is passed by the shareholders of the Concessionaire for the voluntary winding up of the Concessionaire;

(9) The Concessionaire is adjudged bankrupt or insolvent or if a trustee or receiver is appointed for the Concessionaire or for any of its property that has a material bearing on the Project;

(10) Any petition for winding up of the Concessionaire is admitted by a court of competent jurisdiction or the Concessionaire is ordered to be wound up by Court except for the purpose of amalgamation or reconstruction provided that, as part of such amalgamation or reconstruction, the property, assets and undertaking of the Concessionaire are transferred to the amalgamated or reconstructed entity and that the amalgamated or reconstructed entity has unconditionally assumed the obligations of the Concessionaire under this Agreement and the Project Agreements, and provided that:

(i) the amalgamated or reconstructed entity has the technical capability and operating experience necessary for the performance of its obligations under this Agreement and the Project Agreements;

(ii) the amalgamated or reconstructed entity has the financial standing to perform its obligations under this Agreement and the Project Agreements and has a credit worthiness at least as good as that of the Concessionaire as at the Financial Close; and

(iii) each of the Project Agreements remains in full force and effect;

(11) The Concessionaire is in Material Breach of any of the Project Agreements;

(12) An event of default of the Concessionaire under any of the Financing Documents has occurred or any of the Senior Lenders has recalled its loan under any of the Financing Documents;

(13) The Concessionaire abandons the operations of the Project Highway for more than 15 (fifteen) consecutive days without the prior consent of NHAI, provided that the Concessionaire shall be deemed not to have abandoned such operation if such abandonment was (i) as a result of Force Majeure Event and is only for the period such Force Majeure is continuing, or (ii) is on account of a breach of its obligations by NHAI.

(14) The Concessionaire repudiates this Agreement or otherwise evidences an intention not to be bound by this Agreement;

(15) The Concessionaire suffers an execution being levied on any of its assets/ equipment causing a Material Adverse Effect on the Project and allows it to be continued for a period of 15 (fifteen) days;

(16) The Concessionaire has delayed any payment that has fallen due under this Agreement if such delay exceeds 90 (ninety) days; or

(17) The Concessionaire is in breach of its obligation to repay the Revenue Shortfall Loans in accordance this Agreement.

32.1.2 Save and except as otherwise provided in Clause 32.2, and without prejudice to any other right or remedy which NHAI may have in respect thereof under this Agreement, upon the

occurrence of any breach or default by the Concessionaire under this Agreement including any Concessionaire Event of Default, NHAI shall be entitled to terminate this Agreement by a communication in writing (the "Termination Notice") to the Concessionaire if the Concessionaire has failed to cure such breach or default within the period provided for the same in this Agreement provided that before issuing the Termination Notice, NHAI shall by a notice in writing inform the Concessionaire of its intention to issue the Termination Notice (the "Preliminary Notice") and grant 15 (fifteen) days time to the Concessionaire to make its representation, if any, against such intended Termination Notice and shall after the expiry of said 15 (fifteen) day period whether or not it is in receipt of such representation, in its sole discretion issue the Termination Notice.

32.1.3 Subject to Clause 32.2, the following shall apply in respect of cure of any of the defaults and/or breaches of this Agreement.

(i) The Cure Period shall commence from the date on which a notice in writing is delivered by NHAI to the Concessionaire asking the latter to cure the breach or default specified in such notice.

(ii) The Cure Period provided in this Agreement shall not relieve the Concessionaire from liability for Damages caused by its breach or default;

(iii) The Cure Period shall not in any way be extended by any period of suspension under this Agreement;

(iv) If the cure of any breach by the Concessionaire requires any reasonable action by Concessionaire that must be approved by NHAI or the Independent Consultant hereunder the applicable Cure Period (and any liability of the Concessionaire for damages incurred) shall be extended by the period taken by NHAI or the Independent Consultant to accord their required approval.

32.2 Notwithstanding anything to the contrary contained in this Agreement, in the event of the Concessionaire being in default under any of the provisions hereof expressly providing for Termination under or in accordance with this Clause 32.2, NHAI shall be entitled to terminate this Agreement forthwith by issuing a Termination Notice to the Concessionaire and upon issue of such Termination Notice by NHAI this Agreement shall stand terminated forthwith. Provided, however, that prior to such Termination, NHAI shall by notice grant to the Concessionaire a Cure Period of one month for curing the relevant breach or default of the provisions of this Agreement.

32.3 Upon Termination by NHAI on account of occurrence of Concessionaire Event of Default during the Operations Period, the NHAI shall pay to the Concessionaire by way of Termination Payment an amount equal to 90% (ninety per cent) of the Debt Due less insurance claims, if any, provided, however, that if all or any of the insurance claims are not admitted and paid, then 80% (eighty per cent) of such unpaid claims shall qualify for being included in the computation of Debt Due.

32.4 Termination for NHAI Event of Default.

32.4.1 The Concessionaire may after giving 90 (ninety) days notice in writing to NHAI terminate this Agreement upon the occurrence and continuation of any of the following events (each a "NHAI Event of Default"), unless any such NHAI Event of Default has occurred as a result of Concessionaire Event of Default or due to a Force Majeure Event.

(1) NHAI is in breach of this Agreement and such breach has a Material Adverse Effect on the Concessionaire and NHAI has failed to cure such breach or take effective steps for curing such breach within 90 (ninety) days of receipt of notice in this behalf from the Concessionaire;

(2) NHAI repudiates this Agreement or otherwise evidences an irrevocable intention not to be bound by this Agreement;

(3) GoI or Government of Kerela or any Governmental Agency have by an act of commission or omission created circumstances that have a Material Adverse Effect on the performance of its obligations by the Concessionaire and have failed to cure the same within 90 (ninety) days of receipt of notice by NHAI in this behalf from the Concessionaire;

(4) NHAI has delayed any payment that has fallen due under this Agreement if such delay exceeds 90 (ninety) days.

32.4.2 Upon Termination by the Concessionaire on account of an NHAI Event of Default, the Concessionaire shall be entitled to receive from NHAI by way of Termination Payment a sum equal to:

(i) the total Debt Due, plus

(ii) 120% (one hundred twenty percent)the total Subordinated Debt, plus

(iii) 150% (one hundred fifty per cent) of the Equity (subscribed in cash and actually spent on the Project but excluding the amount of Equity Support referred to in

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Article XXIII) if such Termination occurs at any time during three years commencing from the Appointed Date and for each successive year thereafter, such amount shall be adjusted every year to fully reflect the changes in WPI during such year and the adjusted amount so arrived at shall be reduced every year by 7.5% (seven and a half per cent) per annum.

32.5 Upon Termination of this Agreement for any reason whatsoever, NHAI shall:

(i) take possession and control of Project Highway forthwith;

(iii) take possession and control forthwith of any materials, construction plant, implements, stores etc. on or about the Site;

(iii) restrain the Concessionaire and any person claiming through or under the Concessionaire from entering upon the Site or any part of the Project Highway; and/or

(iv) succeed upon election by NHAI without the necessity of any further action by the Concessionaire, to the interests of the Concessionaire under such of the Project Agreement as NHAI may in its discretion deem appropriate and shall upon such election be required to compensate such contractors only for compensation accruing and becoming due and payable to them under the terms of their respective Project Agreements from and after the date NHAI elects to succeed to the interests of the Concessionaire as aforesaid. All sums claimed by such Contractors as being due and owing for work and services performed or accruing on account of any act, omission or event prior to such date shall constitute debt between the Concessionaire and such Contractors and NHAI shall in no way or manner be liable or responsible for such sums.

32.6 Termination Payments: The Termination Payment pursuant to this Agreement shall become due and payable to the Concessionaire by NHAI within thirty days of a demand being made by the Concessionaire with the necessary particulars duly certified by the Statutory Auditors. If NHAI fails to disburse the full Termination Payment within 30 (thirty) days, the amount remaining unpaid shall be disbursed along with interest @ SBI PLR plus two per cent for the period of delay on such amount.

32.7 Mode of Payment: Payment of compensation of costs by NHAI pursuant to this Article XXXII shall be made by way of credit to the Escrow Account and such payment shall constitute valid discharge of NHAI's obligations for Termination Payment hereunder.

32.8 Notwithstanding anything to the contrary contained in this Agreement, any Termination pursuant to the provisions of this Agreement shall be without prejudice to accrued rights of either Party including its right to claim and recover money damages and other rights and remedies which it may have in law or contract. All rights and obligations of either Party under this Agreement, including without limitation Termination Payments and Divestment procedures, shall survive the Termination of this Agreement to the extent such survival is necessary for giving effect to such rights and obligations.

XXXIII. DIVESTMENT OF RIGHTS AND INTERESTS

33.1 Upon Termination of this Agreement, the Concessionaire shall comply with the following:

(a) notify to NHAI forthwith the location and particulars of all Project Assets;

(b) deliver forthwith actual or constructive possession of the Project Highway free and clear of all Encumbrances and execute such deeds, writings and documents as may be required by the NHAI for fully and effectively divesting the Concessionaire of all of the rights, title and interest of the Concessionaire in the Project Highway and conveying the Project Highway free of any charge or cost to NHAI; and

(c) comply with the Divestment Requirements set out in Clause 33.2.

33.2 Upon Termination of this Agreement, the Concessionaire shall comply and conform to the following Divestment Requirements in respect of the Project Highway:

(i) all Project Assets including the road, pavement, structure and equipment shall have been renewed and cured of all defects and deficiencies as necessary so that the Project Highway is compliant with the Specifications and Standards set forth in this Agreement;

(ii) all sections of each traffic lane (the "Carriageway") of the Project Highway shall have a roughness index of not more than 2500 mm per km and shall be free from defects in accordance with O&M requirements;

(iii) all lamps shall be in working condition;

(iv) the Concessionaire delivers relevant records and reports pertaining to the Project Highway and its design, engineering, construction, operation, and maintenance including all operation and maintenance records and programmes and manuals pertaining thereto and complete as built Drawings on the Divestment Date;

(v) the Concessionaire executes such deeds of conveyance, documents and other writings as the NHAI may reasonably require to convey, divest and assign all the rights, title and interest of the Concessionaire in the Project Highway free from all Encumbrances absolutely and free of any charge or tax unto the NHAI or its Nominee; and

(vi) the Concessionaire complies with all other requirements as may be prescribed under Applicable Laws to complete the divestment and assignment of all the rights, title and interest of the Concessionaire in the Project Highway free from all Encumbrances absolutely and free of any charge or tax to NHAI or its nominee.

33.3 Not earlier than 3 (three) months before the expiry of the Concession Period but not later than 30 (thirty) days before such expiry, or in the event of earlier Termination of this Agreement, immediately upon but not later than 15 (fifteen) days from the date of issue of Termination Notice, the Independent Consultant shall verify, in the presence of a representative of the Concessionaire, compliance by the Concessionaire with the Divestment Requirements set forth in Clause 33.2 in relation to the Project Highway and, if required, cause appropriate tests to be carried out at the Concessionaire's cost for determining the compliance therewith. If any shortcomings in the Divestment Requirements are found by either Party, it shall notify the other of the same and the Concessionaire shall rectify the same at its cost. The provisions of Article XXXIV shall apply mutatis mutandis in relation to repair or curing of defects under this Article XXXIII.

33.4 Upon the Concessionaire conforming to all Divestment Requirements and handing over actual or constructive possession of the Project Highway to NHAI or a person nominated by NHAI in this regard, NHAI shall issue a certificate substantially in the form set forth in Schedule 'V' (the "Vesting Certificate") within 3 months of Concessionaire conforming to all Divestment Requirements and handing over actual or constructive possession of the Project Highway to NHAI, which will have the effect of constituting evidence of divestment of all rights, title and lien in the Project Highway by the Concessionaire and their vesting in NHAI pursuant hereto. Issue of the Vesting Certificate shall not be unreasonably withheld by NHAI. The divestment of all rights, title and lien in the Project Highway shall be deemed to be complete on the date when all the Divestment Requirements have been fulfilled and Vesting Certificate has been issued, it being expressly agreed that any defect or deficiency in any Divestment Requirement shall not in any manner be construed or interpreted as restricting the exercise of any rights by NHAI or its nominee on or in respect of the Project Highway on the footing as if all Divestment Requirements have been complied with by the Concessionaire.

33.5 Notwithstanding anything to the contrary contained in this Agreement, any Termination Payments made by NHAI into the Escrow Account shall not be withdrawn therefrom for any purpose whatsoever until the Vesting Certificate has been issued by NHAI under this Article. Provided, however, that the aforesaid restriction shall not apply to withdrawals from the Escrow Account in favour of the Senior Lenders to the extent of Debt Due.

CHAPTER – VIII
MISCELLANEOUS

XXXIV. DEFECTS LIABILITY

34.1 Not less than 30 months nor more than 36 months prior to the expiry of the Concession Period, the Concessionaire and the Independent Consultant shall conduct a joint inspection (the "Initial Inspection") of the Project Highway and all Project Facilities.

34.2 Within 90 days after the completion of the Initial Inspection, the Concessionaire shall provide to the Independent Consultant a report on the condition of the Project Highway and the Project Facilities and a notice setting out the Concessionaire's proposals as to the renewal works required to comply with the Divestment Requirements.

34.3 The Independent Consultant may, within 90 days after receipt of the notice from the Concessionaire in accordance with Clause 34.2, by notice to the Concessionaire object to the proposals giving details of the grounds for such objection and shall give the Independent Consultant's proposals in respect of the renewal works.

34.4 If no agreement is reached between the Concessionaire and the Independent Consultant within 30 days of receipt of such notice, then either the Concessionaire or the Independent Consultant may refer the matter to the Disputes Resolution Procedure.

34.5 Upon agreement or determination in accordance with the Disputes Resolution Procedure, the Concessionaire shall carry out the renewal works at its own cost.

34.6 Not less than 9 months nor more than 12 months prior to the expiry of the Concession Period, the Concessionaire and the Independent Consultant shall conduct a joint inspection (the "Second Inspection") of all elements of the Project Highway and Project Facilities (whether or not the Renewal Works have been carried out).

34.7 Within 30 days after the completion of the Second Inspection, the Concessionaire shall provide to the Independent Consultant a report on the condition of the Project Highway and

Project Facilities and a notice setting out any revisions or additions to the renewal works required in order to ensure compliance with the Divestment Requirements.

34.8 The Independent Consultant may, within 30 days after receipt of the notice from the Concessionaire in accordance with Clause 34.7, by notice to the Concessionaire object to the proposed revisions giving details of the grounds for such objection and shall give the Independent Consultant's proposals in respect of such matters.

34.9 If no agreement is reached between the Concessionaire and the Independent Consultant within 30 days of receipt of such notice, then either the Concessionaire or the Independent Consultant may refer the matter to the Dispute Resolution Procedure.

34.10 Upon agreement or determination in accordance with the Disputes Resolution Procedure, the Concessionaire shall carry out the renewal works (as so revised) at its own cost.

34.11 From the date which is 2 years prior to the expiry of the Concession Period a sum equal to the Fees realisable during the last two years of the Concession Period for a traffic volume calculated at the rate of 10,000 (ten thousand) PCUs per day per year or a higher sum estimated by the Independent Consultant for Renewal Works, shall notwithstanding anything to the contrary contained in this Agreement, be retained in the Escrow Account provided that if a Bank Guarantee of an equivalent sum in the form and content acceptable to NHAI has been furnished by the Concessionaire to NHAI, no such retention shall be made.

34.12 If following the Second Inspection, it is agreed or determined that no renewal works are required, then within 14 days of such agreement, 50% of the sums retained in accordance with Clause 34.11 shall be released from the Escrow Account to the Concessionaire.

34.13 Within 14 days after the issue of the Vesting Certificate issued in accordance with Article XXXIII the sums retained in accordance with Clause 34.11 shall be released from the Escrow Account to the Concessionaire.

XXXV. ASSIGNMENTS AND CHARGES

35.1 Subject to Clauses 35.3 and 35.4, this Agreement shall not be assigned by the Concessionaire save and except with prior consent in writing of NHAI, which consent NHAI shall be entitled to decline without assigning any reason whatsoever.

35.2 Subject to Clause 35.3, the Concessionaire shall neither create nor permit to subsist any encumbrance over or otherwise transfer or dispose of all or any of its rights and benefits under this Agreement or any Project Agreements to which Concessionaire is a party except with prior consent in writing of NHAI, which consent NHAI shall be entitled to decline without assigning any reason whatsoever.

35.3 Restraint set forth in Clauses 35.1 and 35.2 shall not apply to:

(i) liens arising by operation of law (or by an agreement evidencing the same) in the ordinary course of business of the Project Highway;

(ii) mortgages/pledges/hypothecation of goods/assets other than Project Assets, and those covered by the Substitution Agreement and their related documents of title arising or created in the ordinary course of business of the Project Highway and as security only for indebtedness to the Senior Lenders under the Financing Documents and/or for working capital arrangements for the Project Highway;

(iii) assignment of rights, title and interest to or in favour of the Lenders pursuant to and in accordance with the Substitution Agreement in respect of financing by the Senior Lenders under the Financing Documents for the Project; and

(iv) liens or encumbrances required by any Applicable Law.

35.4 Senior Lenders may exercise the rights of step-in or substitution as provided in the Substitution Agreement to be entered into among the Concessionaire, NHAI and Senior Lenders in the form set forth in Schedule 'U' provided that the person substituting the Concessionaire shall be deemed to be the Concessionaire under this Agreement and shall enjoy all rights and be responsible for all obligations under this Agreement as if it were the Concessionaire, Provided, however, that in the event of such step-in or substitution, an additional Cure Period of 90 (ninety) days shall be provided by NHAI to enable the Concessionaire to cure any breach or default subsisting on the day of such step-in or substitution. Provided further that if the Senior Lenders step in to operate and manage the Concession for a period not exceeding 90 (ninety) days, their liabilities shall be restricted to the obligations relating to and arising during such 90 (ninety) days period.

35.5 Notwithstanding anything to the contrary contained in this Agreement NHAI may assign any of its rights and benefits and/or obligations under this Agreement pursuant to any direction of GOI or by operation of law or in the course of its own business.

XXXVI. CHANGE IN LAW

36.1 If as a result of Change in Law, the Concessionaire suffers an increase in costs or reduction in net after tax return or other financial burden, the aggregate financial effect of which exceeds Rs.10 million (Rupees ten million) in any Accounting Year, the Concessionaire may notify NHAI and propose amendments to this Agreement so as to put the Concessionaire in the same financial position as it would have occupied had there been no such Change in Law resulting in such cost increase, reduction in return or other financial burden as aforesaid. Upon notification by the Concessionaire as aforesaid, the Parties shall meet as soon as reasonably practicable but no later than 30 (thirty) days and either agree on amendments to this Agreement or on alternative arrangements to implement the foregoing.

Provided that if no agreement is reached as aforesaid by the Parties within 90 (ninety) days of the meeting pursuant to this Clause 36.1, the Concessionaire may by notice in writing require NHAI to pay an amount that would put the Concessionaire in the same financial position it would have occupied had there been no such Change in Law resulting in such cost increase, reduction in return or other financial burden as aforesaid. Such notice shall be accompanied by necessary particulars duly certified by the Statutory Auditors of the Concessionaire. NHAI shall make payment of such compensation within 15 (fifteen) days of receiving such notice or with interest @ SBI PLR if the payment thereof is delayed beyond such 15 (fifteen) days. If NHAI shall dispute the quantum of such compensation claim of the Concessionaire, the same shall be finally settled in accordance with the Dispute Resolution Procedure.

36.2 If as a result of Change in Law, the Concessionaire enjoys a reduction in costs or increase in net after tax return or other financial benefit, the aggregate financial effect of which exceeds Rs.10 million (Rupees ten million) in any Accounting Year, NHAI may so notify the Concessionaire and propose amendments to this Agreement so as to put the Concessionaire in the same financial position as it would have occupied had there been no such Change in Law resulting in such decreased cost, increase in return or other financial benefit as aforesaid. Upon notification by the NHAI as aforesaid, the Parties shall meet as soon as reasonably practicable but no later than 30 (thirty) days and either agree on such amendments to this Agreement or on alternative arrangements to implement the foregoing.

Provided that if no agreement is reached as aforesaid by the Parties within 90 (ninety) days of the meeting pursuant to this Clause 36.2, NHAI may by notice in writing require the Concessionaire to pay an amount that would put the Concessionaire in the same financial position it would have occupied had there been no such Change in Law resulting in such decreased cost, increase in return or other financial benefit as aforesaid. Such notice shall be

accompanied by necessary particulars duly certified by the NHAI Representative. The Concessionaire shall make such payment within 15 (fifteen) days of receiving such notice or with interest @ SBI PLR if the payment is delayed beyond such 15 (fifteen) days. If the Concessionaire shall dispute such claim of NHAI, the same shall be finally settled in accordance with the Dispute Resolution Procedure.

36.3 Notwithstanding anything to the contrary contained in this Agreement, NHAI shall not be liable to reimburse to the Concessionaire any sums on account of any Change in Taxes if the same are recoverable from the users of the Project Highway or if the aggregate financial effect of such changes in any Accounting Year is less than or equal to Rs.10 million (Rupees ten million).

XXXVII. LIABILITY AND INDEMNITY

37.1 General Indemnity

(i) The Concessionaire will indemnify, defend and hold NHAI harmless against any and all proceedings, actions and, third party claims (other than a claim by NHAI or GOI for loss, damage and expense of whatever kind and nature arising out of the design, engineering, construction, procurement, Operation and Maintenance of the Project Highway or arising out of a breach by Concessionaire of any of its obligations under this Agreement except to the extent that any such claim has arisen due to NHAI Event of Default).

(ii) NHAI will, indemnify, defend and hold harmless the Concessionaire against any and all proceedings, actions, third party claims for loss, damage and expense of whatever kind and nature arising out of defect in title and/or the rights of NHAI in the land comprised in the Site adversely affecting the performance of the Concessionaire's obligations under this Agreement and/or arising out of acts done in discharge of their lawful functions by NHAI, its Officers, servants, agents, subsidiaries and contractors ("NHAI Indemnified Persons") including NHAI Events of Default except to the extent that any such claim has arisen due to a negligent act or omission, breach of contract or breach of statutory duty on the part of the Concessionaire, its Subsidiaries, affiliates, contractors, servants or agents including due to Concessionaire Event of Default.

37.2 Without limiting the generality of Clause 37.1 the Concessionaire shall fully indemnify, save harmless and defend NHAI including its officers, servants, agents and subsidiaries from and against any and all loss and damages arising out of or with respect to (a) failure of the Concessionaire to comply with Applicable Laws and Applicable Permits, (b) payments

of taxes relating to the Concessionaire contractors, suppliers and representatives, income or other taxes required to be paid by the Concessionaire without reimbursement hereunder, or (c) non-payment of amounts due as a result of materials or services furnished to the Concessionaire or any of its Contractors which are payable by the Concessionaire or any of its contractors.

37.3 Without limiting the generality of the provisions of this Article XXXVII, the Concessionaire shall fully indemnify, save harmless and defend the NHAI indemnified Person from and against any and all damages which the NHAI Indemnified Persons may hereafter suffer, or pay by reason of any demands, claims, suits or proceedings arising out of claims of infringement of any domestic or foreign patent rights, copyrights or other intellectual property, proprietary or confidentiality rights with respect to any materials, information , design or process used by the Concessionaire or by the Concessionaire's Contractors in performing the Concessionaire's obligations or in any way incorporated in or related to the Project. If in any such suit, claim or proceedings, a temporary restraint order or preliminary injunction is granted, the Concessionaire shall make every reasonable effort, by giving a satisfactory bond or otherwise, to secure the suspension of the injunction or restraint order. If, in any such suit, claim or proceedings, the Project, or any part, thereof or comprised therein is held to constitute an infringement and its use is permanently enjoined, the Concessionaire shall promptly make every reasonable effort to secure for NHAI a licence, at no cost to NHAI, authorizing continued use of the infringing work. If the Concessionaire is unable to secure such licence within a reasonable time, the Concessionaire shall, at its own expense and without impairing the specifications and standards either replace the affected work, or part, or process thereof with non-infringing work or parts or process, or modify the same so that it becomes non-infringing.

37.4 In the event that either Party receives a claim from a third party in respect of which it is entitled to the benefit of an indemnity under this Article XXXVII (the 'Indemnified Party') it shall notify the other Party ("Indemnifying Party") within 14 (fourteen) days of receipt of the claim and shall not settle or pay the claim without the prior approval of the Indemnifying Party, such approval not to be unreasonably withheld or delayed. In the event that the Indemnifying Party wishes to contest or dispute the claim it may conduct the proceedings in the name of the Indemnified Party subject the Indemnified Party being secured against any costs involved to its reasonable satisfaction.

37.5 Defence of Claims

37.5.1 The Indemnified Party shall have the right, but not the obligation, to contest, defend and litigate any claim, action, suit or proceeding by any third party alleged or asserted against

such party in respect of, resulting from, related to or arising out of any matter for which it is entitled to be indemnified hereunder and their reasonable costs and expenses shall be indemnified by the Indemnifying Party. If the Indemnifying Party acknowledges in writing its obligation to indemnify the person indemnified in respect of loss to the full extent provided by this Article XXXVII, the Indemnifying Party shall be entitled, at its option, to assume and control the defence of such claim, action, suit or proceeding liabilities, payments and obligations at its expense and through counsel of its choice provided it gives prompt notice of its intention to do so to the Indemnified Party and reimburses the Indemnified Party for the reasonable cost and expenses incurred by the Indemnified Party prior to the assumption by the Indemnifying Party of such defence. The Indemnifying Party shall not be entitled to settle or compromise any claim, action, suit or proceeding without the prior written consent of the Indemnified Party unless the Indemnifying Party provides such security to the Indemnified Party as shall be reasonably required by the Indemnified Party to secure, the loss to be indemnified hereunder to the extent so compromised or settled.

37.5.2 If the Indemnifying Party has exercised its rights under Clause 37.4, the Indemnified Party shall not be entitled to settle or compromise any claim, action, suit or proceeding without the prior written consent of the Indemnifying Party (which consent shall not be unreasonably withheld or delayed).

37.5.3 If the Indemnifying Party exercises its rights under Clause 37.4 then the Indemnified Party shall nevertheless have the right to employ its own counsel and such counsel may participate in such action, but the fees and expenses of such counsel shall be at the expense of such Indemnified Party, when and as incurred, unless:

(i) the employment of counsel by such party has been authorised in writing by the Indemnifying Party; or

(ii) the Indemnified Party shall have reasonably concluded that there may be a conflict of interest between the Indemnifying Party and the Indemnified Party in the conduct of the defence of such action; or

(iii) the Indemnifying Party shall not in fact have employed independent counsel reasonably satisfactory to the Indemnified Party to assume the defence of such action and shall have been so notified by the Indemnified Party; or

(iv) the Indemnified Party shall have reasonably concluded and specifically notified the Indemnifying Party either:

(a) that there may be specific defences available to it which are different from or additional to those available to the Indemnifying Party; or

(b) that such claim, action, suit or proceeding involves or could have a material adverse effect upon it beyond the scope of this Agreement;

provided that if clauses (ii), (iii) or (iv) shall be applicable, counsel for the Indemnified Party shall have the right to direct the defence of such claim, action, suit or proceeding on behalf of the Indemnified Party and the reasonable fees and disbursements of such counsel shall constitute legal or other expenses hereunder.

XXXVIII. RIGHTS AND TITLE OVER THE SITE

38.1 The Concessionaire shall have exclusive rights to the use of the Site in accordance with the provisions of this Agreement and for this purpose it may regulate the entry and use of the Project Highway by third parties.

38.2 The Concessionaire shall allow access to, and use of the Site for telegraph lines, electric lines or such other public purposes as NHAI may specify. Where such access or use causes any damage to the Project Highway and consequent financial loss to the Concessionaire, it may seek compensation or damages from such user of the Site as per Applicable Laws.

38.3 The Concessionaire shall not be liable to pay any property taxes for the Site.

38.4 For the purposes of claiming tax depreciation, the property representing the capital investment made by the Concessionaire shall be deemed to be acquired and owned by the Concessionaire.

38.5 The Concessionaire shall not sublet the whole or any part of the Site save and except as may be expressly set forth in this Agreement provided however that nothing contained herein shall be construed or interpreted as restricting the right of the Concessionaire to appoint contractors for the performance of its obligations hereunder including for operation and maintenance of all or any part of the Project Highway including Project Facilities.

XXXIX. DISPUTE RESOLUTION

39.1 Amicable Resolution

(a) Save where expressly stated to the contrary in this Agreement, any dispute, difference or controversy of whatever nature howsoever arising under, out of or in

relation to this Agreement including incompletion of the Project Highway between the Parties and so notified in writing by either Party to the other (the "Dispute") in the first instance shall be attempted to be resolved amicably in accordance with the conciliation procedure set forth in Sub-clause (b) below.

(b) In the event of any Dispute between the Parties, either Party may call upon the Independent Consultant to mediate and assist the Parties in arriving at an amicable settlement thereof. Failing mediation by the Independent Consultant or without the intervention of the Independent Consultant, either Party may require such Dispute to be referred to the Chairman of NHAI and the Chairman of the Board or Directors of the Concessionaire, for the time being for amicable settlement. Upon such reference, the said two Authorities shall meet not later than 7 (seven) days of the date of such request to discuss and attempt to amicably resolve the Dispute. If such meeting does not take place within the said period or the Dispute is not amicably settled within 15 (fifteen) days of such meeting between the said two Authorities, either Party may refer the dispute to arbitration in accordance with the provisions of Clause 39.2.

(c) If the Dispute is not resolved as evidenced by the signing of the written terms of settlement within 30 (thirty) working days of the aforesaid notice in writing or such longer period as may be mutually agreed by the Parties then the provisions of Clause 39.2 shall apply.

39.2 Arbitration

39.2.1 Any Dispute, which is not resolved amicably as provided in Clause 39.1 shall be finally decided by reference to arbitration by a Board of Arbitrators, appointed pursuant to Clause 39.2.2 below. Such arbitration shall be held in accordance with the Rules of Arbitration of the Indian Council of Arbitration and shall be subject to the provisions of the Arbitration Act.

39.2.2 There shall be a Board of three arbitrators of whom each party shall select one and the third arbitrator shall be appointed in accordance with the Rules of Arbitration of the Indian Council of Arbitration.

39.2.3 The arbitrators shall issue a reasoned Award.

39.2.4 The venue of such arbitration shall be New Delhi, India.

39.3 Arbitration Awards to be Binding

39.3.1 The Concessionaire and NHAI undertake to carry out any decision or award of the arbitrators (the "Award") without delay. Awards relating to any Dispute shall be final and binding on the Parties as from the date they are made.

39.3.2 The Concessionaire and NHAI agree that an Award may be enforced against the Concessionaire and/or NHAI, as the case may be and their respective assets wherever situated.

39.3.3 This Agreement and rights and obligations of the Parties shall remain in full force and effect pending the Award in any arbitration proceeding hereunder.

XL. DISCLOSURE

40.1 The Concessionaire shall make available for inspection by members of public free of charge during normal business hours on all working days copies of this Concession Agreement, the O&M Contract, the Tolling Contract and the State Support Agreement (hereinafter collectively referred to as "Public Documents") at the Concessionaire's Site office during the subsistence of this Agreement. The Concessionaire shall prominently display at the Toll Plazas public notices about the availability of the Public Documents for inspection and shall make available upon request and payment in advance of copying charges on no profit no loss basis to members of public, copies of the said Public Documents.

XLI. REDRESSAL OF PUBLIC GRIEVANCES

41.1 The Concessionaire shall maintain a public relations office adjacent to each Toll Plaza and keep it open to public access at all times. At each such office, the Concessionaire shall open and maintain a register (the "Complaints Register") for recording of complaints by any person (the Complainant") at any time of the day. The availability of and access to such office and the Complaints Register shall be prominently displayed by the Concessionaire at each Toll Plaza so as to bring it to the attention of all persons who are entering and exiting the Project Highway.

41.2 The Complaints Register shall be securely bound and kept in proper custody at the public relations office. Each page of the Register shall be duly numbered and each complaint recorded therein shall also be duly numbered. Soon after a complaint is registered the Complainant shall be given a receipt by such office stating the date and complaint number,

which the Complainant may refer to in any subsequent correspondence or claim. The Complaints Register shall have appropriate columns including but not limited to the complaint number and date, name and address of the Complainant, the complaint and the action taken by the Concessionaire thereon.

41.3 The Concessionaire shall inspect the Complaints Register at reasonable intervals and take prompt steps for redressal of the grievances stated in each complaint. The action so taken by the Concessionaire shall be briefly noted in the 'Action taken' column of the Complaints Register and a suitable reply shall also be sent to the Complainant by post under a certificate of posting.

41.4 Within one week following the close of each calendar month, the Concessionaire shall send to NHAI a true photocopy of such pages of the Complaints Register on which any entries have been recorded of any Complaint on the Concessionaire during the course of such month. NHAI may in its discretion direct the Concessionaire to take such further reasonable action as NHAI may deem appropriate for a fair and just redressal of any grievance. Where NHAI is of the opinion that the Complainant is entitled to any further redressal or compensation beyond what the Concessionaire is willing to provide, NHAI may refer the matter to the Consumer Redressal Forum having jurisdiction for its disposal in accordance with the provisions of the Consumer Protection Act, 1986.

XLII. ADVERTISING ON THE SITE

42.1 This shall be governed by Applicable Laws, rules, regulations, guidelines and instructions of GOI, NHAI and Government Agency.

XLIII. GOVERNING LAW AND JURISDICTION

43.1 This Agreement shall be construed and interpreted in accordance with and governed by the laws of India and the Courts at New Delhi, India shall have jurisdiction over all matters arising out of or relating to this Agreement.

XLIV. MISCELANEOUS

44.1 Video Recording

During the Construction Period, the Concessionaire shall provide a video recording to NHAI every calendar quarter which will be compiled into a 3 (three) hour cassette, covering the construction of the Project Highway in that quarter. Such video recording shall be provided no later than fifteen days after the close of each quarter.

CA BOT for NSTPBOT(P) Ltd.

44.2 Waiver

(a) Waiver by either Party of any default by other Party in the observance and performance of any provision of or obligations of or under this Agreement.

(i) shall not operate or be construed as a waiver of any other or subsequent default hereof or of other provisions of or obligations under this Agreement;

(ii) shall not be effective unless it is in writing and executed by a duly authorised representative of the Party; and

(iii) shall not affect the validity or enforceability of this Agreement in any manner.

(b) Neither the failure by either Party to insist on any occasion upon the performance of the terms, conditions and provisions of this Agreement or any obligation thereunder nor time or other indulgence granted by a Party to the other Party shall be treated or deemed as waiver of such breach or acceptance of any variation or the relinquishment of any such right hereunder.

44.3 Survival

Termination of this Agreement (a) shall not relieve the Concessionaire or NHAI of any obligations hereunder which expressly or by implication survives Termination hereof, and (b) except as otherwise provided in any provision of this Agreement expressly limiting the liability of either Party, shall not relieve either Party of any obligations or liabilities for loss or damage to the other Party arising out of or caused by acts or omissions of such Party prior to the effectiveness of such Termination or arising out of such termination.

All obligations surviving the cancellation, expiration or Termination of this Agreement shall only survive for a period of 5 (five) years following the date of such Termination or expiry of this Agreement.

44.4 Entire Agreement:

The Agreement constitutes a complete and exclusive statement of the terms of the agreement between the Parties on the subject hereof and no amendment or modification hereto shall be valid and effective unless expressly previously approved in writing by NHAI and executed by the person expressly authorized by a resolution of NHAI in this behalf.

44.5 Notices

Any notice or other communication to be given by Party to the other Party under, or in connection with the matters contemplated by this Agreement shall be in writing and shall:

(a) in the case of the Concessionaire, be given by letter delivered by hand to the address given and marked for the attention of the person set out opposite the corresponding signature below or to such other address marked for such other attention as the Concessionaire may from time to time designate by notice to NHAI, provided that notices or other communications to be given to an address outside New Delhi may (if they are subsequently confirmed by sending a copy thereof by first class registered airmail or by courier) be sent by facsimile to the number as the Concessionaire may from time to time designate by notice to NHAI; and

(b) in the case of NHAI, be given by letter delivered by hand and be addressed to the Chairman, NHAI. Copies of all notices shall also be sent by facsimile and by registered acknowledgement due pre-paid post or courier. Copies of all notices shall also be sent to the NHAI Representative.

44.6 Severability

If for any reason whatever any provision of this Agreement is or becomes invalid, illegal or unenforceable or is declared by any court of competent jurisdiction or any other instrumentality to be invalid, illegal or unenforceable, the validity, legality or enforceability of the remaining provisions shall not be affected in any manner, and the Parties will negotiate in good faith with a view to agreeing one or more provisions which may be substituted for such invalid, unenforceable or illegal provisions, as nearly as is practicable to such invalid, illegal or unenforceable provision. Failure to agree upon any such provisions shall not be subject to dispute resolution under this Agreement or otherwise.

44.7 No Partnership

Nothing contained in this Agreement shall be construed or interpreted as constituting a partnership between the Parties. Neither Party shall have any authority to bind the other in any manner whatsoever.

44.8 Language

All notices required to be given by one Party to the other Party and all other communications, documentation and proceedings which are in any way relevant to this Agreement shall be in writing and in English language.

44.9 Exclusion of Implied Warranties etc.

This Agreement expressly excludes any warranty, condition or other undertaking implied at law or by custom or otherwise arising out of any other agreement between the Parties or any

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representation by either Party not contained in a binding legal agreement executed by both Parties.

44.10 Counterparts

This Agreement may be executed in two counterparts, each of which when executed and delivered shall constitute an original of this Agreement.

IN WITNESS WHEREOF THE, PARTIES HAVE EXECUTED AND DELIVERED THIS AGREEMENT AS OF THE DATE FIRST ABOVE WRITTEN

SIGNED SEALED AND DELIVERED

For and on behalf of

NATIONAL HIGHWAYS AUTHORITY OF INDIA

By Pranavant
(Signature)

प्राणवंत / PRANAVANT
महाप्रबंधक (तकनीकी) / General Manager (Tech.)
भारतीय राष्ट्रीय राजमार्ग प्राधिकरण
(National Highways Authority of India)
(सड़क परिवहन और राजमार्ग मंत्रालय)
(Ministry of Road Transport & Highways)
प्लॉट नं. 5 पर्ट 6, सैक्टर-10, द्वारका, नई दिल्ली - 75
Plot No. 5 Part 6, Sector 10, Dwarka, New Delhi - 75

In the presence of:

1. NIRMAL JIT SINGH
2. C.R MUKUNDAN

SIGNED, SEALED AND DELIVERED

For and on behalf of

Guruvayoor Infrastructure Private Limited, the by:

(Signature)

SHADAN KUMAR (Name)

(Designation)

In the presence of:

1. VIKRAM REDDY. M
2. D. Bajrang Raju

SCHEDULE-A

(SITE OF THE PROJECT)

SITE OF THE PROJECT

1. GENERAL

1.1 The Site

The Govt. of India (GoI) through Ministry of Roads & Highways (MORT&H) is contemplating to enhance the traffic capacity and safety for efficient transhipment of goods as well as passenger traffic on the heavily trafficked National Highway sections. GoI has entrusted National Highways Authority India (NHAI) with the responsibility of improving the quality highways of national importance. The project under consideration aims at developing following sections of NH-47, located in Kerala state to four lane divided carriageway standards including with strengthening of existing two lanes.

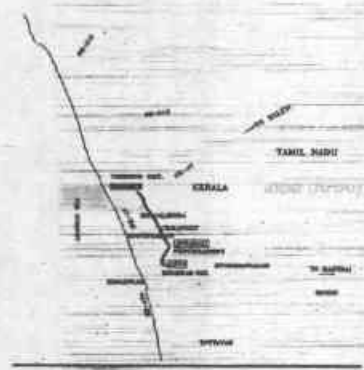


Fig A-1: Project Corridor

- In order to provide a better level of service to vehicular traffic it has been decided to augment the capacity of Thrissur-Angamali section of NH-47 (Km.270.000 to Km.316.700) by widening the existing 2-lane to 4/6 lane divided carriageway facility, including strengthening of existing 2-lane on Built, Operate and Transfer (BOT basis). This package also consists of Junction improvement at Cochi Airport (from Km.324.245 to Km.324.716), curve improvement before Marthandaverma Bridge and a 6-lane flyover at Aluva (from Km. 330.450 to Km.331.305), construction of approaches to ROB at km 320.090 on NH-47. The Index Plan of the construction package is shown in Figure A-1.

		Construction Package	Already Four Laned Section as part of package
BOT Package 14	From	270.00	316.70
	To	316.70	342.00
	Length	40.00*	25.30

* There is a missing Chainage of about 6.700 km

1.2 DISCLAIMER

The data presented below in this schedule is for an initial understanding and guidance of the concessionaire. NHAI will not be responsible for any inaccuracy in the information provided and shall not be liable for or be bound by the data used by concessionaire in evaluating the project viability. The Concessionaire will carry out his own independent surveys for assessing actual situation on the project corridor.

The Concessionaire acknowledges that prior to the execution of this Agreement, the Concessionaire has satisfied himself (based on his own independent assessment) of the data, specifications and standards, Site and all information provided by the NHAI. The Concessionaire acknowledges and accepts the difficulties, risks and hazards likely to arise or that may be faced by the Concessionaire in the course of performance of his obligations herein under.

2.0 DESCRIPTION OF PROJECT HIGHWAY

Along the corridor, existing kilometer stones are available for entire length of the project Highway. It is called existing chainage. During detailed topographic survey, observations made are referred to "design/Proposed chainage". The relationship between the old chainage and the design chainage as per field surveys shown below:

Schedule of Existing and proposed chainages (from Km 270.000 to Km 316.700)

Existing Kilometer stone (Old chainage)	Design Chainage (Km)
Km 270.000 (start of project)	Km 270.000
Km 271.000	Km 271.000
Km 272.000	Km 272.000
Km 273.000	Km 273.000
Km 274.000	Km 274.000
Km 275.000	Km 275.000
Km 276.000	Km 275.860

Km 277.000	Km 277.000
Km 278.000 *	Km 278.030
Km 285.000 *	Km 279.000
Km 286.000	Km 280.000
Km 287.000	Km 280.960
Km 288.000	Km 281.870
Km 289.000	Km 282.870
Km 290.000	Km 283.790
Km 291.000	Km 284.770
Km 292.000	Km 285.750
Km 293.000	Km 286.690
Km 294.000	Km 287.780
Km 295.000	Km 288.800
Km 296.000	Km 289.800
Km 297.000	Km 290.830
Km 298.000	Km 291.800
Km 299.000	Km 292.791
Km 300.000	Km 293.792
Km 301.000	Km 294.785
Km 302.000	Km 295.785
Km 303.000	Km 296.785
Km 304.000	Km 297.400
Km 305.000	Km 297.800
Km 306.000	Km 298.800
Km 307.000	Km 299.800
Km 308.000	Km 300.800
Km 309.000	Km 301.765
Km 310.000	Km 302.800
Km 311.000	Km 303.770
Km 312.000	Km 304.795
Km 313.000	Km 305.812
Km 314.000	Km 306.830
Km 315.000	Km 307.830
Km 316.000	Km 308.810
Km 316.700	Km 309.500 (End of project)

* Missing Km's on existing Project road between Km.278.00 and Km.285.00

2.1 ROAD INVENTORY

The project corridor completely runs in plain/ rolling terrain and crosses major and minor rivers, canals. It has a two- lane (7.0 – 7.5m) carriageway with and without paved shoulders. This corridor passes through urbanized / semi-urbanized towns and villages, and paved shoulders exist in some urbanized locations.

Table A-1: Details of existing Paved shoulders

S.No.	Chainage		Length (Km.)	Width	Side (S)
	From	To			
1	278.560	285.000 (old)	0.44	1.2 to 1.5	Both
2	286.000	287.617	1.617	1.2 to 1.5	Both
3	393.000	295.000	2.014	1.2 to 1.5	Both
4	305.000	316.700	11.7	1.2 to 2.0	Both

In general, the height of embankment varies between 0.0m-3.5m, except for bridge approaches, where embankment height is in the range of 4m- 6m. There are as many as 11 major intersections along the project corridor, of which five are of primary importance and designed as grade separated intersections. The remaining 113 minor junctions need proper junction improvement. The major junctions are :

	Existing ch.	Proposed ch.	
• Nadatara Junction	(ch.270.413)	270.400	At grade
• Puthur Junction	(ch.272.330)	272.330	Flyover
• Thrissur bypass junction	(ch.277.190)	277.180	Flyover
• Panikara junction	(ch.277.655)	277.650	Median close
• Ambalore junction	(ch.285.367)	279.370	At grade
• Pudukkad junction	(ch.286.550)	280.578	At grade
• Kodakara junction	(ch.293.1004)	287.700	Flyover
• Potta junction	(ch.299.499)	293.280	Flyover
• Chalkudy Rly. St. Road junction	(ch.302.362)	293.155	median close
• Chalkudy south junction	(ch.303.000)	296.500	Flyover
• Korutty junction	(ch.308.300)	301.125	At grade

Minor junctions on project road are needed to be improved as per IRC and MORT & H standards.

2.2 Road Geometry

The existing alignment of NH-47 mostly consists of straight reaches with mild curves except at some locations where sharp and reverse curves exist. The locations of these sharp curves are mentioned below in Table A-2

Table A-2: Locations of Poor Geometry

Sl. No.	From	To	Remarks
1	278+300	278+800	Sharp curve of radius 500m
2	280+000	281+000	Sharp S curve with radii 400m & 250m
3	281+200	281+800	Sharp S curve with radii 500m & 360m
4	282+200	282+800	Sharp S curve with radii 360m and 450m
5	287+500	288+000	Sharp curve of radius 400m
6	298+000	299+000	Sharp S curve of radii 400m & 500m
7	300+000	300+300	Sharp curve of radius 500m

2.3 Abutting land use

The major villages and towns are on the project road are

Table A-3

S. No.	Village name / District	Existing Chainage (As per Km. Stones)	
		From	To
1	Nedutara / Thrissur	270/000	272/000
2	Ollur / Thrissur	272/000	273/250
3	Marathakara / Thrissur	273/250	276/000
4	Trikkur / Thrissur	276/000	277/300
5	Namminikara / Thrissur	277/300	278/500
6	Amballur / Thrissur	278/500	286/200
7	Thorava (Puddkukkad) / Thrissur	286/200	287/800
8	Parappukara / Thrissur	287/800	290/000
9	Nellayi / Thrissur	290/000	292/800
10	Kodakara / Thrissur	292/800	298/300
11	Perambra / Thrissur	298/300	300/900
12	Potta / Thrissur	300/900	301/200
13	Kizhakke Chalakudy / Thrissur	301/200	305/000
14	Muringoor Vadakkumuri / Thrissur	305/000	307/000
15	Muringoor Thekkumuri / Thrissur	307/000	309/700
16	Kizhakkumuri / Thrissur	309/700	312/500
17	Karukutty / Ernakulam	312/500	316/300
18	Angamali / Ernakulam	316/300	316/700

The present corridor passes through semi-urban and urbanised localities. The abutting land use pattern is tabulated in Table A-4

Table A-4

Existing Kilometer stone (Old chainage)	Land use
Km 270.000 to Km 285.000	Built up area/ gardens/fields
Km 285.000 to Km 287.000	Built up area/ commercial
Km 287.000 to km 288.000	Fields/open lands
Km 288.000 to Km 291.000	Built up area
Km 291.000 to Km 293.000	Fields/open land
Km 293.000 to Km 302.000	Built up area/gardens
Km 302.000 to Km 304.000	Built up area / commercial
Km 304.000 to Km 314.000	Built up area/fields
Km 314.00 to Km 316.000	Built up area
Km 316.000 to Km 316.700	Open fields/Built up area

2.4 Drainage

Presently, the drainage facilities along the roadside are found to be very poor for the entire road stretch. The roadside drainage along the Project Highway needs improvement, predominantly in urban stretches. However, overlopping has not been reported on the corridor and most of the water bodies are in dry state.

2.5 Soil Characteristics:

The project corridor generally runs through fertile agricultural lands in the initial sections between Km. 270.00 to Km.278.500. For the most of the length soil along the corridor has been observed to be gravely soil except at few locations where soil appears to be laterite red soil in nature. This is mainly observed in urbanized localities with exposed rock crops. Quarrying operations and stone crushers have been observed at three to four locations along the corridor within a radius of five to fifteen kilometre radius.

2.6 Environment & Climate

The project corridor experiences high rainfall and the climate is humid. The mean daily maximum and minimum temperatures recorded in the vicinity of the project corridor are 42° and 18° C respectively. The air is highly humid through out the year with the relative humidity being generally around 60 to 70%.

Air quality and noise level appears to be within limits as per CPCB standards. In the immediate vicinity, no major sources (factories, power plants etc.,) were observed which might contribute to air and noise pollution.

There are no sensitive areas like forest, National Park, Sanctuary etc., in the project and its surrounding areas.

2.7 RIGHT OF WAY

There are no RoW boundary stones existing along the corridor. In most of the urban areas, properties exist adjacent to carriageway and there is no land for accommodating the proposed improvements. Information on available land width has been collected from local highways department, Govt. of Kerala. This information revealed that in general there is a land width of 25-45 available with government for most of the length. Details of available land width is as given in Table A-5.

Table A-5

Chainage	Existing right of way	Proposed right of way
Km 270.000 to Km 278.500	45 m	Min. 45 m
Km 278.500 to Km 298.400	Varies 30 to 45 m	Min. 45 m
Km 298.400 to Km 303.000	45 m	Min. 45 m
Km 303.000 to Km 316.700	Varies 24 m to 30 m	Min. 45 m

- Additional land acquisition is proposed at Toll plaza and near Junctions and for Bus stops etc.

2.8 TRAFFIC

The details of Average Daily Traffic (ADT) observed in Aug-Sept 2003 are presented in Table A-6. The traffic volume characteristics reveal that this section of NH-47 is primarily catering to the needs of goods traffic, passenger traffic as being observed that of the total PCU, share of goods traffic PCU were varying from 60% to 70%. The volume levels were observed to be varying along the corridor from about 23590 PCU to 35235 PCU, with maximum flows observed at Angamali side of the corridor.

Table A-6 Details of traffic (ADT)

Mode	At Km 270.000	At Km 314.000
2-A trucks	3159	4094
3-A trucks	669	646
MAV Articulated	20	2
MAV Semi Articulated	139	136
LCV (G)	1225	2200
Animal Drawn Vehicles	1	0
Two wheelers	3025	3192
LVC Auto	1167	538
Cycles	586	175
Van/jeep	915	2222
Cars	2240	5711
Mini Bus	47	162
Bus standard	220	1409
O-P-n MT	1	0
O-G-NMT	3	0
Total Vehicles	13677	20785
Moterised PCU's	23241	35088
Non Moterised PCU's	349	147
Total PCU's	23590	35235

2.9 Pavement Composition and Condition

Details of Existing pavement crust (Table A-7)

Sno	Test pit Reference Number	Location chainage	Bituminous course from top of pavement (in mm)			Grannular base (WBM) In mm		
			main c/w	Shoulders	Remarks	main c/w	shoulders	Remarks
1	TP-2-1	270.000	170		unpaved .S.	220	Gravel	
2	TP-2-2	272.000	220		unpaved .S.	220	Gravel	
3	TP-2-3	274.000	230		unpaved .S.	220	Gravel	
4	TP-2-4	276.000	190		unpaved .S.	230	Gravel	
5	TP-2-5	278.000	180		unpaved .S.	150	Gravel	
6	TP-2-6	286.000	260	80	Paved Sho	200	160+60	Soling+WBM
7	TP-2-7	289.150	250		unpaved .S.	280	200+200	Gravel+WBM
8	TP-2-8	291.000	270		unpaved .S.	200	120+200	Gravel+WBM
9	TP-2-9	293.000	300	70	Paved Sho	250	200	
10	TP-2-10	295.000	250		unpaved .S.	280	Gravel	
11	TP-2-11	297.000	230		unpaved .S.	210	Gravel	
12	TP-2-12	299.000	280		unpaved .S.	200	150+170	Gravel+WBM
13	TP-2-13	301.000	200		unpaved .S.	330	Gravel	
14	TP-2-14	308.000	250	50	Paved Sho	180	140	
15	TP-1-16	309.050	200	80	Paved Sho	170	100	
16	TP-2-15	310.000	200	80	Paved Sho	130	100	
17	TP-2-16	312.000	250	30	Paved Sho	230	100	
18	TP-2-17	314.000	300	80	Paved Sho	280	220	
19	TP-2-18	316.000	300	80	Paved Sho	230	190	
20	TP-1-1	271.000	230		unpaved .S.	230	Gravel	
21	TP-1-2	273.000	230		unpaved .S.	230	Gravel	
22	TP-1-3	275.000	200		unpaved .S.	200	Gravel	
23	TP-1-4	277.000	220		unpaved .S.	200	Gravel	
24	TP-1-5	285.000	230	80	Paved Sho	250	160+60	Soling+WBM
25	TP-1-6	288.000	200	80	Paved Sho	300	160+60	Soling+WBM
26	TP-1-7	290.000	300		unpaved .S.	300	120+200	Gravel+WBM
27	TP-1-8	292.000	250		unpaved .S.	300	120+200	Gravel+WBM
28	TP-1-9	294.000	250	70	Paved Sho	300	200	
29	TP-1-10	296.000	250		unpaved .S.	230	Gravel	
30	TP-1-11	298.000	250		unpaved .S.	230	Gravel	
31	TP-1-12	300.000	200		unpaved .S.	200	Gravel	
32	TP-1-13	302.050	200		unpaved .S.	230	Gravel	
33	TP-1-14	305.433	310	160	Paved Sho	300	150	
34	TP-1-15	307.050	250	50	Paved Sho	180	140	
35	TP-1-16	309.050	200	80	Paved Sho	170	100	
36	TP-1-17	311.200	240	30	Paved Sho	150	100	Gravel+WBM
37	TP-1-18	313.000	140	80	Paved Sho	230	220	
38	TP-1-19	315.000	240	80	Paved Sho	240	220	
39	TP-1-20	316.500	300	80	Paved Sho	230	190	

Table A-8: Variation of Pavement Distress along the Project Corridor

Range Of Distress in % Area	Length in Kilometre			
	Total Cracking	Patching	Ravelling	Total Distress
>50 %	1.00	0.00	6.00	0.00
30 - 50%	2.00	0.00	5.00	0.00
15 - 30%	15.00	0.00	3.00	0.00
5 - 15%	7.00	0.00	7.00	0.00
<= 5%	15.00	40.00	19.00	40.00
Total	40.00 Km	40.00 Km	40.00 Km	40.00 Km

The Project corridor has fair riding surface for most of its length. Average IRI values along the corridor were grouped in to four categories as shown in Table A-9.

Table – A-9: Roughness Values along the Project Highway

Section	IRI (m/Km)
Km.270.00 to Km.277.200	2.48
Km.277.200 to Km.287.000	2.95
Km.287.000 to Km.305.000	3.34
Km.305.000 to Km.316.700	3.56

2.10 CROSS DRAINAGE STRUCTURES

Culverts

There are 41 Nos. of slab culverts, 50 Nos. of Box culverts and 9 Nos. of pipe culverts and 2 Nos. of 2 x 6m twin cell box culverts exist on the project corridor. These are in fairly good condition and hydraulically adequate except one number culvert (i.e. at Ch. Km.308.800) which is proposed for reconstruction. The spans of culverts varies from 0.9m to 4.0m and dia of pipe culvert varies from 0.75m to 1.0m.

The culverts proposed for widening to suit to 6 laning requirement with same span arrangement. The existing slab culverts are also proposed for widening with Box type culverts with same clear span. The existing Pipe culverts are extended with same configuration as Pipe culverts.

Table – A-10: Summary of Inventory of Major and Minor Bridges

Superstructure Type	Major Bridge	Minor Bridge	Total
T-Girder	2	1	3

T-Beam	1	2	3

Table – A-11: Summary of Box Slab Culverts on NH-47

Superstructure Type	Span (range) (m)		Total
	From	To	
Slab Culverts	0.9m	4.00 m	41
Box Culverts			50

Table – A-12: Summary of Pipe Culverts on NH-47

Pipe Culverts No	Dia Range Minor Bridge	
	From	To
9	0.75m	1.00m

Bridges and structures

Major bridges 3 Nos.

Minor bridges 3 Nos.

All the existing bridges are hydraulically adequate, it is proposed to retain all the bridges with minor repairs / rehabilitation works.

All the proposed bridges will be with 3 lane c/w with one side foot path span arrangement in line with the existing bridges.

The condition of wearing coat of major bridge is poor. Drainage spouts are choked which might lead to accumulation of water on bridge deck, consequently concrete wearing coat has been cracked. The bearings used in the major bridge are of elastomeric type, and the expansion joints are in poor condition. The condition of minor bridges is generally fair to good. General distress in minor bridges is damaged railing and expansion joints, choked drainage spouts, damaged cantilever portion of deck slab etc. Table A-11, A-12 shows the existing details of major and minor bridges.

Table A-13: Existing structural details of Major Bridges

Sl. No.	Structure Ch.	Name of structures	Year of construction	Span (m) C/C Expansion joint	Total Length (m)	Total Width (m)	Opening Height (m)	Road Level from Bed (m)	HFL / FSL from Bed (Local Enquire)	U/S on increasing direction	Super structure		Sub structure	
											Type	Material	Type	Material
1	287.586	Kurumali	1972	20.5+21.0+20.5	62.0	10.9	8.8	10.8	5.12	Right	T-girder	RCC	wall	PCC
2	304.19	Chalkudy Bridge	1972	7 x20.5	143.5	10.9	16.24	18.24	8.8	Right	T-girder	RCC	wall	PCC
3	316.3	Kothakulangara	1973	3 x 6.62	79.86	10.9	7.76	10.26	3.3	Right	T-beam	RCC	wall	PCC

Table A-14: Existing structural details of Minor Bridges

Sl. No.	Structure Ch.	Name of structures	Span (m) C/C Expansion joint	Total Length (m)	Total Width (m)	Opening Height (m)	Super structure		Sub structure	
							Type	Material	Type	Material
1	278+525	Manali Bridge	8.29+22.79 +8.29	39.37	10.9	7.2	T-girder	RCC	Wall	PCC
2	292+20	Tadam Bridge	13.2	13.2	10.9	3.8	T-beam	RCC	Wall	PCC
3	309.84	Korutty Bridge	13.1	13.1	10.9	4.1	T-beam	RCC	Wall	PCC

3.0 EXISTING FACILITIES

Though there are number of bus stops along the Project Highway, no bus bays and bus shelters have been provided.

Apart from the above, number of dhabas, petrol pumps, vehicle repair shops, telephone booths etc. have come up along the project corridor.

SCHEDULE B

(SCOPE OF THE PROJECT)

SCOPE OF THE PROJECT

1. GENERAL

The following sections of this schedule briefly highlight the scope of the work of the Project Highway for the information of the Concessionaire. The description of the requirements for the various elements of the Project Highway given herein under are the bare minimum requirements that the Concessionaire needs to undertake/provide for improvement of the same.

Apart from the scope of work of the project highway pertaining to construction package from 270.000 KM to 316.7000 KM the following scope of work shall be considered as part of BOT Package 14:

- Junction improvement at Airport
- Curve improvement before Marthandverma bridge
- 6-Lane Flyover at Aluva Junction
- Construction of approaches to ROB at km 320.090

The designs for different project facilities shall follow the locations and indicative designs given in Schedule C and shall comply with design, specifications and standards outlined in Schedule D. The maintenance of the different elements of Project Highway and facilities thereon shall follow the minimum maintenance requirements as described in Schedule L. All the designs and drawings shall be reviewed by the Independent Consultant prior to execution.

2. CORE CONSTRUCTION REQUIREMENT

In the planning, design and execution of the works and other works in connection with the repair, maintenance or improvement of the Project Highway and functions associated with the construction of the Project Highway and roadside facilities, the Concessionaire shall take all such actions and do all such things (including, but not limiting to, organizing itself, adopting measures and standards, executing procedures, including inspection procedures and highway patrols, and engaging and managing contractors, agents and employees) as will :

a. enable the NHAI to provide an acceptably safe highway in respect of its condition (structural safety) and use (road safety); and

b. enable the NHAI to fulfil its statutory and common law obligations; and

c. enable the NHAI to provide a congestion free uninterrupted flow of traffic on the Project Highway;

d. enable the NHAI to provide a level of highway service to the public not inferior to that provided on the trunk road during construction or improvement works;

e. enable the police, local authorities, and others with statutory duties or functions in relation to the Project Highway or adjoining roads to fulfil those duties and functions;

f. minimise the occurrence and adverse effects of accidents and ensure that all accidents and emergencies are responded to as quickly as possible;

g. minimise the risk of damage, destruction or disturbance to third party property

h. ensure that members of the public are treated with all due courtesy and consideration;

i. provide a safe, clear and informative system of road signs;

j. comply with any specified programme requirements, including for the completion of the new road;

k. enable standards of reliability, durability, accessibility, maintainability, quality control and assurance, and fitness for purpose appropriate to a highway of the character of the Project Highway to be achieved throughout the Contract Period;

l. ensure adequate off-street parking facilities for both passenger and goods vehicles;

m. provide adequate bus bays for stopping of buses and bus shelters for commuters to wait under protection; and

n. achieve a high standard in the appearance and aesthetic quality of the Project Highway and achieve integration of the Project Highway with the character of the surrounding landscape through both sensitive design and sensitive management of all visible elements including those on the existing road.

o. undertake proper safety audit through an appropriate consultant (i.e. apart from the Independent Consultant) before C.O.D.

p. carry out accident recording and reporting (to IC/NHAI) by type on regular basis.

q. ensure adequate safety of the Project Workers on the work site.

3. Cross Sections

The Project Highway shall be widened to have a 4/6 lane divided carriageway facility. Table B-1 indicates the location of different types of road cross sections, which shall be followed along with the minimum construction criterion, mentioned below for the development of the Project Highway.

Table : B-1 Type of road cross sections

Sl. No.	Design Chainage from	to	Length (m)	Type of cross section	Remarks
1	270+000	270+100	100	A	
2	270+100	270+200	100	A to B	
3	270+200	270+600	400	B	
4	270+600	270+700	100	B to A	
5	270+700	271+550	850	A	
6	271+550	271+650	100	A to B	
7	271+650	271+800	150	B	
8	271+800	273+000	1200	Flyover c/s	Putthur Flyover
9	273+000	273+050	50	B	
10	273+050	273+150	100	B to A	
11	273+150	274+800	1650	A	
12	274+800	274+900	100	A to B	
13	274+900	275+750	850	B	
14	275+750	275+850	100	B to A	
15	275+850	276+575	725	A	
16	276+575	276+675	100	A to B	
17	276+675	276+750	75	B	
18	276+750	277+600	850	Flyover c/s	Thrissur Bypass end
19	277+600	281+100	3500	D	
20	281+100	281+200	100	D to A	
21	281+200	282+400	1200	A	
22	282+400	282+550	150	E	
23	282+550	282+650	100	E to B	
24	282+650	284+700	2050	B	
25	284+700	284+800	100	B to A	
26	284+800	285+700	900	A	
27	285+700	286+450	750	E	
28	286+450	286+800	350	A	
29	286+800	286+900	100	A to B	
30	286+900	287+225	325	B	
31	287+225	288+100	875	Flyover c/s	Kodakara Flyover
32	288+100	291+700	3600	B	
33	291+700	291+800	100	B to A	
34	291+800	292+750	950	A	
35	292+750	294+100	1350	Flyover c/s	Potta Flyover
36	294+100	296+000	1900	B	
37	296+000	296+350	350	C	
38	296+350	297+300	950	Flyover c/s	Chalakudi Flyover
39	297+300	298+100	800	A	
40	298+100	298+200	100	A to B	
41	298+200	298+650	450	Flyover c/s	Muringur Underpass
42	298+650	299+350	700	B	
43	299+350	299+450	100	B to A	
44	299+450	300+800	1350	A	

45	300+800	300+900	100	A to B	
46	300+900	301+500	600	B	
47	301+500	301+600	100	B to A	
48	301+600	301+700	100	A	
49	301+700	302+800	1100	E	
50	302+800	302+900	100	E to B	
51	302+900	306+100	3200	B	
52	306+100	306+800	700	C	
53	306+800	308+700	1900	B	
54	308+700	308+800	100	B to A	
55	308+800	309+675	875	A	

Note: The extent of cross section type is indicative and shall be reviewed in consultation with the Independent Consultant at the time of construction as per the site condition.

Figure B-1 to Figure B-5 presents the typical cross sections that shall be followed for the improvement of the Project Corridor

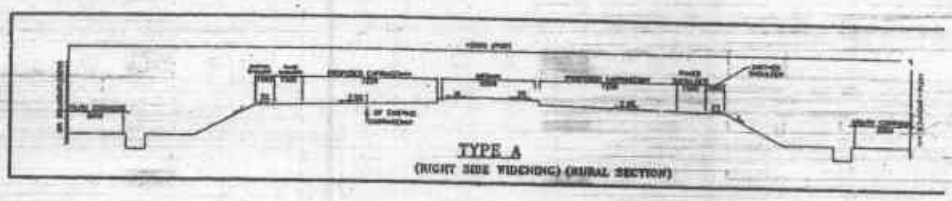
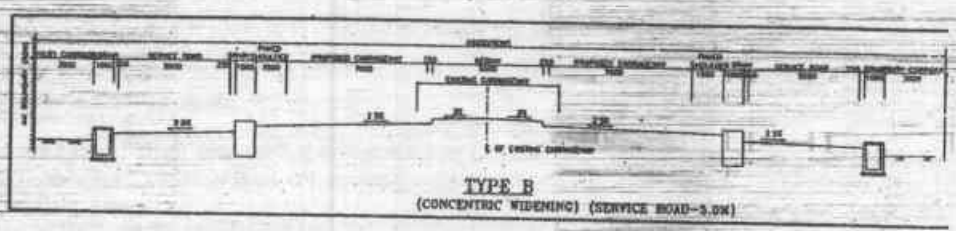


Fig: B-1



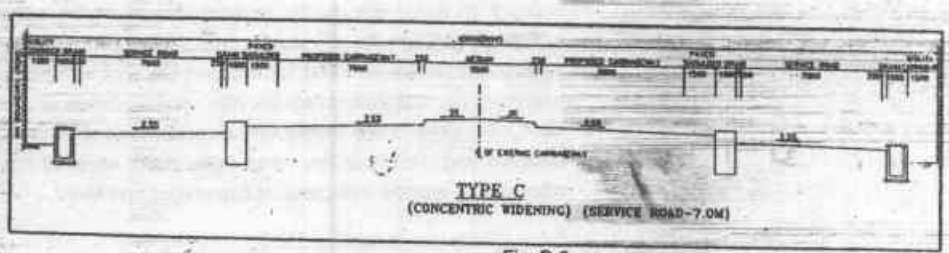


Fig: B-3

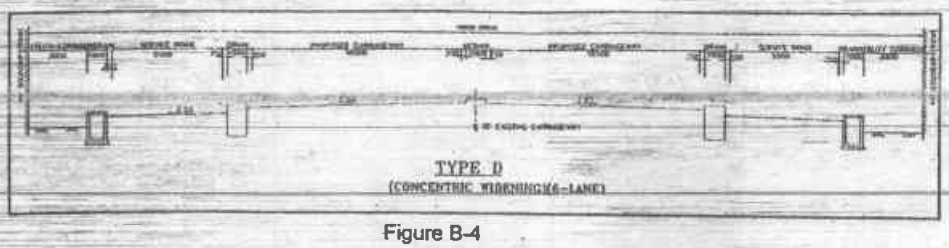


Figure B-4

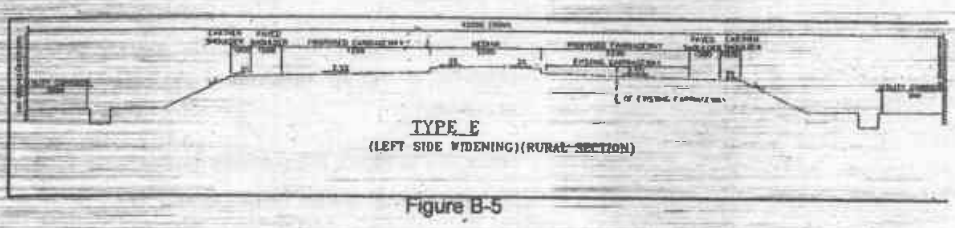
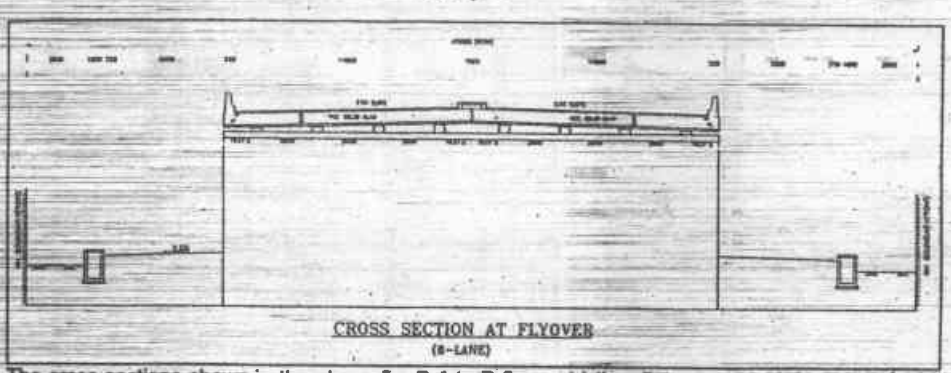


Figure B-5



The cross sections shown in the above fig. B-1 to B-5 are strictly adhere to except the location of flyovers and underpasses. For such locations cross section shown in Fig. 6 shall be used.

The utility services, including optical fibre cables, shall be provided in the utility corridor on the side where it is convenient to the Concessionaire or the concerned Authority with the approval of Independent Consultant/NHAI. In urban sections the utility services shall be provided through underground ducts provided for this purpose. For cross connection it shall be carried through the nearest cross drainage structure/cattle crossing below its deck slab and above HFL. In absence of such a structure in the vicinity of the locations, it shall pass through separate underground ducts. Location and design of the cross utility ducts shall be finalized at the detailed design stage in consonance with the Independent Consultant and NHAI.

Geometric Improvement

- Special attention shall be given while designing the centre line to ensure that the existing trees with large girth along the Project Highway are saved as far as possible.
- The flat gradients shall be corrected in such a way so as to attain an appropriate longitudinal gradient in order to achieve longitudinal drainage. Also, vertical curves

shall be improved/introduced so that the vertical curves meet IRC 73-1980 standards.

- The horizontal alignment along the Project Highway shall be improved as per the standards set out in Schedule D
- Kinks and sharp curves mentioned in the Schedule-A, in the horizontal alignment shall be eliminated.

5. Service Roads

Service roads of 5.5 m wide on either side of proposed 4/6 lane c/w have been provided in urban/semi urbanized zones on the project road. The total service road length on the project road is around 27 km.

A service road width of 7 m has been provided at existing Kerala Govt. check posts in between km 313.280 to 313.980 (cont. chainages). Also, a service road of 7 m has been provided at chalkudy railway station junction zone.

Table B-2: Location of Service road zones in the project road

Name of village	Chainage	Width of service road in m
Nadathara	Km 270.200 to Km 270.600	5.0m
Ollur	Km 271.650 to Km 273.175	5.0m
Marathakara	Km 274.900 to Km 275.850	5.0m
Trikkur	Km 276.815 to Km 277.725	5.0m
Namminikara	Km 278.925 to Km 287.136	5.0m
Ambalfur, Pudukkadu	Km 288.765 to Km 292.000	5.0m
Parappukara, Nellayi	Km 293.206 to Km 297.857	5.0m
Kodakara	Km 299.029 to Km 302.209	5.0m
Koorumbra, Potta	Km 302.509 to Km 304..000	7.0m
Chalakke chalakudy	Km 305.330 to Km 306.544	5.0m
Kodungur vadakkumuri	Km 308.100 to Km 308.624	5.0m
Kodungur thekkumuri	Km 310.100 to Km 312.000	5.0m
Thekkumuri, Korutty	Km 312.800 to Km 313.286	5.0m
Korutty	Km 313.286 to Km 314.000	7.0m
Korutty	Km 314.000 to Km 316.000	5.0m

Bypass Candidates-Nil

7.1General

The detailed pavement design including overlay and pavement characteristics requirements of the Project Highway and that of the service roads in Urban Sections shall be done in accordance with Schedule D. Pavement will be flexible for new two lanes, paved shoulders, service roads, truck lay bys, rest area, way side amenity complex and for cross roads up to 100 m beyond Row limit and Rigid at Toll Plaza Location.

Table B-3: Tentative Locations of Pavement Reconstruction Stretches

Nil

In general the existing pavement appears to be in good condition and doesn't require re-construction. However, any location on the project highway found to require reconstruction it shall be finalized in consultation with IC at the time of execution.

7.2 Pavement composition for new construction/Realignment

The minimum composition of the new flexible pavement shall be as shown in Table B-3 below for a subgrade strength of 8% CBR (4-day soaked value) at 97% Modified Proctor Density. The indicated pavement composition is for the purpose of bidding only. Any additional thickness in the design over that indicated in the bidding documents shall not constitute a change in scope of work, nor qualify for a variation order.

Table B-4: Composition of Flexible Pavement

Designation of the Pavement Layer	Main Carriageway (Traffic 100 msa)
Bituminous Concrete (BC/AC)	50
Dense bituminous macadam (DBM)	100
Bituminous Macadam (BM)	75
Wet mix macadam (WMM)	250
Granular Sub-base (GSB)	225
Selected Subgrade	500

7.3 Strengthening of the existing flexible pavement

Strengthening of the existing flexible pavement shall not be less than 50mm Bituminous Macadam plus 75 mm Dense Bituminous Macadam (DBM) and 50mm bituminous concrete over profile corrective course. If the required thickness is more than 150 mm, profile corrective course can be laid with granular+ bituminous layer by completely removing the existing bituminous layer. No grooving and furrowing techniques shall be adopted for laying granular layer on existing bituminous layer.

If the Concessionaire desires to use geo-synthetics as part of strengthening of the existing carriageway, the same shall be finalized in consultation with IC before execution of work. The above-prescribed minimum thickness for overlay shall be laid even with such special provisions.

Composition of profile corrective course shall be as follows.

If the level difference between the underside of total overlay thickness and existing centre line level is:

i) Up to 150 mm – PCC is by BM

ii) More than 150 mm and up to 300 mm - Dismantle the existing bituminous course and provide 75mm BM+ rest with WMM as PCC

iii) More than 300 mm and up to 500 mm- Dismantle the existing bituminous course and Provide 75mm BM+ 250mm WMM + Remaining with GSB (min. 100mm) as PCC

iv) More than 500 mm – Reconstruction with new carriageway pavement thickness with dismantling of existing pavement to requisite depth

v) More than 1600mm- Reconstruction with new carriageway pavement thickness without dismantling the existing bituminous course

7.4 Paved Shoulder composition

The paved shoulder shall be designed as an integral part of the pavement for the main carriageway. Therefore the total pavement thickness in the paved shoulder shall be the same as in the carriageway

7.5 Pavement Composition for Service Road/Slip Road

The minimum pavement thickness for service Roads shall be as follows

Table B-5: Composition of Flexible Pavement for Service Road/Slip road

Designation of the Pavement Layer	Service road
Semi dense Bituminous Concrete (SDBC)	25
Bituminous Macadam (BM)	75

Wet mix macadam (WMM)	250
Granular Sub-base (GSB)	200
Selected Subgrade	500

7.6 Rigid Pavement Design

The minimum pavement composition of the Rigid Pavement for toll plaza shall be, over a 500mm subgrade of 10% CBR value for a design life of 30 years shall include the following:

300 mm	Pavement Quality Concrete (PQC-M-40)
100 mm	Dry Lean Concrete (DLC) [M-10]
150 mm	Granular Sub base (GSB)

7.7 Joints

Expansion & Contraction joints with dowel and tie bars shall be designed & provided in consultation with IC.

8. Intersections

The major and minor intersections mentioned in Table B-6 & B-7 shall be designed individually in accordance with standards mentioned in Schedule-D. Improvement for the intersections shall be done according to the type designs or the Concessionaire in consultation with the Independent Consultant shall decide the treatment at these intersections.

There are about 12 major intersections and 111 minor intersections as detailed below in Table-B6 & Table –B7.

The Concessionaire shall take up 'Detailed Engineering Study' to ascertain further details of all intersections based on type designs and the treatment for these intersections shall be designed in accordance with the latest IRC/ MORT &H guidelines spelt out in Schedule-D.

Table: B-6: Major intersections

S. No.	Name of the Junction	Chainages (proposed)	Type of Intersection
1	Nadathara Junction	(ch. 270.413)	At grade (signalised)
2	Puthur Junction	(ch. 272.330)	Flyover
3	Thrissur bypass junction	(ch. 277.190)	Flyover
4	Panikara junction	(ch.277.655)	Median closed
5	Ambalore junction	(ch. 285.367)	At grade
6	Pudukkad junction	(ch. 286.550)	At grade
7	Kodakara Junction (main)	(ch. 294.004)	Flyover
8	Potta Junction	(ch.299.499)	Flyover
9	Chalkudy Rly stn. Road junction	(ch.302.362)	Median closed
10	Chalkudy south junction	(ch 303.000)	Flyover
11	Korutty junction	(ch.308.300)	At grade

Junction Improvement at Air Port :- It is proposed to improve the junction at Km 324.245 to 324.716 as per the DPR Drg. No. MELTECH/NH47/AIR/001, 002. However the detailed designs and alignment and improvement may be finalised in consultation with IC.

Flyover at Aluva: It is proposed to construct a 6-lane flyover at Aluva (from Km.330.450 to Km.335.305) as per DPR drg.no:MELTECH/NH47/P&P-Aluva/001, 002 and MELTECH/NH47/FL-Aluva/001 to 010 . However the detailed designs and alignment and improvement may be finalised in consultation with IC.

Approaches to ROB at km 320.090: Main part of ROB has already been constructed by Railways. It is proposed that Concessionaire shall construct approaches to ROB.

Table:B-7: Minor intersections

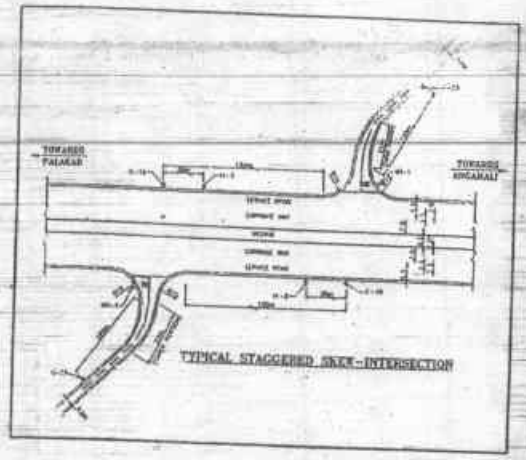
S.No	Junction At Chainage	
	Name	Chainage
1	TAJ	270+533
2	STJ	270+600
3	SQJ	271+100
4	TAJ	271+200
5	TAJ	271+400
6	TAJ	271+800
7	SQJ	271+900
8	TAJ	272+200
9	SQJ	272+750
10	TAJ	273+078
11	SQJ	274+100
12	SQJ	274+600
13	TAJ	274+663
14	SQJ	274+900
15	STJ	275+100
16	SQJ	275+500
17	TAJ	276+775
18	STJ	276+940
19	TAJ	277+800
20	TAJ	278+430
21	TAJ	278+530
22	TAJ	278+730
23	TAJ	278+930
24	TAJ	285+600
25	TAJ	285+900
26	SQJ	286+550
27	SQJ	286+565
28	TAJ	286+951
29	TAJ	287+140
30	TAJ	287+640
31	TAJ	288+230
32	SQJ	288+330
33	TAJ	288+430
34	STJ	288+830
35		288+864
36	STJ	289+430
37	TAJ	290+510
38	SQJ	290+810
39	TAJ	290+852

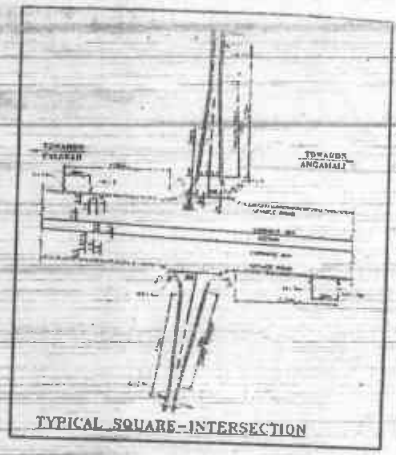
S.No	Junction At Chainage	
	Name	Chainage
40	TAJ	290+910
41	SQJ	291+730
42	TAJ	292+650
43	SQJ	294+220
44	SQJ	294+436
45	TAJ	295+000
46	TAJ	295+700
47	TAJ	295+894
48	TAJ	296+100
49	SQJ	296+755
50	SQJ	296+764
51	SQJ	294+275
52	TAJ	297+570
53	TAJ	297+770
54	TAJ	297+870
55	SQJ	298+200
56	TAJ	300+108
57	SQJ	300+208
58	TAJ	300+716
59	TAJ	300+803
60	SQJ	300+808
61	TAJ	301+215
62	SQJ	301+315
63	STJ	301+715
64	SQJ	302+115
65	SQJ	302+315
66	TAJ	302+815
67	SQJ	303+115
68	TAJ	303+277
69	TAJ	303+515
70	SQJ	304+500
71	TAJ	305+200
72	TAJ	305+500
73	SQJ	305+600
75	SQJ	306+400
75	SQJ	306+600
76	SQJ	306+900
77	SQJ	307+500
78	SQJ	307+700

S.No	Junction At Chainage	
	Name	Chainage
79	TAJ	308+200
80	TAJ	308+885
81	TAJ	309+101
82	SQJ	309+435
83	TAJ	309+535
84	TAJ	309+935
85	TAJ	310+276
86	TAJ	310+576
87	TAJ	310+976
88	SQJ	311+011
89	SQJ	311+023
90	TAJ	311+430
91	TAJ	311+830
92	SQJ	311+946
93	SQJ	311+996
94	TAJ	312+078
95	SQJ	312+405

S.No	Junction At Chainage	
	Name	Chainage
96	TAJ	312+805
97	TAJ	312+927
98	TAJ	312+971
99	TAJ	313+588
100	TAJ	313+688
101	TAJ	313+888
102	TAJ	313+988
103	TAJ	314+070
104	SQJ	314+470
105	TAJ	314+670
106	TAJ	315+070
107	TAJ	315+170
108	STJ	315+906
109	TAJ	316+490
110	TAJ	316+772
111	TAJ	316+790

Note : TAJ : Three Armed Junction, STJ: Skew T-junction ; SQJ: Square junction


TOWARDS PALAKAD
TOWARDS ANGAMALI
TYPICAL STAGGERED SKEW-INTERSECTION


TOWARDS PALAKAD
TOWARDS ANGAMALI
TYPICAL SQUARE-INTERSECTION

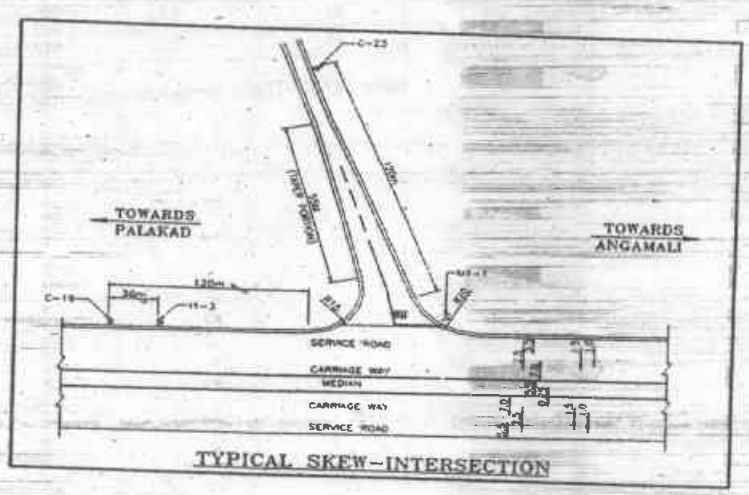

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TOWARDS PALAKAD
TOWARDS ANGAMALI
SERVICE ROAD
CARRIAGE WAY
MEDIAN
CARRIAGE WAY
SERVICE ROAD
TYPICAL SKEW-INTERSECTION

Fig: B-8

9.Structures

There are 3 major bridges and 3 minor bridges and 2 box culvers of 2x6m span on the project road other than the above culverts.

All these existing bridges / box culverts are hydraulically adequate and hence, it is proposed to retain the same with minor repairs or rehabilitation works. (Refer **table. No. B-8** for details)

Table-B-8: Improvement measures for Major and Minor Bridges

Type of structures	Repair	Repair & Widening	Reconstruction	New Construction	Total no.of structures
Major Bridges	--	3	--	--	3
Minor Bridges	--	3	--	--	3
Box Culverts (2 x 6m)	--	2	--	--	2

The reconstruction of major or minor bridges, if any, shall be finalised in consultation with IC during execution

9.1 Major Bridges:

Project corridor crosses three major rivers with major bridges. The existing bridges are made useful with minor or no repairs and for widening of the road additional three lane bridges with footpath on one side are proposed parallel to the existing bridges as detailed in **Table-B-9.**

Table: B-9: Details of new major Bridges

Sr.No.	Chainage (km)	Name of struct.	Span arrangement (m)	Total length of bridge (m)	Opening height (m)	Total width of super structure (m)	Type of super structure	Type of sub.str & found.
1	287.586	Kurumali Bridge	20.5+21.0+20.5	62.0	8.80	14.5	T-girder	PCC
2	304.190	Chalkudy Bridge	7x20.5	143.5	16.24	14.5	T-girder	PCC
3	316.300	Kothakulangra Bridge	3x5.62	79.86	7.76	14.5	T-beam	PCC

The details mentioned in above table are indicative and shall be finalised in consultation with IC during execution.

9.2 Minor Bridges:

Project corridor crosses few minors rivers with minor bridges. The existing bridges are made useful with minor or no repairs and for widening of the road additional three lane bridges with footpath on one side are proposed parallel to the existing bridges as detailed in Table-B-10.

Table: B-10: Details of new minor Bridges

Sr.No.	Chainage (km)	Name of struct.	Span arrangement (m)	Total length of bridge (m)	Opening height (m)	Total width of super structure (m)	Type of super structure	Type of sub.str & found.
1	278+525	Manali River Bridge	1x39.45	39.45	7.2	14.5	PSC-girder	PCC
2	292+200	Tadam River Bridge	13.2	13.20	3.8	14.5	T-girder	PCC
3	309+840	Koruty River Bridge	13.1	13.10	4.1	14.5	T-beam	PCC
4	278+190	Box culvert	2 x6.0m	22.00	6.20	13.5	box	PCC
5	291+348	Box culvert	2 x6.0m	14.15	5.00	13.5	box	PCC

The details mentioned in above table are indicative only and shall be finalised in consultation with IC during execution.

9.3 Proposed Major Structures (Flyovers)

Details of 5-Flyovers proposed for construction on the project corridor at major intersections and pedestrian crossings are mentioned in the table B-11 below.

Table B-11: Details of proposed Flyovers

S.No.	Chainage (km)	Name of structure	Span arrangement (m)	Total length of flyovers (m)	Opening Height (m)	Total width of sup.str(m)	Type of sup. Str.	Type of sub.str. * found.
1	272+330	Flyover at Puthur Jn.	1x16.5+1x31.5 +1x16.5	1200m	5.0m	24.60m	RCC T-beam/ PSC box girder	Pile foundation / wall type abutment
2	277+190	Flyover at Thrissur bypass jn.	1x16.5+1x36.5 +1x16.5	850m	5.0m	24.60m	RCC T-beam/ PSC box girder	Pile foundation / wall type abutment
3	294+004	Flyover at Kodakara	9 x 16.5	875m	5.0m	24.60m	RCC T-beam/ PSC box girder	Pile foundation / wall type abutment
4	299+499	Flyover at Potta Jn.	3 x 16.5	1250m	5.0m	24.60m	RCC T-beam/ PSC box girder	Pile foundation / wall type abutment
5	303.000	Flyover at Chalkudy jn.	7 x 16.5+1x 31.5 + 12 x 16.5	950m	5.0m	24.60m	RCC T-beam/ PSC box girder	Pile foundation / wall type abutment
6	330+940	Flyover at Aluva	1x31.5+27x15.5	900m	5.0m	24.60m	RCC T-beam / PSC girder	Pile foundation s/wall type

The details mentioned in above table are indicative only and shall be finalized in consultation with IC during execution.

9.4 Cattle Crossing/ Underpass

Table B-12: Details of proposed Underpass

S.No.	Chainage (km)	Name of structure	Span arrangement (m)	Total length of flyovers (m)	Opening Height (m)	Total width of sup.str(m)	Type of sup. Str.	Type of sub.str. * found.
1.	305+680	Underpass at Muringoor divine centre	1*10.00	350m	3.0m	24.60m	RCC Slab	Wall Type abutment with open foundation
2	304+032	Underpass at Chalkudy	1X4.5m	4.5 m (covered under chalkudy bridge	4.25m	24.60m	RCC box type	RCC box type

				embankment)				

9.5 Culverts / CD works

On the project road there are 41 nos of slab culverts, 50 nos of Box culverts and 9 nos of pipe culverts . These are in fairly good condition and hydraulically adequate except one culvert i.e at ch. Km 308.800 which is proposed for reconstruction.

The culverts proposed for widening to suit to 6 laning requirement with same span arrangement. The existing slab culverts are also proposed for widening with Box type culverts with same clear span. The existing Pipe culverts are extended with same configuration as Pipe culverts.

Improvement measures for existing CD works

Type of structures	Repair	Repair & Widening	Reconstruction	New Construction	Total no.of structures
Slab culverts	--	41	--	--	41
Pipe culverts	--	8	1	--	9
Box culverts	--	48	--	--	48

The requirement of reconstruction of culvert at Ch:108.800 shall be strictly adhered to. If any structure other than this requires reconstruction, shall be finalised in consultation with IC.

Table B-13 & B-14: Repair/Rehabilitation scheme for slab/Box/Pipe culverts

S. no.	CD No.	Chainage	Culvert (B x D in m)		Total Width	Type of Repair /Rehabilitation
		(In Km)	Type	Size (m x m)	(in m)	
1	271/1	270/032	Box	0.90 x 0.93	16.80	Silt and Bushes clearance and Bed protection
2	271/2	270/150	Slab	3.75 x 2.04	15.00	Silt and Bushes clearance and Bed protection
3	272/1	271/005	Box	0.94 x 0.90	15.00	Silt and Bushes clearance and Bed protection
4	272/2	271/375	Box	2.50 x 2.23	12.00	Silt Clearance and Bed protection, drainage
5	272/3	271/481	Box	1.20 x 1.47	12.00	Silt Clearance and Bed protection, drainage
6	272/4	271/767	Box	0.90 x 0.80	16.50	Silt Clearance and Bed protection, drainage
7	273/1	272/233	Slab	2.00 x 1.16	30.70	Silt Clearance drainage
8	274/1	273/116	Box	1.00 x 1.84	12.00	Silt, Garbage and Bushes clearance
9	274/2	273/350	Box	3.00 x 2.99	15.10	Bed Protection, Bushes clearance
10	274/3	273/519	Box	1.00 x 2.50	14.80	Bushes, trees on retaining walls to be cleared, abutment steel exposed , slab concrete spalling, Bed protection
11	275/1	274/279	Box	0.90 x 0.64	15.00	drainage and bed protection
12	276/1	275/060	Box	1.60 x 1.33	18.00	Bushes clearance and bed protection
13	277/1	276/299	Box	6.00 x 2.97	13.20	Silt and Bushes clearance and Bed protection
14	277/2	276/615	Box	2.00 x 1.98	12.00	Silt clearance and bed protection
						Bushes clearance and bed protection

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15	278/1	277/075	Box	2.50 x 1.94	12.00	Silt and Bushes clearance and Bed protection
16	278/2	277/293	Box	1.20 x 1.33	13.00	Silt and Bushes clearance and Bed protection
	278/3	278/719	Box	2.50 x 2.31	20.60	Bushes, trees on retaining walls to be cleared, steel exposed , slab concrete spalling, Bed protection
	279/2					
18	286/1	285/120	Box	2.00 x 2.03	13.00	Silt, dense vegetation, to be cleared, slab concrete spalling,Bed protection
19	286/2	285/514	Box	2.00 x 2.58	14.70	Silt, dense vegetation, to be cleared, slab concrete spalling, Bed protection
20	286/3	285/760	Box	4.10 x 4.00	12.50	Silt and Bushes clearance and Bed protection, steel exposed and spalling of concrete
21	287/1	286/024	Box	4.00 x 4.00	12.00	Bushes clearance and bed protection
22	287/2	286/080	Box	4.00 x 3.38	12.00	Proper approach drain, dismantling of old NH culvert, steel exposed repairs to slab and parapet, bed protection
23	287/3	286/900	Box	2.00 x 2.00	12.00	Silt clearance and bed protection
24	288/1	287/208	Box	1.50 x 1.92	12.00	Silt clearance and bed protection, exposed steel and spalling of concrete
25	288/2	287/559	Slab	3.00 x 4.12	12.10	Silt, garbage, bushes clearance, bed protection
26	288/3	287/701	Slab	3.00 x 4.31	12.20	bed protection
27	289/1	288/209	Slab	3.00 x 3.00	12.00	Silt clearance and bed protection
28	289/2	288/478	Box	3.00 x 2.98	12.10	Silt clearance and bed protection
29	289/3	288/838	Box	4.00 x 2.90	12.10	Silt clearance and bed protection
30	290/1	289/279	Box	2.00 x 1.83	12.00	Silt clearance and bed protection
31	290/2	289/722	Box	2.00 x 1.58	12.00	Bed protection
32	290/1	290/005	Box	2.00 x 1.49	12.10	Silt clearance
33	291/2	290/134	Box	2.00 x 1.12	12.00	Silt clearance
34	292/1	292/109	Slab	3.00 x 3.07	17.50	Silt clearance, bed protection, exposed steel, spalling of concrete
35	293/3	292/450	Slab	3.00 x 3.12	16.35	Silt clearance and bed protection
36	293/4	292/833	Box	2.50 x 3.01	18.40	Bed protection
37	294/1	293/239	Box	1.00 x 1.00	12.00	Silt clearance and bed protection
38	294/2	294/030	Box	2.00 x 1.88	16.30	Silt, obstructions to flow to be cleared, cracks on the abutment faces, bed protection
39	295/2	294/295	Box	2.00 x 2.00	14.00	Silt, dense vegetation, to be cleared, abutment and slab concrete spalling,Bed protection
40	295/3	294/488	Box	1.00 x 0.70	12.00	Silt clearance and bed protection
41	296/1	295/200	Slab	1.00 x 1.31	15.00	Silt clearance, bed protection, exposed steel, spalling of concrete
42	296/2	295/606	Slab	1.00 x 1.24	12.00	Silt clearance and bed protection
43	296/3	295/906	Slab	1.00 x 1.00	12.00	Silt clearance, bed protection, exposed steel, spalling of concrete
44	297/1	296/160	Slab	2.00 x 2.09	12.00	bed protection, exposed steel, spalling of concrete
45	297/2	296/590	Slab	1.00 x 0.50	12.00	Silt, garbage, stones clearance, bed protection
46	297/3	297/268	Slab	1.00 x 0.49	16.00	Silt, garbage, stones clearance, bed protection

47	298/2	297/503	Slab	2.00 x 2.50	12.50	bed protection, exposed steel, spalling of concrete
48	298/3	297/562	Slab	1.00 x 1.35	12.00	silt clearance
49	299/1	298/405	Slab	1.20 x 1.50	18.00	silt clearance, bed protection and drainage
50	299/2	298/720	Slab	6.00 x 3.10	18.00	silt and bushes clearance
51	300/1	299/118	Box	0.90 x 0.95	14.20	silt and bushes clearance and bed protection
52	300/2	299/313	Box	2.50 x 2.50	16.70	bed protection and steel exposed on abutments
53	300/3	299/618	Box	1.20 x 1.21	13.20	bed protection and steel exposed spalling of concrete
54	300/4	299/884	Slab	2 v of 0.75 x 0.85	14.20	silt and bushes clearance, bed protection and steel exposed spalling of concrete
55	301/1	300/130	Box	1.10 x 1.20	16.60	silt and bushes clearance and bed protection
56	301/2	300/910	Box	2.55 x 2.35	16.80	silt and bushes clearance and bed protection, exposed steel and spalling of concrete
57	302/1	301/035	Box	2.50 x 2.50	18.00	Bed protection
58	302/2	301/176	Box	3.00 x 3.00	17.60	Bed protection
59	302/3	301/448	Slab	0.90 x 0.90	27.00	silt and bushes clearance, bed protection and steel exposed spalling of concrete
60	302/4	301/637	Box	2.50 x 2.50	20.00	Bed protection
61	302/5	301/769	Box	1.20 x 0.90	14.70	silt, garbage, bushes clearance, bed protection
62	302/6	301/960	Box	3.00 x 3.00	18.60	Bed protection
63	303/1	302/077	Box	1.20 x 1.26	25.50	Silt clearance and bed protection
64	303/2	302/362	Box	1.20 x 1.00	21.20	silt and concrete deposits to be cleared, bed protection
65	303/3	302/627	Slab	1.00 x 1.24	14.00	silt and concrete deposits to be cleared, bed protection
66	303/4	302/776	Box	2.50 x 2.50	18.00	silt clearance and bed protection, steel exposed, spalling of concrete
67	303/5	302/834	Box	2.50 x 2.20	17.70	silt and garbage to be cleared, exposed steel on abutment faces
68	304/1	303/110	Box	1.50 x 1.00	30.00	silt clearance, repairs to slab and abutments, bed protection
69	304/2	303/202	Slab	2.50 x 1.27	28.00	Silt clearance and bed protection
70	305/1	304/032	Slab	4.50 x 4.25		silt clearance and bushes clearance
71	305/1	305/230	Slab	4.50 x 3.56	12.40	Silt, garbage, and bushes clearance, bed protection
72	305/2	305/266	Slab	4.50 x 3.35	12.40	silt clearance and bed protection
73	305/3	305/842	Slab	1.00 x 1.19	19.50	bed protection and steel exposed of slab
74	306/1	306/611	Slab	2.75 x 0.78	15.40	silt clearance, repairs to abutment, honey combs
75	306/1	307/258	Slab	1.00 x 1.20	12.10	silt clearance and bed protection, steel exposed, spalling of concrete
76	306/2	307/503	Slab	1.00 x 0.87	12.00	silt garbage stones clearance, bed protection, exposed steel and honey combs
77	306/3	307/696	Slab	2.00 x 1.00	12.00	honey combs to be repaired
78	306/4	307/999	Slab	1.00 x 1.70	14.90	silt clearance and bed protection, exposed steel and spalling of concrete

79	309/1	308/325	Slab	0.90 x 1.36	22.00	silt clearance and bed protection, drainage
80	309/2	308/445	Slab	2.50 x 0.59	12.00	silt clearance and bed protection, drainage
81	309/3	308/700	Pipe	1 no. of 0.75 D	28.50	silt clearance
82	309/4	308/600	Pipe	1 no. of 0.75 D	0.00	silt clearance
83	310/1	309/444	Pipe	2 nos. of 0.75 D	20.00	silt clearance
84	310/2	309/575	Pipe	3 nos. of 0.75 D	20.50	silt clearance
85	311/1	310/025	Pipe	4 nos. of 0.75 D	28.10	silt clearance
86	311/2	310/535	Pipe	1 no. of 1.00 D	15.10	silt clearance
87	311/3	310/741	Pipe	1 no. of 1.00 D	14.00	silt clearance
88	311/4	310/853	Pipe	1 no. of 1.00 D	14.80	silt clearance
89	311/5	310/927	Pipe	1 no. of 1.00 D	16.50	silt clearance, repairs to inlet and outlet chambers
90	312/1	311/157	Slab	3.00 x 4.15	12.75	Floor protection with stone pitching
91	312/2	311/653	Slab	1.00 x 1.16	12.10	silt clearance, bed protection, exposed steel and spalling concrete
92	312/3	311/978	Slab	4.00 x 2.35	13.00	steel exposed and spalling of concrete
93	313/1	312/714	Slab	1.00 x 1.53	12.00	silt clearance, bed protection and spalling of concrete
94	315/1	314/025	Slab	1.50 x 1.32	20.00	silt and other deposits to be cleared and bed protection
95	315/2	314/327	Slab	1.00 x 1.00	21.60	silt clearance and bed protection
96	315/3	314/580	Slab	1.50 x 0.59	12.30	silt and garbage clearance
97	316/1	315/260	Slab	1.00 x 0.65	21.60	silt and garbage clearance and bed protection
98	316/2	315/396	Slab	1.50 x 0.50	12.00	silt and garbage stones clearance, bed protection repairs to slab and abutments

9.6 Typical cross sections for structures

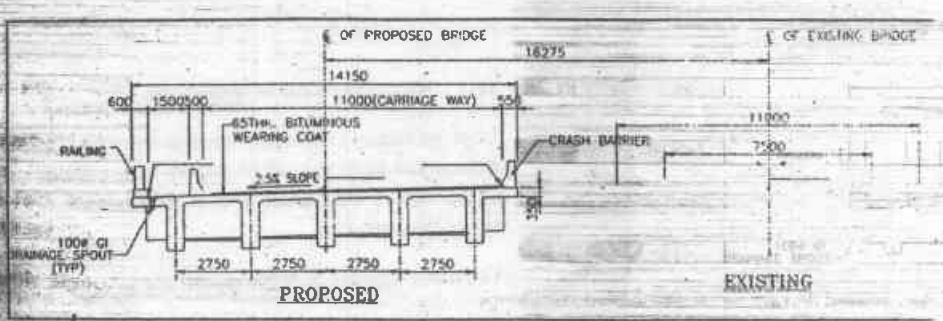


Fig-B-9: Typical cross section for major or minor bridge

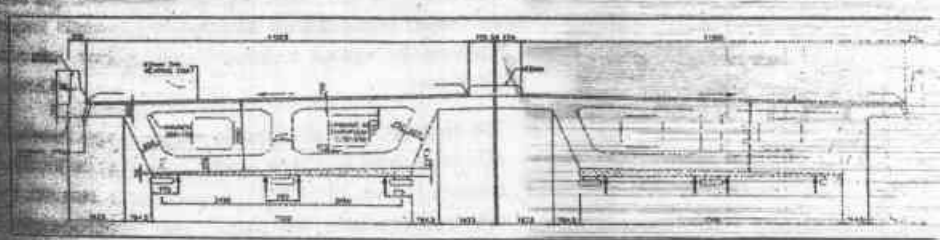


Fig-B-10: Typical cross section for Flyover

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Typical cross section for Flyover

10 Road Drainage & Slope Protection

10.1 Road Drainage

Following measures shall be adopted:

- Side ditches of required cross-section for area drainage on both sides of carriageway in rural sections.
- Chute drains along with shoulder drains in high embankment (3m and above);
- Median drains at super elevated sections with proper outfall connections; and

Additional number of culverts required from betterment of drainage shall be provided in consultation with IC prior to execution of work. Hume pipe culverts shall be provided at the location of cross road, i.e. at intersections / service road, to allow the drain water flow. The numbers and location be finalized in consultation with IC at the time of execution

10.2 Slope Protection Measures

Slope protection in the form stone pitching and turfing shall be provided on the embankment slopes. The pitching shall be provided for embankment heights greater than 3m and turfing in the form of local grass and bushes has been provided for the remaining embankment height lower than 3m.

11 Traffic Signage and Pavement Markings

Traffic signs and pavement markings shall include road side signs, overhead signs, kerb mounted signs and road markings along the Project Highway. The design and marking for the Project Highway shall be as per the design standards indicated in Schedule D and the locations for various treatment shall be finalized in consultation with the Independent Consultant.

The overhead signs shall be the reflectorised type with high intensity retro-reflective sheeting of encapsulated type. The height, lateral clearance, location and installation shall be as per relevant clauses of MORT&H specifications. Overhead signs shall be installed ahead of major intersections, toll plazas, rest places and urban areas as per detailed design requirement.

12 Highway Lighting

- Non-conventional energy like solar lighting system shall be provided at all major intersections as per the design standards indicated in Schedule D
- High mast lightings shall be provided at toll plaza locations and at all grade separated intersections as per the design standards indicated in Schedule D
- The design of lighting system on the Project Highway for different locations shall be as per the design standards indicated in Schedule D.

13. Speed breaker on Side roads

Speed breakers shall be provided on all side roads intersecting the Project Highway as per the design standards indicted in Schedule D.

14. Traffic Blinker signal (L.E.D) at intersection

Traffic Blinker signal (L.E.D.) shall be provided at all grade intersections as per the design standards indicated in Schedule D.

15. Delineators and Guard Posts

- Delineators shall be provided at all Horizontal curves on either side of the Carriageway as per the design standards indicated in Schedule D.
- Guard post shall be provided on either side of the carriageways. At locations where the embankment height varies between 2 to 3 m as per the specifications and design standards spelt out in Schedule D.

16. Studs

Studs shall be provided at median openings and at intersections as per the design standards spelt out in Schedule D.

17. Pedestrian Guard Rail and Safety Barrier

Pedestrian Guard Rail and Safety Barrier shall be provided, as prescribed in Schedule D

18. Road Land Boundary

Road (RoW) boundary shall be demarcated on the Project Highway. For this purpose concrete angle posts shall be used in rural section and poles and chain shall be used in urban section. All the components used in delineating road land boundary shall be highly pleasing, sturdy and vandal-proof. A system for the identification of chainages along the Project Highway shall be done in consultation with Independent Consultant.

Documentation and scripting on chainage identification system shall also be done in consultation with the Independent Consultant.

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SCHEDULE-C

(PROJECT FACILITIES)

PROJECT FACILITIES

1 GENERAL

The following sections of this schedule provide the minimum spatial and functional requirements of the facilities to be provided on the Project Highway with an aim to cater to the envisaged demand till the end of the concession period. The concessionaire shall review the adequacy of the proposed facilities at regular intervals of 5 years and accordingly provide additional facilities with necessary approval from the Independent Consultant in order to meet the demand of the road users till the end of the concession period.

The present schedule briefly highlights the minimum spatial and functional requirements of the facilities to be provided on the project corridor in construction package 270.000 KM to 316.700 KM.

2 TOLL PLAZA

One toll plaza is suggested at Km 278.000 on the project corridor. The typical layout of toll plaza is given in Fig C-1 attached with this report. The Toll plaza shall have 6 lanes in each direction including a separate service lane for oversized vehicles and or toll free traffic. The lane width is kept as 3.0m except for the outer lane for oversized vehicles that is kept as 4.5m. It is proposed that the fee collection system shall be semi automatic. The service lanes are designed for the maximum queue length of vehicles and service time for each vehicle. Normally the service time allowed is 15 seconds for manual/ semi automatic system with a queue length of not more than 5 vehicles at any point of time. High mast lighting shall be provided. The number of lights shall be finalized in consultation with Independent Consultant.

It should be noted that the Toll Plaza should be developed in stages. Initially only a few service lanes as per design requirement. These would need to be expanded to accommodate the traffic projected for the later half of the project life. In order to accommodate this expansion the supervision and administration building would be set back at a sufficient distance as shown in the drawing.

3 WAYSIDE AMENITY COMPLEX

No way side Amenities are proposed for the project road as existing facilities will be used by the road users.

4 REST AREA

No Rest Areas are proposed for the project road and existing facilities will be used by the road users.

5 BUS BAYS AND BUS SHELTERS

At places where sufficient bus stoppages are there, Bus stops/Shelters are to be provided. These shelters are generally proposed at existing bus stops and at major road intersections. The typical lay out of Bus bays and Bus stops are shown in Fig C-2 attached with this report. However, Concessionaire can change the design of shelter with approval from IC and NHAI. Tentative locations of bus bays and bus shelters are presented in Table C-1.

Table C-1: List of Proposed Bus Shelters & Bus Bays along NH-47

Chainage	Location Left/Right
285.535	East
286.440	East
288.965	East
290.865	East
293.500	East
297.450	East
302.730	East
308.236	East
310.836	East
314.380	East
276.840	West
277.600	West
285.299	West
286.450	West
288.800	West
290.565	West
285.299	West
286.450	West
288.800	West
290.565	West
293.450	West
297.270	West
300.700	West
303.500	West
305.800	West
308.462	West
310.910	West
313.000	West
314.980	West

6 TRUCK LAYBYS

No Truck laybys were proposed for the project road as existing facilities will be used by the road users.

7 HIGHWAY TRAFFIC MANAGEMENT SYSTEM

Project Highway shall be provided with Highway Traffic Management Systems (HTMS) to Collect/disseminate information for traffic and incident management and for the safety of Users.

The system shall comprise following sub-systems:

i. Emergency Communication System.
ii. Mobile Communication System.
iii. Variable Message Sign System.
iv. Meteorological Data system.
v. Automatic traffic counter- cum-classifier system
vi. Power Supply System.

(i) Emergency Communication System shall have Emergency Call Boxes (ECBs) installed at the spacing of 2 kms on either side of the highway for both direction of travel and connected to the control centre through the transmission system of optical fibre cable and copper cables with suitable interfacing. The toll plaza shall have main control centre so that any user making emergency call from ECBs can be provided the assistance of ambulance, crane and highway patrol unit depending upon the location of caller.

(ii) Mobile Communication System shall have mobile sets provided on ambulances, cranes and patrolling vehicles for facilitating speedy communication even when they are on the move.

(iii) Variable Message Signs shall be provided at minimum six locations to guide and forewarn the users about the traffic and weather conditions on highways. These messages can be varied from control centers based on the data received through surveillance system, highway patrolling, traffic censors etc. The locations shall be decided for their maximum utility to the users.

(iv) Meteorological Data System shall be installed at minimum two locations to provide weather information on temperature, wind speed, humidity and visibility. These informations shall be available to the users through variable message signs as per requirements.

(v) Automatic Traffic Counters cum-classifier shall be installed at minimum two locations for traffic data collection and monitoring.

(vi) Provision of installing of video cameras shall be made available at all major intersections and video cameras shall be made available for use at any of the identified locations on need basis.

(vii) These systems shall have outdoor equipments consisting of ECBs, VMS panels, weather sensors, traffic sensors, video camera etc. The outdoor equipment shall be connected to the control centre through transmission system preferably comprising optical fibre cable, copper cable and interface equipment. The control centre shall have monitoring equipment, on line information acquisition equipment, processing equipment etc. It shall also have a graphic display board showing the highway and the locations of equipments and of incidents. The main control centre and sub-centre would also have ambulance, tow away trucks and cranes, and fire tenders for dispatching these emergency services to the required locations.

8 ADMINISTRATIVE, OPERATION AND MAINTENANCE BASE CAMP

Administrative base camp may be provided. Exact location of administrative base shall be finalized in consultation with IC. However it can be preferably located at toll plaza.

The main administrative, operation and maintenance base camp shall be provided to cater to the requirement of the following services.

- Central Traffic Control
- Central Toll Control
- Highway Maintenance
- Facilities for storage and repair of maintenance equipments, vehicles, and materials

The main base camp shall be housed adjacent to the toll complex. An area of approximately 4000 sqm shall be earmarked for this purpose. The layout of the different buildings and facilities shall be finalized in consultation with the Independent Consultant.

The Administrative building shall primarily house the Control Center, the security headquarters, the central store, the toll audit and data processing units in addition to other secondary facilities such as computer room, office space, stores, sanitary facilities, canteen etc. The base camp shall have adequate parking space for staff and visitors.

In addition, the base camp shall have an electric room and supplies room to cater to the power requirements of the camp. The electric room shall house a standby generator to provide the required power in case of failure of normal power.

The camps shall have adequate lighting during dark periods and night.

There shall be underground fuel storage area with delivery facilities at the campsites to be adequate to cater to the demands of maintenance and patrolling activities.

The base camps shall not have more than one entry and one exit point. Both of these shall be manned by security personnel at all times.

The camp shall be landscaped so as to protect the area from dust and noise from the Project Highway.

9 HIGHWAY LIGHTING

The lighting in classified urban areas on the Project Highway, grade separators, toll plaza and main administrative base camp. Traffic aid posts shall be provided in accordance with the standards set in Schedule D.

10 LANDSCAPING

Landscape treatment of the Project shall be undertaken through planting of trees and ground cover of appropriate varieties and landscaping on surplus land in the ROW and median.

Shrubs of low height shall be planted in the median of highway. Plantation scheme shall be prepared in consultation with Forest Department, Government of Orissa and the Independent Consultant.

11 ENVIRONMENT

In view of the statutory requirement of environmental clearance for Highway Project, the NHAI decided to carry out environmental and social impact assessment of the proposed widening and strengthening of the Project Highway.

The environmental and social assessment study has accordingly, been carried out and is presented in a report titled:

"Thrissur-Angamali DPR".

"Environmental Management Plan" – Volume - IV &

"Resettlement Action Plan" Volume -V

The said report brings out the baseline environmental and social conditions, envisaged impacts of the project, mitigation measures proposed and suitable management plan for monitoring and implementation measures.

The Project Highway during design, construction, operation and maintenance shall conform to the environmental rules and regulations in force. The Concessionaire shall be responsible for the same. As such a copy of the report in question is enclosed herewith for guidance of the Concessionaire. However this does not absolve the Concessionaire from performance according to the laws on environment.

12. ROAD FURNITURE AND ROAD SIDE FACILITIES

Road furniture and roadside facilities like litterbins, public toilet and drinking water kiosks shall be provided as per standards mentioned in Schedule D.

13 FACILITIES TO BE PROVIDED FOR NHAI

The Concessionaire shall provide the following facilities for NHAI

i. The Concessionaire shall provide a new 4X4 driven A.C. Vehicle to the PIU and all the expenses made against vehicle maintenance including fuel charges, driver salary etc shall be borne by Concessionaire for the entire Concession Period.

ii. The Concessionaire shall provide at least 2 mobile phones with connection

iii. The Concessionaire shall also provide following supporting staff for NHAI including their wages and additional benefits

- One stenographer
- One office attendant/ Peon

14 LAB FACILITIES FOR IC

The Concessionaire shall provide a well-established highway/ material engineering laboratory with latest state of art material testing equipments to enable the IC. This lab will be manned and operated by IC for quality control. The Lab shall also have power stand by system. The list of equipments shall be finalized in consultation with NHAI/ IC.

Fig : C-1 : Typical Layout of Toll Plaza

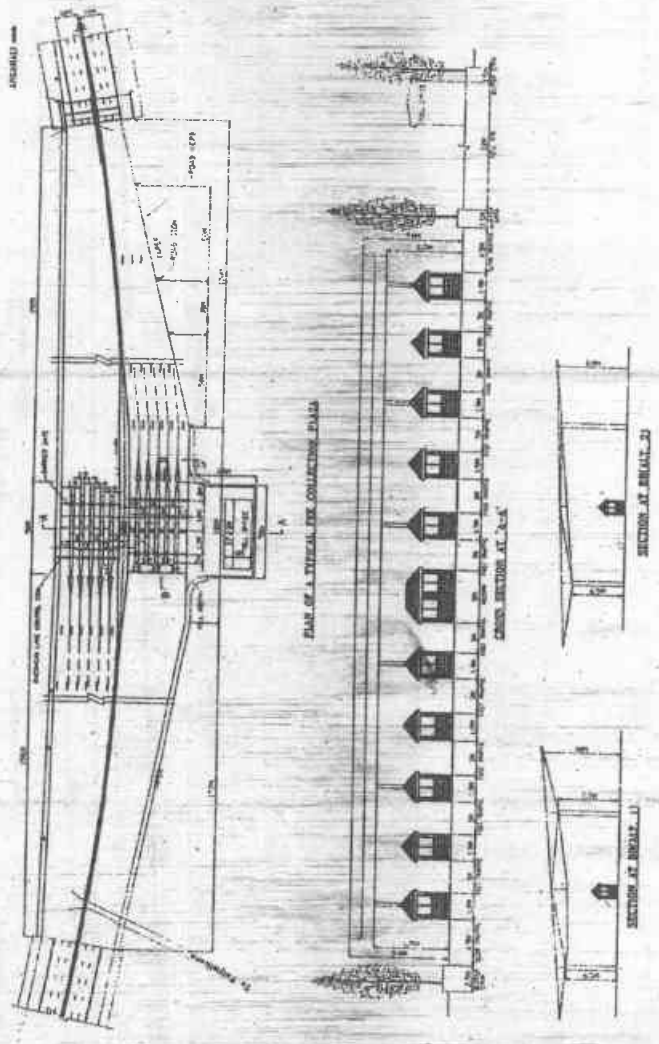
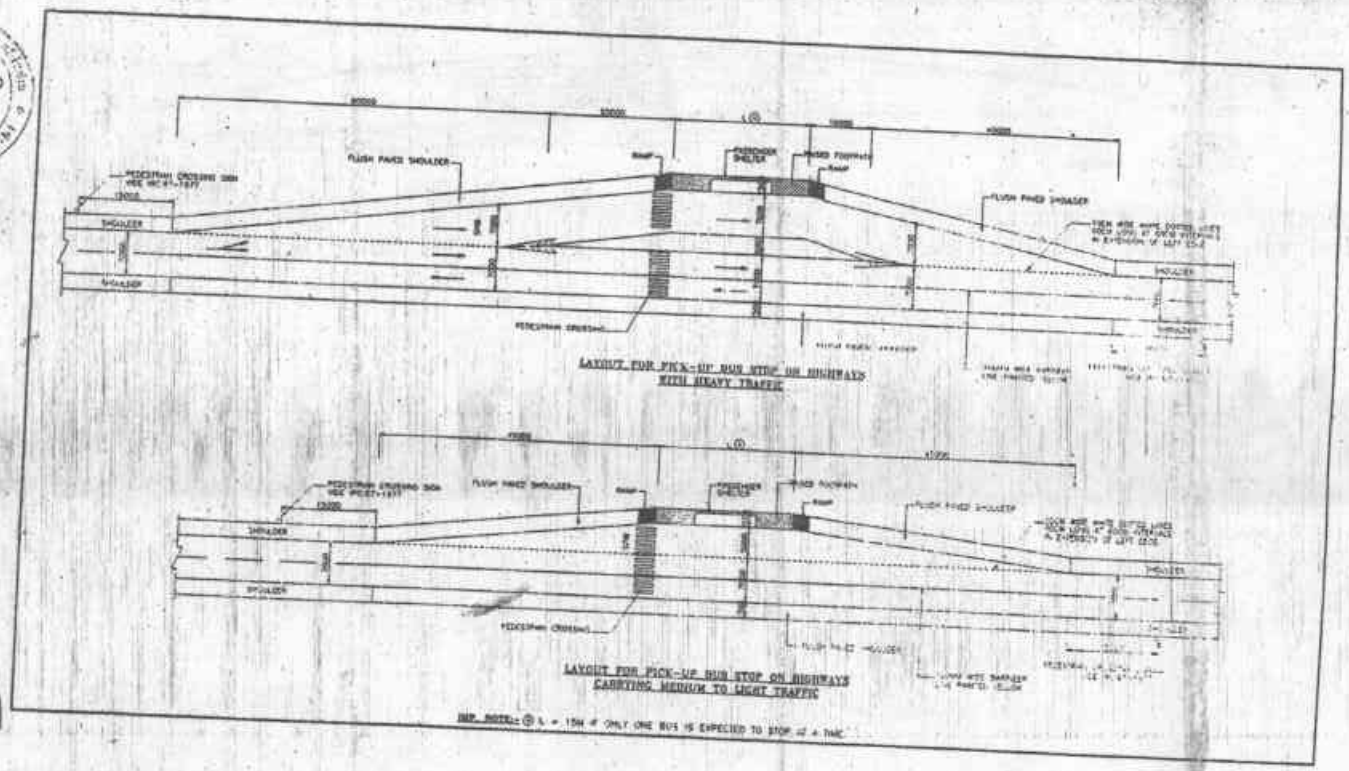


Fig: C-2: Typical layout of bus bays & bus stops



SCHEDULE-D

(SPECIFICATION & STANDARDS)

SCHEDULE D

SPECIFICATIONS AND STANDARDS

1. INTRODUCTION

1.1 The Designs for various elements of the Project including facilities shall conform to the minimum design requirements set out in DPR and this Schedule. Alternative or additional designs submitted by the Concessionaire shall also meet these requirements.

1.2 Concessionaire in consultation with and approval of Independent Consultant / NHAI can adopt alternative designs for Bridges, Culverts, Flyovers, Retaining Earth Walls, Overpass and Underpass. In case the Concessionaire follows the DPR designs it shall carry out its own engineering surveys and shall be solely responsible for such designs. However, total length of viaduct portion of structure should not be reduced from that of mentioned in Schedule B. Notwithstanding anything to the contrary contained herein, the Concessionaire shall carry out its own engineering surveys and designs and shall be responsible for design, engineering and construction of the Project Highway as per the Specifications and Standards in accordance with the provisions of this Agreement

1.3 The Concessionaire shall strictly follow the horizontal alignment given in the DPR. In case DPR alignment design is deficient in terms of standards to be followed for the design speed of 100 kmph, improvements to alignment can be done with consultation and approval of Independent Consultant.

1.4 In no case the FRL of the Project Highway be less than the FRL proposed in the DPR. The vertical profile shall conform to the standards mentioned in this Schedule. In no case the depth of cut shall be more than that mentioned in DPR at any section of the Project Highway.

1.5 The Cross sectional elements specified for the Project shall be strictly followed.

1.6 All works related to the Project Highway shall conform to the Guidelines and Special Publications as applicable to National Highways and Ministry of Shipping, Road Transport and Highway earlier Ministry of Road Transport and Highway (MORT&H) Specifications and Indian Roads Congress (IRC) standards, Codes, with all updates till 30 days before the date of bid submission by the Concessionaire. In the absence of any definite provisions on any particular issue related to the Specifications and/or standards, reference may be made to the latest codes and Specifications of Bureau of Indian Standards, British Standards, AASHTO, ASTM or any other International standard in that order. But, where even these are silent, the construction and completion of the works shall conform to sound engineering practice with the approval of the Independent Consultant / NHAI.

1.7 Amendments and/ or modifications carried out by the Ministry of Road Transport and Highway in the MORT&H Specifications and IRC standards, and codes and available to public 30 days before the date of receipt of bids shall be applicable.

1.8 Whenever any specific provision for any building works is given in the MORT&H Specifications, IRC standards and codes, those shall apply. All building works shall conform to Central Public Works Department (CPWD) Specifications for class I building works or standards given in the National Building Code (NBC) as amended and/or modified from time to time. For the purpose of this clause, building works shall be deemed to include road furniture, landscape elements and /or any other works incidental to the building works.

1.9 In case, any further amendments and/ or modifications in the said Specifications and/or standards and codes come into force after the said date (clause 1.7 above) and have financial impact, the matter shall be settled according to the Concession Agreement.

1.10 In so far as amended/modified/added clause supersedes a clause or part thereof in the said Specifications and standards, then any reference to the superseded clause elsewhere shall be deemed to refer to the amended/modified /added clause or part there of.

1.11 If amended/modified/added clause provision comes in conflict or be inconsistent with any of the provisions of the said Specifications and standards, the amended/modified/ added clause shall always prevail.

1.12 The Concessionaire shall plan and implement the quality assurance programme for the Project Highway and finalize it in consultation with the Independent Consultant at least one month prior to the commencement of the work.

1.13 The quality and/ or the quantities of various items shall primarily be the responsibility of the Concessionaire. The Independent Consultant shall, however, ensure and/ or verify it by devising suitable means. On noticing any deficiency in the quality and/ or quantity, corrective measures as ordered by the Independent Consultant shall be carried out by the Concessionaire at the Concessionaire's cost to the satisfaction of the Independent Consultant. In case of any disagreement or non-compliance by the Concessionaire, the dispute will be referred to NHAI to resolve it in terms of the Concession Agreement.

2. DESIGN STANDARDS

2.1 Design Standards comprise of MORT&H policy circulars and IRC codes, guidelines and special publications applicable to National Highways. The design standards adopted in DPR shall be generally followed. NHAI policy guidelines and respective State government current requirements and guidelines shall be adopted for landscaping and tree plantation along the corridor. Where the said standards are silent on any item, the following standards in order of preference shall be adopted with the approval of the Independent Consultant/NHAI.

i. Bureau of Indian Standards (BIS)
ii. American Association of State Highway and Transport Officials (AASHTO)
iii. American Society of Testing Materials (ASTM)

iv. British Standards (BS)

v. Any other National or International Standard suggested by the Concessionaire.

Designs offered by the Concessionaire shall comply with the standards as spelt out in clause 2.1 above. The list of Codes in Annexure 1 is given to serve as a guide for design of various elements of Project Highway.

2.3 Geometric Design Standards

2.3.1 Geometric design standards shall be adopted as per IRC codes as applicable to the National Highways. The design Standards and design criteria adopted in DPR shall be followed.

2.4 Geotechnical Design

2.4.1 Cut and fill slopes shall be appropriate to the nature of the material and the height of embankment or depth of cut. The slopes shall be safe against failure.

2.4.2 Material used in the fill and its compaction requirements shall conform to IRC - 36-1970. Where these Specifications are in variance with the MORT&H Specifications the latter shall govern and be followed.

2.5 Pavement Design

2.5.1 The Pavement crust thickness requirement as mentioned in Schedule B for various elements shall be the bare minimum requirement for the Project. Any additional thickness above and over that mentioned in Schedule B shall be finalised in consultation with Independent Consultant.

2.5.2 The new flexible pavement shall have Bituminous Concrete (BC) [also termed Asphaltic concrete (AC)] wearing course laid over Dense Bituminous Macadam (DBM). Underneath DBM a bituminous base course of Bituminous Macadam (BM) shall be provided if necessary as per design requirements. It will be laid on Wet Mix Macadam (WMM) base course. The subbase granular material shall conform to the grading, density and other physical requirements stipulated in MORT&H Specifications and shall have a minimum CBR of 30% at 97% Maximum Dry Density (MDD). Material Chosen for subgrade shall have CBR not less than that suggested in DPR at 97% MDD.

2.5.3 Refinery Modified bitumen shall be used for bituminous concrete wearing courses in accordance with the stipulations of relevant and latest IRC & MORT&H guidelines.

2.5.4 The minimum requirement of thickness for Cement concrete pavement shall be as mentioned in Schedule-B for Toll Plaza Locations. The flexural strength of concrete used for PQC should not be less than 45 Kg/cm^2. In case Concessionaire desires to adopt rigid pavement for new carriageway or any other facilities other than toll plaza, the above mentioned minimum thickness shall be provided in consultation with Independent Consultant.

2.5.5 Rigid pavement should be provided below the underpass locations where the Project Highway is flying over the crossroad and proposed underpass is not a RCC box structure. In case the crossroad is NH or SH the rigid pavement of at least same thickness as that of Toll Plaza as mentioned in Schedule B shall be provided. In case the crossroad is MDR/ODR the rigid pavement shall be designed and finalised in consultation with Independent Consultant.

2.5.6 To ensure internal drainage of the pavement structure, the lower drainage layer of the road subbase shall extend upto full formation width.

2.5.7 Unevenness index of the pavement on completion shall not be more than 2000 mm per km measured with Bump Integrator fitted in a vehicle or an equivalent device approved by the Independent Consultant/NHAI. The instrument used in the measurement of roughness shall be calibrated as per guidelines given in the World Bank Technical Note No.46.

2.6 Drainage System

2.6.1 An effective surface and sub surface drainage system of pavement structure shall be designed as stipulated in IRC SP: 42 (1994).

2.6.2 Rainwater Harvesting System shall be provided all along the Project Highway as per provisions of DPR and IRC SP 50:1999.

2.6.2 Drainage system as designed and adopted in DPR for the drainage of carriageways in urban areas, rural areas, medians, toll plazas, wayside amenities, truck parking areas, bus-bays, rain water harvesting systems and other highway features are the minimum requirement for the Project and shall be followed. Any further requirement for ensuring more effective drainage system shall be designed and finalised in consultation with Independent Consultant.

2.7 Design Standards for Culverts, Bridges, Underpasses, Over bridges

2.7.1 The design standards and loading to be considered for culverts, bridges, underpasses and over bridges shall be those laid down in the latest relevant IRC codes and / or IS codes. Where the said codes are found wanting or are silent other codes as stipulated in Clause 2.1 above shall be followed.

2.7.2 MORT&H specification (Clause 2607.2) shall be followed for the material of strip seal expansion joints.

2.7.3 Design of POT/PTFE bearings design shall be done in accordance with IRC 83 (Part-III) Specifications.

2.7.4 Specifications for structural Concrete shall be as per IRC 21: 2000.

2.7.5 HDPE sheathing shall be used for pre-stressing.

2.7.6 Pre-stressing anchorages shall confirm to the latest BS code CEB-FIP recommendations.

2.7.7 Design of voided slabs shall conform to the draft Specifications as considered by the IRC council.

2.7.8 Provision of pile foundations if proposed by Concessionaire shall have the approval of Independent Consultant. Pile load test shall be performed by conventional load testing method and not by high energy method.

2.7.9 Conduct of Field Pull Out test for RE walls is mandatory. In addition to this, Specifications given in DPR shall be followed for RE wall design and construction.

2.8 Existing Culverts, Bridges

2.8.1 The unsafe and/or deficient bridge and culvert structures on the existing 2 lane carriageway shall be rehabilitated or replaced by sound structures to carry the IRC design loads spelt out in clause 2.7.1 above. The recommendations for rehabilitation of CD structures mentioned in DPR and Schedule-B are the bare minimum and any additional structure, which is required to be reconstructed, or any additional requirement for rehabilitation other than those mentioned in DPR and Schedule-B shall be finalised in consultation with Independent Consultant.

2.8.2 Where the existing structures are retained and extended, the extension shall be done with same type of structure and properly adjusted and matched with the existing structure. The guidelines provided in DPR shall be followed for this purpose.

2.9 Intersections

2.9.1 At-grade intersections shall be designed according to IRC Special Publication 41 'Guidelines for the Design of At-grade Intersections in Rural & Urban Areas' and the MORT&H Type Designs for Intersections on National Highways, with modifications where required. The designs set out in DPR for intersections shall form the basis for the design. Treatment at any additional intersection other than those mentioned Schedule-B, shall be finalized in consultation with Independent Consultant.

2.9.2 For elements not covered in DPR and the said publication, Guidelines of IRC-92-1985 supplemented by relevant MORT&H and the AASHTO publication 'A Policy on Geometric Design of Highways and Streets' shall be used.

2.9.3 Geometric design standards for elements of grade-separated intersections given in DPR shall be adopted.

2.10 Litter Bins

2.10.1 The litterbins shall be located at no more than 100 m intervals in the rest area and the truck-parking lay-byes. The bus stops shall be provided with at least one litterbin.

2.10.2 The capacity of the litterbin shall be as per requirement, subject to a minimum of 30 litres.

2.11 Public Toilets

2.11.1 Requisite number of urinals, WC and bathing places supported by adequate water supply and sewerage facilities and appurtenances as per the National Building Code (NBC) shall be provided at truck parking lay-byes, subject to a minimum of 4 WC, 5 urinals and 3 bathing places. Number of urinals, WC and bathing spaces in all other places including the rest areas will be as per the NBC. The entrance of the ladies toilet shall be clearly marked and segregated from the men's toilet.

2.11.2 At least 2-m wide area around the toilet blocks shall be paved with adequate cross slopes and drainage to ensure speedy disposal of water. Arrangement for sewage disposal shall be provided.

2.12 Drinking Water Kiosk

2.12.1 Drinking water kiosks at the Truck Lay byes and Bus shelters shall have a minimum of 4 taps of push button type. The drinking water kiosks shall be easily accessible to children and handicapped people. The water kiosks shall be properly segregated and shall be at least 3 m away from the toilet blocks, if any. Water supply shall be through existing water pipe line. In absence of this, provisions for ground water extraction shall be made.

2.12.2 Water storage in the drinking water kiosks shall be as per the National Building Code (NBC), subject to a minimum of 200 litres. At least 2 sq.m. area around the drinking water kiosks shall be paved with adequate cross slopes and drainage to ensure speedy disposal of spilt water.

2.13 Highway Lighting System

2.13.1 The night-time illumination in the areas used by pedestrian shall not be less than 10 lux. In urban areas, it is recommended that semi-cut-off luminaries shall be provided. Arrangement of lighting installations shall be staggered except at curves. High mast lighting shall be adopted for lighting of Toll Plazas, all Grade Separated Junctions and any other locations as mentioned in Schedule-B.

2.13.2 The layout of masts, their height and spacing shall be fixed in consultation with the Independent Consultants so that the minimum illumination level prescribed in 2.13.1 above is achieved.

2.13.3 Non-Conventional Sources of lighting system shall be provided at all At-grade Intersections as mentioned in Schedule-B with solar energy. The general Specifications mentioned in DPR shall be followed for this purpose.

2.14 Highway Traffic Management System (HTMS)

HTMS shall provide facilities to the highway users to make emergency calls through Emergency Call Booths (ECBs) to control centre in case of accidents, break down of vehicle and fire and to pre-warn the highway users about unusual conditions on the road. It shall provide information / data to traffic managers on traffic flow, conditions, speed and weather conditions, location of any incident and help required and on incoming calls. Based on these, the traffic managers should be able to exercise control on changing the variable message signs, mobilising the movement of ambulances, cranes, highway patrol units and fire tenders. HTMS shall also provide on line recording and reviewing of the voice and individual information for record and analysis.

2.14.1 All equipment shall comply and be installed in accordance with IEC 364, with minimum of CENELEC standards EN 50128 software integrity level 2.

2.14.2 The HTMS shall have an overall system mobility of better than 99% and shall be considered unavailable if any of the functions can not be properly executed. The mean time to restore to the normal operation following a failure shall be less than four hours all inclusive. The service life of HTMS shall be 10 years.

2.14.3 All outdoor equipment for the facility of the users such as Emergency Call Booths (ECB) and Message Signs (MS) shall be installed at locations which shall be clearly visible to the approaching drivers. The ECBs shall have proper sign identifications

2.15 Traffic Safety Measures

2.15.1 Highway Patrolling

The Concessionaire is required to provide round the clock route patrols to assist motorists. The patrol personnel should be adequately trained to the satisfaction of the Independent Consultant in traffic management, road safety and in primary First Aid. The purpose of these patrols is to:

- Provide the users of the Project Highway with basic mechanical help for vehicles that break down on the National Highway Section, and protect other motorists from such vehicles
- Immediately identify traffic hazards of whatever nature, such as unauthorised parking, public transport vehicles obstructing traffic during passenger loading and unloading, debris, stray animals and the like. The Concessionaire shall take the necessary measures to remove such obstructions.
- Provide emergency management at accident scenes until such time as the appropriate authorities arrive,
- Assist the motorist , for the removal of damaged or mechanically impaired vehicles from the Project Highway,
- Provide road user information and to further the image of the National Highway Section in a professional and friendly manner.
- Maintain daily records of assistance provided to motorists

- Observe, record and report suspect aspects of the highway, hazards and incidental damage caused by vehicles, floods, storms, or other random events, such that the highway maintenance records and data base are continuously improved.

2.15.1.1 Patrol vehicles

The Concessionaire will provide 4x4 drive Patrol vehicles as stipulated in the Contract. Each vehicle shall accommodate a minimum 3 persons including the driver. The Concessionaire will also make arrangements for standby vehicles.

2.15.1.2 Ambulances

The Concessionaire will provide ambulances having all facilities of emergency assistance required like stretcher to carry the patient, Emergency Medicines, oxygen etc.

2.15.1.3 Cranes

The Concessionaire will provide cranes of 15 MT capacity having all requisite arrangements of pulling and lifting of accidental/break down vehicles. Table D-1 presents the serviceability indicators, required maintenance level that shall be followed by Concessionaire as part of highway patrolling.

Table D-1: Serviceability Indicators and required maintenance level for Patrolling

Sl. No	Serviceability Indicator	Required Maintenance Level	Frequency of Inspections by Engineer to Ensure Required Level of Service
1.	Tow trucks, cranes & ambulances etc.	within 30 minutes of incident occurrence	Daily on regular basis followed by weekly & monthly inspections
2.	Frequency of highway patrol	Every 4/6 hours on each carriageway for entire stretch (logging system)	Daily on regular basis followed by weekly & monthly inspections

2.15.2 Pedestrian Guard Rails and Safety Barriers

2.15.2.1 Pedestrian guardrail shall be provided at the following locations

i. At the places where pedestrian activity is high

ii. On raised foot path on the side of carriageway at bus stops and bus bays mentioned in Schedule-C, for adequate length for pedestrain safety, not less than 20 m on either side

The layout of pedestrian guard-rails at crossings, road intersections shall be as per the drawing given in DPR. On kerbed road sections, guard-rails shall be at least 15 cm away from the edge of carriageway.

2.15.2.2Safety barriers shall be located at the following locations

i. At high embankments which have height > 3m when measured from the top of the pavement to the natural ground.

ii. At sharp horizontal curves whose radius is less than 500 m by the side of ponds, lakes, open wells even when the height of embankment is less than 3 m.

iii. Along the central median at places where median width is 1.5 m and also in the lengths where median tapers from 5.0 m to 1.5 m. Typical layout for safety barriers is given in DPR.

iv. On the approaches of major and minor bridges for a length of at least 25m on both sides even if the embankment height is less than 3m.

2.15.3 Traffic Blinker Signal with Liquid Electromagnetic Display (LED)

The road traffic signals, its configuration, size, location and other requirements shall be as per IRC: 93 - 1985 and IS: 7537 - 1974.

Blinker Signal shall be provided at all intersections with SH/MDR/ODR category roads in rural areas with non-conventional energy sources like solar energy. The general Specifications mentioned in DPR shall be followed for this purpose.

2.15.4 Road Studs

2.15.4.1 Nineteen degree (19°) tilted one-way reflective road studs with anchor and with 1x43 glass elements etc. complete shall be provided at 1 m c/c on pedestrian crossing with red reflective panel as per EN 1463 and BS873 part IV (1987). Road studs shall also be provided at 9 m c/c on edge lanes, lane lines for a length of at least 130 m on the approaching side of the intersection with white reflective panels as per BS873 part IV (1987) replaced partly with BS EN 1463-1: 1998.

2.16 Highway Signs

2.16.1 The design and location of route marker signs for National Highway shall be as per the IRC: 2-1968. The design and placement of highway kilometer stones, the dimensions of stones, size, color, arrangement of letters shall be as per IRC: 26-1967 and IRC: 8-1980. The design, location and materials to be used for Road delineators shall be as per IRC: 79-1981. The color, configuration, size and location of size of traffic signs shall be as per IRC: 67-2001.

2.16.2 For the road signs the standards set in IRC: 67-2001, Code of Practice for Road Signs shall be followed. As regards, the overhead signs the standards prescribed by MORT&H shall be followed. Where these are silent, standards prescribed in BIS/British Standards/AASHTO/ASTM or any other international standard in that order shall be adopted in consultation with the Independent Consultant / NHAI.

2.16.3 All the cautionary/mandatory signs shall be provided on shoulder and median for each direction of traffic for clear visibility during overtaking operations.

2.17.3 On kerbed road sections the edges of the road signs shall be at least 60 cm away from the edge of the kerb, where as on un-kerbed road sections the edge of the signs shall be at a distance of 2 m from the edge of the carriageway.

2.17 Pavement Markings

2.17.1 Pavement markings shall be designed and provided in accordance with IRC: 35-1997 "Code of Practice for Road Markings" in consultation with the Independent Consultant.

2.17.2 Centre line, Edge line (outer), Edge line (inner) and pedestrian crossing shall follow the guidelines mentioned in BS EN 1436 - 1998.

2.18 Pickup Bus Stops & Bus Bays

2.18.1 The layout, design and location of the pickup bus stops shall be as mentioned in Schedule C and shall follow the Specifications of IRC: 80 - 1981. The sizes of the bus shelters shall be 0.6 m^2 per person during peak load depending on the frequency of buses to be handled by each stop. Bus stops shall be provided on both sides of the road for either direction of traffic. The plinth height of the bus stop shall be 0.3 m from the bus bay level and shall be 2 risers high. The minimum ceiling height of the structure shall be 2.1 m. The height of seating shall be 0.4 m from floor level while the back of the seat shall be 0.35 m high. Seating space per person shall be 0.45m X 0.45m, while minimum leg and circulation space for each seat shall be 0.6 m. Each bus stop shall have at least one litter bin. The pedestrian guard rails shall be provided as described earlier in this Schedule.

2.18.2 No raised medians shall be constructed at bus bay locations. Chevron marking and bollard system shall be provided at the median portion between main carriageway and bus bay for delineation of bus bay from main carriage way.

2.19 Truck Parking Facility

2.19.1 The parking length at bays for each vehicle shall not be less than 15 m and parking width for each vehicle shall be 2.75 m. The length of the lay-bye shall be as per parking requirement subject to a minimum of 100 m and the minimum width of the raised separator between the lay-bye and the carriageway shall be 3m in rural sections. The parking spaces shall be parallel to the road. Parking lots shall be adequately illuminated and night time illumination shall not be less than 10 lux.

2.20 Landscaping

2.20.1 Trees shall be planted in rows and on either side of the road with staggered pitch as per the IRC: SP: 21-1979. A range of 10-15 m c/c is recommended for spacing of trees (parallel to the road). Setback distance of trees needed in different situations shall be as per the IRC: SP: 21-1979 and the IRC: 66-1976. The distance between the kerb, if any, and the nearest edge of tree trunk shall be at least 2 m. Shrubs in medians shall not normally exceed 1-1.5 m in height and shall be as per IRC: SP: 21-1979.

2.20.2 Relevant provisions of NHAI policy guidelines and respective State Government current requirements and guidelines shall be followed for landscaping.

2.20.3 The Environment and Social Impact Assessment Report, (Clause 8 Schedule C) attached shall be followed in respect of plantation.

For safe traffic operation vertical clearance between the crown of the carriageway and lowest part of the overhang of the tree available across the roadway shall conform to the standards set down in IRC: SP: 21-1979. The pit size, fencing, watering and maturing requirements shall also conform to the above standard. Planting shall be such that it does not obstruct the visibility of traffic from any side and shall be pleasing in appearance.

2.21 Utility Ducts

Two (2) Numbers of Utility ducts shall be provided at an interval of 500m in urban sections and 2000m in rural sections for cross connection. These ducts shall be made of NP4 pipes of minimum 300mm diameter and shall be provided below the ground level. The above mentioned size of the pipe is bare minimum. It shall be increased if necessary in consultation with respective service departments and Independent Consultant. Location and level of the cross utility ducts shall be finalized in consultation with the Independent Consultant and NHAI

3. SPECIFICATIONS

3.1 'Specifications' herein under mean the Specifications relating to the quality and other requirements for the Project Highway as set forth in this Schedule and any modifications there-of, or additions there-to as included in the Specifications of DPR for the Project Highway.

3.2 All Specifications (Additional & Modified) for materials used shall be consistent with DPR Specifications and other publications referred to therein.

3.3 The materials to be used in the work of the Project Highway (including facilities thereon) shall conform to DPR and MORT&H Specifications. However, where the said Specifications are silent in regard to Specification for the material in question in that case, Specifications under Bureau of Indian Standard/British Standards/AASHTO/ASTM shall apply in that order. But even where these standards are silent, the Concessionaire shall get the Specifications for the material in question approved by the Independent Consultant prior to its use in the work.

3.4 Fly ash shall be utilised in the road construction if it is available in adequate quantity within a radius of 100 Km from the Project corridor as per Ministry of Environment and Forest regulations.

3.5 In addition to road and bridge works, there will be other works, described herein under, on the Project Highway. Wherever the tailor made Specifications are not available for these works, specific approval of the Independent Consultant shall be obtained by the Concessionaire in respect to that particular item of work.

3.5.1 HIGHWAY LANDSCAPING

3.5.1.1 Planting of trees along the Project Highway shall follow a variety of schemes depending upon location requirement as per the IRC: SP: 21-1979. The choice of trees to be planted shall also be made as per IRC: SP: 21-1979: "Manual on Landscaping". Eucalyptus (all species) is not recommended for planting. Local, indigenous species that grow in high salinity microclimate shall be planted.

3.5.1.2 On medians and as under-crop, planting of dust and gaseous substance-absorbing shrubs such as nerium oleander album is recommended. To ensure survival from herbivorous animals, shrubs/plants containing latex shall only be planted.

3.5.1.3 Preparation of schemes for Project Highway development, restriction on building lines, control lines, control of access, prevention unauthorised occupation of land and removal of encroachment shall be as per IRC: SP : 15-1996

3.5.1.4 The treatment of the highway embankment slopes shall be as per the recommendations of IRC: 56-1974, depending upon the soil types involved. Pitching works on the slopes shall be as per the MORT&H Specifications.

3.5.1.5 Construction of CC (M-20) footpaths for pedestrians shall be as per MORT&H Specifications.

3.5.1.6 No advertisement shall be allowed to be erected within the RoW.

3.5.1.7 It shall be ensured that any sign, signal or any other device erected for traffic control, traffic guidance and/or traffic information shall not obscure any other traffic sign.

3.5.2 BUILDINGS

3.5.2.1 All building works shall be designed to meet the functional requirements and shall be compatible with the regional architecture and microclimate. Locally available materials shall be given preference but not at the cost of construction quality. All brick and stone masonry works shall be of first class type and as per good practice. All steel works shall conform to section 6, Part VI of the NBC and section 1900 and 2000 of MORT&H Specifications.

3.5.2.2 Whenever any specific provision for any building works is given in the MORT&H Specifications, IRC standards and codes, those shall apply all building works shall conform to Central Public Works Department (CPWD) Specifications for class I building works or standards given in the National Building Code (NBC) as amended and/or modified from time to time. For the purpose of this clause, building works shall be deemed to include road furniture, landscape elements and /or any other works incidental to the building works

3.5.2.3 All the open spaces around the building(s) shall be landscaped. Boundary walls, fe[illegible]ng, controlled entry points and cattle-catches at all entry and exit points to the buildings shall be provided to protect them from intruders and animals.

3.5.2.4 The design of water distribution and storage systems, laying of mains and pipes, cleanin[illegible]nd disinfecting of the water supply system shall be as per relevant clauses of section 1, Part IX of the NBC.

3.5.2.5 The design, layout and construction of drains for sewage disposal system with all ancillary w[illegible]ks such as connections, manholes and inspection chambers and septic tanks shall be as per relevant clauses of Section 2, Part IX of the NBC. Each septic tank, if provided, shall have a soak p[illegible] of adequate size. The location of the septic tanks and subsurface absorption system shall be as per clause 12.15.1 of part I of NBC.

3.5.2.6 The design and location of all electrical installations, distribution system, wiring, fittings, accessories and lightning protection of buildings shall be as per relevant clauses of Section 8, Part VI of the NBC.

3.5.3 HIGHWAY LIGHTING SYSTEM

3.5.3.1 The following codes shall be followed while designing the lighting system on the Pro[illegible] Highway for different locations such as urban areas, junctions, bridges, junction of slip roads with elevated roads, pedestrian crossing, toll plazas, base camps etc.

i) IS: 1944 (Parts I and 11) - 1970
ii) IS: 1944 (Part V) - 1981; and
iii) IS: 1944 (Part VI - 1981)

The layout of the lighting system together with type of luminaries and level of illumination [illegible] different locations shall be determined in consultation with the Independent Consultant.

3.5.3.2 Overhead electric power and telecommunication lines erected within the Right of Way (ROW) by the Concessionaire shall be provided with adequate clearance so that safe use of road is not affected. Vertical and horizontal clearances shall conform to the IRC:32-1969.

3.5.4 HIGHWAY TRAFFIC MANAGEMENT SYSTEM

3.5.4.1 The system and the equipment shall meet the following main climatic and environmental requirements as specified in IS 9000.

i) Temperature Range of Operation - Low of 0°C (± 3° centigrade) to high of 60°C (± 2° centigrade)
ii) Relative Humidity of 95%
iii) Vibration - Frequency Range of 10 Hz - 55 Hz.

3.5.4.2 The Emergency Communication System shall comprise Emergency Call Boxes with loud speaker, micro phone, activation button with LED indicating conversation and housed in a vandal proof fibre glass casing. They shall operate in full duplex mode in a noise level of up to 95 DB and would have in built diagnostic feature for detection in case of damage by any object. They shall be placed at an interval of 2 Km (± 100 meters) on left side of the carriagway for each direction of Traffic. They shall be connected to the transmission system through the integrator by means of copper cable. The System shall have a product support guarentee of 10 years from the manufacturers.

3.5.4.3 The mobile communication system shall comprise of mobile radio base station and control centre equipment. Mobile radio shall have provision for mounting mobile set on ambulances, cranes and patrolling vehicles. The system shall neither affect functioning of other telecom equipment nor get affected by the presence of other equipment. The system shall have the facility to connect mobile to mobile, mobile to controller and controller to mobile along with the system for waiting, holding and transfer of calls. The system shall use single frequency to be allotted by NHAI with the approval of Wireless planning and co-ordination, Department of Telecom. The equipment shall operate in semi duplex mode at 12V ±10% DC.

3.5.4.4 The design for Variable Message Signs (VMS) will be modular with sign panels using LEDs / High Gain Trans Reflective LCDs, for outdoor ambient lights. The sign panel should be such that a display is legible from a distance of about 200 m. For this purpose, panel shall have minimum dimensions of 3m length x 1.8 m height x 0.2 m depth. The minimum height of the characters shall be 300 mm. The contrast ratio shall be more than 30: perpendicular to the bold face and more than 10 at an angle of ± 70 minutes to perpendicular. The equipment shall be capable of storing minimum 10 frames than can be triggered on receiving the tele command. The sign panel shall be installed on structures, which are aesthetically pleasing and can withstand wind pressure. The equipment shall be capable of storing minimum semi duplex mode and other known forces. The minimum vertical clearance available at VMSs shall be 5.5 m from the road surface. Power supply shall be fed from the integrator locations.

3.5.4.5 The meteorological sensors shall comprise thermocouple / pyranometer, humidity meter, anemometer meter, visibility meter and sensor for measuring pavement surface temperature. They shall be installed on a single pole with a specific attachment and power supply fed from integrator. They shall have the facility to communicate on PIJF/Optical Fibre Cable.

3.5.4.6The Automatic Traffic Counter-cum-Classifier shall be capable of detecting and recording all types of vehicles plying on the Project Highway, based on their length and number of axles. It shall be capable of taking input from portable sensors. The system shall be robust and capable of operating with minimum maintenance.

The temperature range of pavement in which the sensor shall work are -40° Centigrade to +80° Centigrade. The recording and display unit shall work accurately between -20° centigrade to +60°

Centigrade. The sensor shall be combination of piezo electric sensor and inductive loops enabling counting / classification of up to four/six-lane traffic with user set time periods. The logic unit shall be micro processors based. Vehicle counting / classification interval shall be programmable from one minute to 1440 minutes (24 hours). The system should be able to record and store vehicle data for a period of at least two weeks with Daily Traffic Volume upto 30,000 vehicles. The system shall have compatibility to transfer the data on PIJF/ Optical Fibre cable.

3.5.4.7 The control centre shall be designed for round the clock operations of monitoring, on line information acquisition and processing the same for decision taking. The control centre shall have equipment of central computer, call centre, terminal junction box, uninterrupted power supply (UPS), console operator with monitors and joy sticks, rack accommodation, large display board, line printer and general purpose office computer with monitor, printer, fax and telephone. The system shall also have Network Management System (NMS) for real time monitoring of ECBs and network diagnostic.

3.5.5 TOLL PLAZA

3.5.5.1 Toll Plaza Complex

Tollbooth shall be visually pleasing structurally sound and capable of withstanding extreme weather conditions of the region. It shall have clear visibility of approaching vehicles and shall be strong enough to withstand all forces as per relevant clauses of Section 1, Part VI of NBC. The buildings of the Toll Plaza complex shall conform to clause 3.5.2 of this Schedule.

3.5.5.2 The Toll Plaza complex including its canopy shall have 6 m clear height. Toll gates shall be provided with check barriers, which can be electrically operated from the Tollbooths. High mast lighting shall be provided. Power supply will be from the public power supply system but standby diesel generating sets of adequate capacity shall be provided as mentioned in DPR.

3.5.5.3 The Toll Plaza Complex shall have surface and sub surface drainage system.

3.5.5.4 Fire fighting equipment including smoke detectors and audio visual alarm system shall be planned and installed as per section 4.17.1 of NBC.

3.5.5.5 The pavement of the service lanes shall be of rigid type for at least a length of 27.5m on either side of centre of Toll plaza and shall be designed as stipulated under pavement design.

3.5.5.6 The toll collection system shall be at least semi automatic type and it shall be equipped with a vehicle detector on entry lane which counts the number of vehicles and their axle numbers, a ticket issuing machine which issues a toll ticket at the press of a button on the touch panel and an entry lane controller which controls these equipments of the entry lane and sends the data to the data processing equipment of the Toll Plaza Office. The electronic toll collection system shall be

provided on one toll lane in each direction within a period of 5 years from the date of commissioning the commercial traffic and it shall consist of a tag fitted on vehicle which transmits radio waves to antenna for its identification code and other stored data, an antenna fitted on canopy which relays the received signal from tag to reader and a reader which transmits all information to the customer's information management system. The Electronic Toll Collecting (ETC) system shall also be compatible with the technology to be adopted by NHAI for all the Toll Plazas throughout the country.

3.5.5.7 Toll plaza shall be provided with Low speed weigh-in-motion (WIM) system, which should be capable of determining the axle weights either statically or dynamically up to a speed of 5 KMPH. WIM system should consist of a weigh beam permanently installed into a concrete lane. WIM should also have piezo electric axle detection sensors for accurate automatic vehicle classification and should be provided in all truck lanes & over sized vehicle lanes at toll plaza for both directions of traffic. The WIM system should have traffic signal control, configurable alarm outputs and user-friendly operator control unit.

3.5.5.8 The weigh beam used in the WIM shall have following Specifications:

- Accuracy:
  - Weigh-in-motion — Typically < 1% error
  - Static — Typically < 1% error
  - Block Weight — 10Kg (Up to 5 KMPH)
- Capacity
  - Structural Strength — 70 tonnes
  - Weighing Capacity — 30 Tonnes
- Load Cell
  - Weighing Capacity of 10 Tonnes, rated for 50% overload and should be 100% water and dust proof
- Standards
  - Should conform to the standards of OIML R 60 class III (US standards)

3.5.5.9 The WIM system shall have compatible software and be connected to a PC for data management and storage. It should be capable of weighing in both modes of operation. The system should be capable of printing and multi language display for local use. There should be facilities for data back-up, and archive functions to facilitate saving monthly operations.

3.5.6 TRAFFIC SAFETY MEASURES

3.5.6.1 Highway Patrolling

3.5.6.1.1 The location and number of patrol control room centers shall be finalised with Independent Consultant. Highway patrolling establishment should have three shifts of 8 hours each. It would consist of at least 3 persons including driver.

3.5.6.1.2 Control Centers (Main & Sub) for HTMS would have a crane mounted on truck, Diesel Jeep / Station Wagon, ambulance. Motorcycle and other equipments as per requirement. All the vehicles shall conform to the Motor Vehicles Act 1988. The ambulance unit shall have 1 (one) nurse, 1 (one) compounder. 1 (one) photographer and 1 (one) driver.

3.5.6.2 Pedestrian Guard Rails and Safety Barriers

3.5.6.2.1 The Pedestrian Guard Rails along the Highway shall be constructed as per DPR.

3.5.6.2.2 The Safety Barrier shall conform to MORT&H Specifications Clause 810 and shall be constructed as mentioned in DPR. In case not mentioned in DPR it shall be W-beam metal crash barrier.

3.5.7 TRAFFIC CONTROL

3.5.7.1 Traffic Signals

3.5.7.1.1 There shall be no traffic signals on National highway except at the locations of major intersections mentioned in Schedule B, where pedestrian Zebra crossing facilities are to be provided in urban areas. Where provided as pedestrian facility and on the side road crossing/meeting the Project Highway, it will be governed by clause 3.5.7.1.2 herein under.

3.5.7.1.2 The signal foundation shall be constructed as per clause 13 of IRC: 93 - 1985. Constructional requirements shall conform to IS: 7537- 1974, unless otherwise stated in IRC: 93-1985. Posts shall be painted and protected as per clause 3.7 of IS: 7537-1974. Traffic signals shall have a complete electronic mechanism with an auxiliary manual controller.

3.5.7.2 Highway Signs

3.5.7.2.1 The road signs erected on the Project Highway shall conform to IRC 67-2001, Code of Practice for Road signs. Road signs such as Chevron, overhead etc. not covered by IRC 67-2001 will be as per BIS/British Standard/AASHTO/ASTM in that order after approval by the Independent Consultant.

3.5.7.2.2 All road signs shall be with retro-reflective sheeting of high intensity grade with encapsulated lens fixed over aluminium substrata as per Clause 801 of MORT&H Specifications. Hi-intensity grade (micro prismatic type) retro reflective sheeting may also be used for road signage.

3.5.7.2.3 The overhead signs shall be placed on a structurally sound gantry or cantilever structure made of circular pipes or steel sections approved by the Independent Consultant. The said sign shall be with high intensity retro reflective sheeting. The height, lateral clearance and installation shall be as per the MORT&H Specifications.

3.5.7.3 **Pavement Markings**

3.5.7.3.1 Pavement markings shall be as per IRC: 35-1997. These markings shall be applied to road centre lines, edge line, continuity line, stop lines, give way lines, diagonal/chevron markings, zebra crossing and at parking areas by means of an approved self-propelled machine which has a satisfactory cut-off value capable of applying broken lines automatically.

3.5.7.3.2 Road markings shall be of hot applied thermoplastic paints with glass reflectorising beads as per relevant clauses of Section 803 of MORT&H Specifications.

3.5.7.3.3 Titanium of rutile grade, minimum 40% glass beads, bead size of 1-1.5 mm, glass beads with minimum 95% true spheres with minimum reflectivity of 100 mcd/lx/sqm for a period of 12 months and minimum wet reflectivity after rain of 25 mcd/lx/sqm on centre line and pedestrian crossing shall be used. It should also have at least a life warranty of 24 months.

3.5.7.3.4 Instruments such as reflectometers shall be available in mobile battery operated units to check the reflectivity in the site.

3.5.8 **PROJECT VEHICLES AND EQUIPMENT FOR OPERATION**

3.5.8.1 All the vehicles used for activities pertaining to the highway operation shall conform to the Motor Vehicles Act 1988.

3.5.8.2 All the gadgets, equipment or any systems used for operation and maintenance of the highway shall be of standard make and shall conform to international standards

3.5.9 **ROAD FURNITURE AND FACILITIES ON ROADSIDE**

3.5.9.1 Road furniture on the Project Highway provided as per IRC Codes shall meet requirements of MORT&H Specifications. Where any item is not covered by it, then its specification shall conform to BIS/British standard/AASHTO/ASTM in that order after approval by the Independent Consultant.

3.5.9.2 Noise barriers and other measures as suggested in EMP for the Project in DPR shall be strictly adhered to.

3.5.9.3 Low height easily mountable kerb shall be placed at locations of pedestrian crossings and other facilities to accommodate physically handicapped people. These locations should be designed suitably to avoid usage of vehicular traffic, particularly two-wheelers. Design of such facilities shall be finalised in consultation with Independent Consultant.

3.5.9.2 Roadside facilities such as Litter bins, Pubic Toilets and Drinking Water Kiosks where provided shall follow the Specifications spelt out hereinunder.

3.5.9.3 **Litter Bins:** The litter-bin shall be simple in shape and its colour and finish shall be conspicuous. Litter-bin shall be post mounted and/or swivel type. The mounting and fixing components shall be robust. The bin shall have drainage holes for periodic flushing. It shall also be theft, vandal and fire proof. It shall be resistant to wear and tear and the material and design shall be such as to require minimal maintenance.

3.5.9.4 **Public Toilets:** The public toilet shall be simple in design and the area around the toilet block shall be paved with cement concrete tiles or any other suitable material, and have cross slope so as to ensure speedy disposal of water. The structure shall conform to relevant sections of clause 3.5.2 of this Schedule.

3.5.9.5 **Drinking Water Kiosk:** The design of the water kiosk shall be such as to require minimal maintenance. Area around the kiosk shall be paved with cement concrete tiles or any other suitable material, and have cross slope so as to ensure speedy disposal of water. The water supplied shall conform to IS: 10500:1991 for quality and purity of potable water.

3.5.10 PICKUP BUS STOPS

3.5.10.1 The bus stop layout shall provide safe entry and exit of buses from Project Highway and movement of passengers. The shelter structure shall be structurally safe and functional so as to protect the waiting passengers adequately from sun, rain and wind. The seating and plinth of the structure shall be of coursed stone masonry. The bus bay area shall be provided with an effective drainage system.

3.5.10.2 The bus bays shall be paved with flexible pavement as that of new carriageway.

3.5.11 TRUCK PARKING FACILITIES

3.5.11.1 The layout of the truck lay-byes and facilities thereon shall be as mentioned in Schedule C to cater to the estimated parking demand and shall be got approved by the Independent Consultant. Parking shall be parallel to the road and the lay-bye shall be setback from the edge of the carriageway. The lay-byes shall be landscaped with low-density plantation to provide shade.

3.5.11.2 The parking spaces shall have flexible pavement as that of main carriageway. Parking bays/lots shall have proper cross slope and drainage. They shall be marked with paint as per IRC: 35-1997 to demarcate parking and circulation spaces. Lighting shall be provided as per IS: 1944 (Part I and II) - 1970.

3.5.11.3 The parking lay-bye shall have drinking water kiosk, independent of other existing facilities and of required capacity. The kiosk shall be well sheltered from the sun and rain and area around it shall be suitably and adequately paved with proper drainage to ensure disposal of spilt water.

3.5.11.4 The parking lay-bye shall have toilet facility to suit the requirement. It shall have covered soak pits and shall be away from the drinking water facility.

4. Safety During Project Execution, Operation and Maintenance

4.1 The Concessionaire shall ensure complete safety of construction staff during the construction work of the Project Highway. It shall also ensure minimum interference to the flow of traffic during widening of the existing 2-lane pavement. The additional lanes shall be constructed first and the traffic diverted to it before improvements to the existing road are taken up. Detailed plan for traffic management shall be worked out in consultation with the Independent Consultants prior to implementation. During construction, the Concessionaire shall take all necessary measures for the safety of traffic by providing and maintaining barricades, traffic signs and illumination during night.

4.2 The Concessionaire shall also ensure complete safety of the Road Users during the construction work of various nature spelt out in Schedule L

4.3 Guidelines for safety measures during construction, operation and maintenance as given in Schedule S, shall be followed.

4.4 A situation arising at site not covered in Schedule L shall be carefully studied for solution, in consultation with Independent Consultant.

Annexure-I

LIST OF IRC CODES FOR THE DESIGN OF BRIDGE STRUCTURES AND CULVERTS

-1998	Standard Specifications & Code of Practice for Road Bridges. Section I - General Features of Design (Seventh Revision)
-2000	Standard Specifications & Code of Practice for Road Bridges. Section II - Loads and Stresses (Fourth Revision)
-1971	Recommended Practice for Numbering Bridges and Culverts (First Revision)
-2000	Design Criteria for Pre-stressed Concrete Road Bridges (Post-Tensior Concrete) (Third Revision)
-2000	Standard Specifications and Code of Practice for Road Bridges. Section Cement Concrete (Plain and Reinforced) (Third Revision)
-1986	Standard Specifications and Code of Practice for Road Bridges. Section Composite Construction (First Revision)
-2001	Standard Specifications and Code of Practice for Road Bridges. Section Steel Road Bridges. (Second Revisison)
-1972	Recommendations for Estimating the Resistance of Soil Below t... Maximum Scour Level in the Design of Well Foundations of Bridges.
-1974	Lateral and Vertical Clearances at Underpasses for Vehicular Traffic.
-1980	Geometric Design Standards for Rural (Non-Urban) Highways
-2000	Standard Specifications and Code of Practice for Road Bridges. Section VII Foundations & Substructure (Second Revision)
-1999	Standard Specifications and Code of Practice for Road Bridges. Section IX Bearings, Part I : Metallic Bearings (First Revision)
-1987	Standard Specifications and Code of Practice for Road Bridges, (Part-II) Section IX-Bearings, Part II: Elastomeric Bearings
-1997	Guidelines for Design & Construction of River Training & Control Works for Road Bridges.(First revision)
3-1973	Guidelines for the Design of Small Bridges and Culverts
8-1978	Manual for Highway Bridge Maintenance Inspection
3-1989	Guidelines on Supplemental Measures for Design, Detailing & Durability of Important Bridge Structures.
5-1990	Guideline for Inspection and Maintenance of Bridges
0-1993	Guidelines on Techniques for Strengthening and Rehabilitation of Bridges

IRC CODES/STANDARDS/ACTS FOR ROAD WORKS

	Route Marker signs for National Highways (First Revision)
	Type Designs for Highway Kilometer Stone (Second Revision)
	Recommended Practice for Location and layout of Roadside Motor Fuel Filling and Motor Fuel Filling-cum Service Stations (Second Revision)

IRC: 15-2002	Standard Specification and Code of Practice for Construction of Concrete Roads (Third Revision)
IRC: 16-1989	Specification for Printing of Base Course with Bituminous Primers (First Revision)
IRC: 21-2000	Standard Specifications and Code of Practice for Road, Bridges, Section III-Cement Concrete (plain and Reinforced) (Third Division)
IRC: 25-1967	Type Designs for Boundary Stones
IRC: 26-1967	Type design for 200-meter stones
IRC: 30-1968	Standard Letters and Numbers of Different Heights for Use on Highway signs
IRC: 32-1969	Standards for Vertical and Horizontal Clearances of Overhead Electric Power and Telecommunication Lines as Related to Roads
IRC: 35-1997	Code of Practice for Road Markings
IRC: 36-1970	Recommended Practice for the Construction of Earth Embankment for Road Works
IRC: 37-2001	Guidelines for the Design of Flexible Pavement (Second Revision)
IRC: 38-1988	Guidelines for Design of Horizontal Curves for Highways and Design Tables (First Revision)
IRC: 56-1974	Recommended Practice for Treatment of Embankment Slopes for Erosion Control
IRC: 58-2002	Guidelines for the Design of Plain Jointed Rigid Pavements for Highways.
IRC: 62-1976	Guidelines for Control of Access on Highways
IRC: 64-1990	Guidelines for Capacity of Roads in Rural Areas (First Revision)
IRC: 66-1976	Recommended Practice for Sight Distance on Rural Highways
IRC: 67-2001	Code of Practice for Road Signs (First Revision)
IRC: 69-1977	Space Standards for Road in Urban Areas
IRC: 73-1980	Geometric Design Standards for Rural (Non Urban) Highways
IRC: 75-1979	Guidelines for the Design of High Embankments
IRC: 79-1981	Recommended practice for Road Delineators
IRC: 80-1981	Type Designs for Pick-up Bus Stops on Rural (i.e. Non-Urban) Highways
IRC: 81-1981	Tentative Guidelines for Strengthening of Flexible Road Pavements Using Benkelman Beam Deflection Techniques
IRC: 84-1983	Code of Practice for curing of Cement Concrete Pavements
IRC: 86-1983	Geometric Design Standards for Urban Roads in Plains
IRC: 92-1985	Guidelines for the Design of Interchanges in Urban Areas
IRC: 93-1985	Guidelines on Design and Installation of Road Traffic Signals
IRC: 98-1997	Guidelines on Accommodation of Under Ground Utility Services Along and Across Roads in urban Areas (First Revision)
IRC: 103-1988	Guidelines for Pedestrian Facilities
IRC: 106-1990	Guidelines for Capacity of Urban Roads in Plain Areas
IRC: T08-1996	Guidelines for Traffic Prediction on Rural Highways

IRC SP 11-1988	Hand Book of Quality Control for Construction of Roads and Runwa (Second Revision)
[illegible]-1996	Ribbon Development along Highways and its Prevention
[illegible]-1979	Manual on Landscaping of Roads
[illegible]-1983	Vertical curves for Highways
[illegible]-1992	New Traffic signs
[illegible]-1994	Guidelines on Design of At-Grade Intersections in Rural and Urban areas
[illegible]-1994	Guidelines on Road Drainage
[illegible]-1994	Highway Safety Code
[illegible]-1999	Guidelines on Urban Drainage
[illegible]-2002	Guidelines on the use of Polymer and Rubber Modified Bitumen in Road Construction
[illegible]-2001	Guidelines for the use of Fly Ash in Road Embankment
[illegible]-2002	Guidelines for the use of Geotextiles in Road Embankments and Associated Works.
[illegible]-2004	Guidelines for the use of Interlocking Concrete Block Pavement.

Road Transport and Highway Publications

Manual for maintenance of roads, 1983

Specifications for Road and Bridge Works, 2001 (Fourth Revision)

Addendum to Technical Circulars and Directives on National Highways and Centrally oad and Bridge Works Projects (Jan 1995 to Dec 1997)

Type Designs for Intersections on National Highways, 1992

Addendum to Ministry's Technical Circulars and Directives on National Highways an nsored Road and Bridge Projects (August 1988 to December 1992), 1993

Addendum to Ministry's Technical Circulars and Directives on National Highways and nsored Road and Bridge Projects (Jan. 1993 to Dec. 1994) 1996

	Road traffic signals
	Drinking Water
I&II) 1970	Code of Practice for lighting of Public Thoroughfare: Parts land 2 for main and secondary roads (Group A and B) (first revision) (Amendments No. and 2) Parts 1 and 2 in one volume) (Amendments 2)
V) 1981	Code of Practice for Lighting of Public Thoroughfares: Parts 5 Lighting fo Grade separated junctions, Bridges and Elevated roads (Group D)
VI) 1981	Code of Practice for lighting of Public Thoroughfare: Part 6 Lighting fo Towns and city centres and areas civic importance (Group E)
	Hot rolled steel for welded tubes and pipes (First Revision)

National Building Code

Part III, NBC:	Development Control rules and general building requirements
Part VI, NBC:	Structural Design
Part VIII, NBC:	Building Services
Part IX, NBC:	Plumbing Services
Part IV, NBC:	Fire Protection

British Standards

BS 873 part IV (1987)	Road traffic signs and internally illuminated bollards. Specification for road studs
BS EN 1463-1: 1998	Road traffic signs and internally illuminated bollards. Specification for road studs
BS EN 1436:1998	Road marking materials. Road marking performance for road users.

SCHEDULE E

(APPLICABLE PERMITS)

SCHEDULE E

APPLICABLE PERMITS

(to be obtained before/ on financial closure)

1. **Ministry of Finance / RBI**

   i) Approval for foreign investment and foreign loans, if required
   ii) Approval for import of equipment and machinery for construction and operation, if required
   iii) Exemption of Excise duty on construction material, if required.

2. **Department of Telecommunication**

   i) Permission / clearance for setting up of wireless system, if required
   ii) Clearance / permission for the use of optical fibre cables of DOT, if required

3. **State Government Permits**

Quarrying Permits:

- Permits for extraction of boulder from quarry from Additional District Magistrate (ADM) Mines
- Permit for installation of crusher from village Panchayat and State/Central Pollution Control Board
- License for explosives from the office of Explosive controller
- Explosive license for storing diesel

Electricity:

- Permission required from State Electricity Board (SEB) for installation of Diesel Generator (DG)
- Permission for electrical connection, if power source is available

Water:

- If water has to be taken from river/ reservoir, permission to be obtained from State Irrigation Department

Batching Plant:

- License from inspection of factories
- NOC consent from pollution department

Asphalt Plant:

- Clearance required from village panchayats & State/Central Pollution Control Board

Borrow Earth:

- Permission from irrigation department if land taken from irrigation land
- Permission required from village panchayat and ADM mines for Government & private land
- Permission from Local Municipalities and Development Authorities.

Cutting of trees and other environment clearances:

- Permission from Forest Department and other applicable agencies.

Sewage Lines and Water Mains:

- Permission from Local Municipalities and Development Authorities.

SCHEDULE-F

(BANK GUARANTEE FOR PERFORMANCE SECURITY)

KMC - SREI (Consortium)
MCH NO. 555, ARORA COLONY, ROAD NO. 3, BANJARA HILLS, HYDERABAD - 34
TEL (040) 23543541, 23543545
FAX (040) 23543538

Letter No. 1621/KMC/NHAI/KL-1 (BOT)/2005 Date: 28.10.2005

To
Mr. Pranavant
General Manager (NS-II)
National Highways Authority of India
G-5 & G-6, Sector-10, Dwaraka
NEW DELHI – 110 075
Ph No. 011-25074100 Extn.: 1312
Fax No. 011-25074100 Extn.: 2423

Sir,

Sub: (i) Design, Construction, Development, Finance, Operation of Km 270.00 (Thrissur) to Km 316.70 (Angamali) and (ii) Improvement, Operation and Maintenance of Km 316.70 (Angamali) to Km 342.00 (Edapalli) on NH-47 together called the "Project" in the State of Kerala on Build Operate & Transfer (BOT) basis: Project Reference No. NS2/BOT/KL-1 – Submission of Bank Guarantees towards Performance Security – Reg.

Ref: Your Letter No. NHAI/Tech/NS-2/BOT/KL-1/2005 dated 25.10.2005.

In accordance with clause 1.37, Part-1, Instructions to Bidders of RFP, we submit herewith the following Bank Guarantees towards Performance Security for the above work.

S. No.	B.G No., Date & Issuing Bank	Amount (Rs.)
1	2005/306 dated 28.10.2005 Andhra Bank, Sultan Bazar Branch Koti, Hyderabad	93750000 i.e. 3% of the total project cost
2	2005/307 dated 28.10.2005 Andhra Bank, Sultan Bazar Branch Koti, Hyderabad	62500000 i.e. 2% of the total project cost
	Total Amount of Bank Guarantees	**156250000**

KMC - SREI (Consortium)
MCH NO. 555, ARORA COLONY, ROAD NO. 3, BANJARA HILLS, HYDERABAD - 34
TEL (040) 23543541, 23543545
FAX (040) 23543538

We hereby undertake that the validity of the above Bank Guarantees will be extended as and when required.

Thanking you.

Yours faithfully
For KMC – SREI (Consortium)

Encl.: Two Original Bank Guarantees

Copy by fax for advance intimation

(B. Chandra Sekhar Reddy)
Power of Attorney Holder



DATE 3/1/2005 Rs. 100/- 34640 AP 23 IR

PURCHASER Kumar

S/W. D/o. Ramulu Hyd

On: M/s KMC - SREI (Consortium), Hyd

V. S. SRINIVAS 16/1/05
Stamp Vendor L. No. 67/93 R. No. 28/98
Shop No. 5, Vardhaman Apartments,
Srinagar Colony, Hyderabad-500 073.

BANK GUARANTEE FOR PERFORMANCE SECURITY

From: Andhra Bank, Sultan Bazar Branch
Koti, Hyderabad – 500 001

To: National Highways Authority of India
G-5 & G-6, Sector-10, Dwaraka
NEW DELHI – 110 075

A. KMC – SREI (Consortium) (the "Bidder") has agreed in accordance with the Letter of Acceptance (LOA) dated 30.09.2005 issued by NHAI to construct and operate the "(i) Design, Construction, Development, Finance, Operation of Km 270.00 (Thrissur) to Km 316.70 (Angamali) and (ii) Improvement, Operation and Maintenance of Km 316.70 (Angamali) to Km 342.00 (Edapalli) on NH-47 in the State of Kerala, Project Reference No. NS2/BOT/KL-1" Project on BOT basis (the "Project").

ANDHRA BANK
Sultan Bazar (Hyd.) Br.

M. S. SANKARA RAO

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2005 S-268.



DATE 3/11/2005 Rs. 100/-

34641 AP 23 IR

PURCHASER Ramesh, Hyd

S/o. D/o. Ramesh, Hyd

On Account of: M/s KMC - SREI (Consortium), Hyd

V. S. SRINIVAS 16/02
Stamp Vendor L. No. 67/93 R. No. 28/98
Shop No. 5, Vardhaman Apartments,
Srinagar Colony, Hyderabad-500 073.

BANK GUARANTEE FOR PERFORMANCE SECURITY

From: Andhra Bank, Sultan Bazar Branch
Koti, Hyderabad -- 500 001

To: National Highways Authority of India
G-5 & G-6, Sector-10, Dwaraka
NEW DELHI – 110 075

A. KMC – SREI (Consortium) (the "**Bidder**") has agreed in accordance with the Letter of Acceptance (LOA) dated 30.09.2005 issued by NHAI to construct and operate the "(i) Design, Construction, Development, Finance, Operation of Km 270.00 (Thrissur) to Km 316.70 (Angamali) and (ii) Improvement, Operation and Maintenance of Km 316.70 (Angamali) to Km 342.00 (Edapalli) on NH-47 in the State of Kerala. Project Reference No. NS2/BOT/KL-1" Project on BOT basis (the "**Project**").

ANDHRA BANK
Sultan Bazar (Hyd.) Br.

M. B. SANKARA RAO
S-268

8005 | 506 169

B. The Bidder is required to give ("NHAI") a guarantee by a recognized bank based in India in the sum of Rs.9,37,50,000/- only (Indian Rupees Nine Crores Thirty Seven Lakhs Fifty Thousand only) for compliance with its obligations under the Concession Agreement during the Construction Period.

C. The Guarantor has agreed to give NHAI the abovementioned guarantee on the terms set out herein.

GUARANTEE

1. We, **Andhra Bank, Sultan Bazar Branch, Koti, Hyderabad-500 001 (the "Guarantor")** with its registered office at Dr. Pattabhi Bhavan, Saifabad, Hyderabad, unconditionally guarantee to pay NHAI upon first written demand and without any deduction any sum claimed by NHAI upto a maximum of Rupees 9,37,50,000/- (Indian Rupees Nine Crores Thirty Seven Lakhs Fifty Thousand only) (the **"Guaranteed Sum"**) subject to the conditions set out below.

2. The Guarantor unconditionally and irrevocably promises to pay on demand the Guaranteed Sum, without protest or demur whatsoever upon being served a written demand from NHAI, which shall be final and conclusive as against the Guarantor requiring the Guarantor to make the payment to NHAI.

3. The Guarantor waives any requirement that NHAI demand any debt or payment from the Bidder before presenting it with a demand under this Guarantee.

4. NHAI shall notify the Guarantor of its demand for payment of the Guaranteed Sum without any deduction of whatsoever nature and without reference to any claim or counter claim or set off, in accordance with the Concession Agreement.

Such notification served by NHAI, shall be conclusive and binding on the Guarantor.

ANDHRA BANK
Manoja Kr. Sahoo M-616
Asst. Manager
Sultan Bazar (Hyd.) Br.

BAN.
Issue 2005/306
Date 28.10.2005

A. B. SANKARA RAO
S-268.

National Highways Authority of India New Delhi

Gujarat Infrastructure Pvt. Ltd.

Upon encashment and appropriation of the whole or any portion of the Guaranteed Sum by NHAI in accordance with the Concession Agreement, the Guarantor shall be obliged to replenish the existing Guarantee or provide fresh guarantee of the Guaranteed Sum and the Bidder is deemed to have made the request for such fresh guarantee upon the execution and furnishing of this Guarantee in the first instance.

6. No underlying dispute as between NHAI and the Bidder nor any pending application for interim relief or arbitration proceedings or other legal proceedings shall constitute any ground for prevention, delay or obstruction for making payment to NHAI by the Guarantor and the existence of any disputes or differences or claims in arbitration or otherwise shall not constitute any ground for non-payment on this Guarantee.

7. This Guarantee is valid and effective from its date. This Guarantee and the Guarantor's obligations under it will terminate on upon issuance of the Completion Certificate by the Independent Consultant for the Project as advised to the Guarantor in writing by NHAI.

8. The Guarantor agrees that its obligation to pay any demand made by NHAI before the termination of this Guarantee will continue until the amount demanded has been paid in full.

9. This Guarantee shall be valid and effective upto 27.10.2008 for enabling NHAI to lodge a claim for payment under the Guarantee till the date of expiry of the term of the Guarantee. The Guarantor shall be obligated to make payment upon the Guarantee forthwith on demand, if the claim is lodged within the claim validity period and the obligation to pay is subject to normal limitation for payment of claims upon a Guarantee. Time is of essence for payment and in the event of failure to make payment, Guarantor shall be obligated to pay compound interest at 2% above the prime lending rate of the Guarantor institution, compounding quarterly in the event of the Guarantor's failure to make payment upon the Guarantee for any reason whatsoever. Payment of interest as provided is no excuse for delayed payment or non-payment of the Guaranteed Sum.

FOR ANDHRA BANK

Vijaya Kumar Sahoo M-616
Asst. Manager
Sultan Bazar (Hyd.) Br.

2005/306
28/10/2005

M. B. SANKARA RAO
S-268

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10. No change in the constitution of the Bidder or of the Guarantor shall be a ground for release of the Guarantee and no variation in the concession agreement made post selection of the bidder, or post making of the bid, shall constitute a variation, which would, subject to the terms and conditions of this agreement, discharge the Guarantor. The Guarantor shall notwithstanding such change, be bound to make payment upon the Guarantee on demand.

11. The Guarantor agrees that no change, addition to or other modifications to the terms of the Concession Agreement or to any documents which have or may be made between NHAI and the Bidder will in any way release it from any liability under this Guarantee and that it waives any requirement for notice of any such change, addition or modification.

12. The Guarantor agrees that it will not assign its obligations under this Guarantee without the prior written consent of NHAI. NHAI will not unreasonably withhold its consent if the proposed assignee is of at least equal financial standing to the Guarantor and the assignee assumes in writing the obligations of the Guarantor under this Guarantee at the same time or before the assignment.

13. This Guarantee binds the Guarantor, its successors and permitted assigns.

FOR ANDHRA BANK

Malaya Kumar Sahoo M-616
Asst. Manager
Sultan Bazar (Hyd.) Br.

2005/306
28.10.2005

M. B. SANKARA RAO
S-268.

Notwithstanding any thing contained here in:

a) Our liability under this Bank Guarantee shall not exceed Rs. 9,37,50,000/- (Rupees Nine Crores Thirty Seven Lakhs Fifty Thousand Only).

b) This Bank Guarantee shall be valid upto 27.10.2008.

c) We are liable to pay the guaranteed amount or any part thereof under this Bank Guarantee only if you serve upon us written claim or demand on or before 27.10.2008.

SEAL OF [THE BANK] .....

NAME OF [THE BANK] .....

SIGNATURE OF ANDHRA BANK .....

NAME Malaya Kr. Sahoo M-616 .....
Asst. Manager
Sultan Bazar (H;d.) Br.

TITLE .....

DATE 28.10.2005

ANDHRA BANK
HYDERABAD.
B.G. No: 2005/306
Date. 28.10.2005

For Andhra Bank

Manager (Attorney)

M. B. SANKARA RAO
S-268

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No. 290 DATE 3/1/2002 Rs. 100/- 3464

PURCHASER Kumar

S/o, D/o, W/o Ramulu Hyd.

On Account Of Whom: M/s KMC-SREI (Consortium), Hyd

V. S. SRINIVAS
Stamp Vendor L. No. 67/93 R. No. 73/95
Shop No. 5, Vardhaman Apartments,
Srinagar Colony, Hyderabad-500 073.

BANK GUARANTEE FOR PERFORMANCE SECURITY

From: **Andhra Bank, Sultan Bazar Branch**
Koti, Hyderabad – 500 001

To: **National Highways Authority of India**
G-5 & G-6, Sector-10, Dwaraka
NEW DELHI – 110 075

A. KMC – SREI (Consortium) (the "**Bidder**") has agreed in accordance with the Letter of Acceptance (LOA) dated 30.09.2005 issued by NHAI to construct and operate the "(i) Design, Construction, Development, Finance, Operation of Km 270.00 (Thrissur) to Km 316.70 (Angamali) and (ii) Improvement, Operation and Maintenance of Km 316.70 (Angamali) to Km 342.00 (Edapalli) on NH-47 in the State of Kerala, Project Reference No. NS2/BOT/KL-1" Project on BOT basis (the "**Project**").

ANDHRA BANK
Sultan Bazar (Hyd.) Br.

3005/307
28.10.2005

M. B. SANKARA RAO
S-268.

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B. The Bidder is required to give ("NHAI") a guarantee by a recognized bank based in India in the sum of Rs.6.25.00,000/- only (Indian Rupees Six Crores Twenty Five Lakhs only) as security for compliance with its obligations under the Concession Agreement during the Construction Period.

C. The Guarantor has agreed to give NHAI the abovementioned guarantee on the terms set out herein.

GUARANTEE

1. We, **Andhra Bank, Sultan Bazar Branch, Koti, Hyderabad-500 001 (the "Guarantor")** with its registered office at Dr. Pattabhi Bhavan, Saifabad, Hyderabad, unconditionally guarantee to pay NHAI upon first written demand and without any deduction any sum claimed by NHAI upto a maximum of Rupees 6,25,00,000/- (Indian Rupees Six Crores Twenty Five Lakhs only) (the **"Guaranteed Sum"**) subject to the conditions set out below.

2. The Guarantor unconditionally and irrevocably promises to pay on demand the Guaranteed Sum, without protest or demur whatsoever upon being served a written demand from NHAI, which shall be final and conclusive as against the Guarantor requiring the Guarantor to make the payment to NHAI.

3. The Guarantor waives any requirement that NHAI demand any debt or payment from the Bidder before presenting it with a demand under this Guarantee.

4. NHAI shall notify the Guarantor of its demand for payment of the Guaranteed Sum without any deduction of whatsoever nature and without reference to any claim or counter claim or set off, in accordance with the Concession Agreement.

Such notification served by NHAI shall be conclusive and binding on the Guarantor.

Manager M-616
Asst. Manager
Sultan Bazar (Hyd.) Br.

2005/307
Dt. 28.10.2005

M. B. SANKARA RAO
S-263

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5. Upon encashment and appropriation of the whole or any portion of the Guaranteed Sum by NHAI in accordance with the Concession Agreement, the Guarantor shall be obliged to replenish the existing Guarantee or provide fresh guarantee of the Guaranteed Sum and the Bidder is deemed to have made the request for such fresh guarantee upon the execution and furnishing of this Guarantee in the first instance.

6. No underlying dispute as between NHAI and the Bidder nor any pending application for interim relief or arbitration proceedings or other legal proceedings shall constitute any ground for prevention, delay or obstruction for making payment to NHAI by the Guarantor and the existence of any disputes or differences or claims in arbitration or otherwise shall not constitute any ground for non-payment on this Guarantee.

7. This Guarantee is valid and effective from its date. This Guarantee and the Guarantor's obligations under it will terminate on upon issuance of the Completion Certificate by the Independent Consultant for the Project as advised to the Guarantor in writing by NHAI.

8. The Guarantor agrees that its obligation to pay any demand made by NHAI before the termination of this Guarantee will continue until the amount demanded has been paid in full.

9. This Guarantee shall be valid and effective upto 27.07.2006 for enabling NHAI to lodge a claim for payment under the Guarantee till the date of expiry of the term of the Guarantee. The Guarantor shall be obligated to make payment upon the Guarantee forthwith on demand, if the claim is lodged within the claim validity period and the obligation to pay is subject to normal limitation for payment of claims upon a Guarantee. Time is of essence for payment and in the event of failure to make payment. Guarantor shall be obligated to pay compound interest at 2% above the prime lending rate of the Guarantor institution, compounding quarterly in the event of the Guarantor's failure to make payment upon the Guarantee for any reason whatsoever. Payment of interest as provided is no excuse for delayed payment or non-payment of the Guaranteed Sum.

ANDHRA BANK
M.V.S. Kahoo M-616
Asst. Manager
Sultan Bazar (Hyd.) Br.

M. B. SANKARA RAO
S-268

2895/307
28.10.2005

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10. No change in the constitution of the Bidder or of the Guarantor shall be a ground for release of the Guarantee and no variation in the concession agreement made post selection of the bidder, or post making of the bid, shall constitute a variation, which would, subject to the terms and conditions of this agreement, discharge the Guarantor. The Guarantor shall notwithstanding such change, be bound to make payment upon the Guarantee on demand.

11. The Guarantor agrees that no change, addition to or other modifications to the terms of the Concession Agreement or to any documents which have or may be made between NHAI and the Bidder will in any way release it from any liability under this Guarantee and that it waives any requirement for notice of any such change, addition or modification.

12. The Guarantor agrees that it will not assign its obligations under this Guarantee without the prior written consent of NHAI. NHAI will not unreasonably withhold its consent if the proposed assignee is of at least equal financial standing to the Guarantor and the assignee assumes in writing the obligations of the Guarantor under this Guarantee at the same time or before the assignment.

13. This Guarantee binds the Guarantor, its successors and permitted assigns.

FOR ANDHRA BANK

Authorised Signatory

Sulaiman Khan Sahoo M-616
Asst. Manager
Sultan Bazar (Hyd.) Br.

ANDHRA BANK
HYDERABAD.
Ref. No: 2005/307
Date 28.10.2005

A. B. SANKARA RAO
S-268.

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Notwithstanding any thing contained here in:

a) Our liability under this Bank Guarantee shall not exceed Rs. 6,25,00,000/- (Rupees Six Crores Twenty Five Lakhs Only).

b) This Bank Guarantee shall be valid upto 27.07.2006.

c) We are liable to pay the guaranteed amount or any part thereof under this Bank Guarantee only if you serve upon us written claim or demand on or before 27.07.2006.

SEAL OF [THE BANK] .....

NAME OF [THE BANK] .....

SIGNATURE OF BANK .....

Name: K.V. Sahoo M-616
Asst. Manager
Sultan Bazar (Hyd.) Br.

TITLE .....

DATE 28/10/2005

2005/307

28.10.2005

d. B. SANKARA RAO
S-268.

Guruvayoor Infrastructure Private Limited

MCH No. 555, Arora Colony, Road No.3, Banjara Hills, Hyderabad - 500 034. A.P.
Tel No. 040-23543541/23543545, Fax No. 040-23543538

Letter No.1621/GIPL/NHAI/KL-1/2005

Date: 12.01.2006

To
Mr. Pranavant
General Manager (NS-II)
National Highways Authority of India
G-5&G-6, Sector - 10, Dwaraka
New Delhi - 110 075
Ph No: 011 - 25074100 Extn: 1312
Fax No: 011 - 25074100 Extn: 2423

Sir,

Sub: (i) Design, Construction, Finance, Operation and Maintenance of Km 270.00 (Thrissur) to Km 316.70 (Angamali) and (ii) Improvement, operation and maintenance of Km 316.70(Angamali) to Km 342.00 (Edapalli) on NH-47 together called the "Project" in the State of Kerala on Build Operate & Transfer (BOT) basis: Project Reference No. NS2/BOT/KL-1- Performance Security - Reg.

Ref: Your Letter No: NHAI/Tech/NSEW/NS-2/BOT/TN-1/2006 dated 10.01.2006 (received on 12.1.2006)

As desired by you in the reference cited above, we enclose herewith amendment for the following Bank Guarantees, issued by Andhra Bank, Sultan Bazar Branch, Koti, Hyderabad and submitted towards Performance Security for the above mentioned package vide our letter No. 1621/KMC/NHAI/KL-1(BOT)/2005 dated 28.10.2005.

S.No.	BG No. & Date	Amount	Validity extended up to
1	2005/306 dated 28.10.2005	Rs. 9,37,50,000/-	28.02.2009
2	2005/307 dated 28.10.2005	Rs. 6,25,00,000/-	31.08.2006

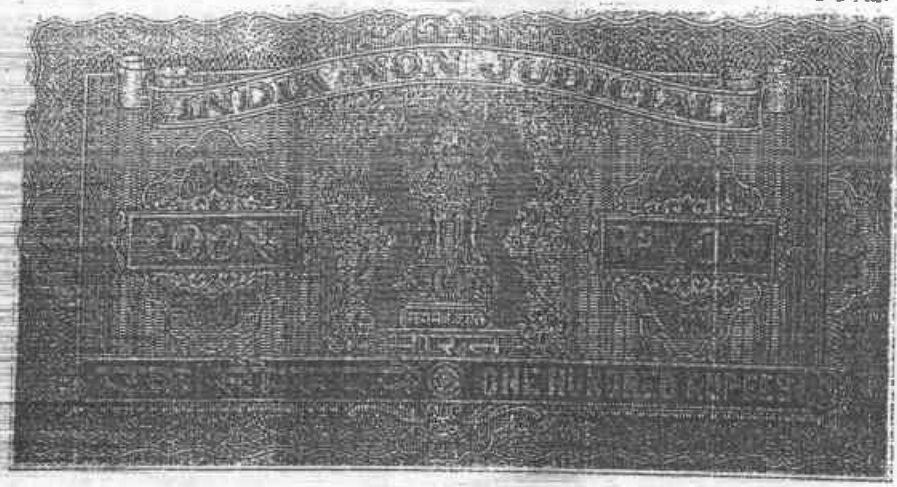
Thanking you,

Yours faithfully,
For Guruvayoor Infrastructure Pvt. Ltd.

(M. Goutham Reddy)
Director

Encl: As above

100Rs.



ANDHRA PRADESH 08AA 441946

No. 115488 Dt. 28/10/2005 Rs. 100/-
To. M/s KMC
On Account of Hon'ble
Purchased by Rameshwar
For whom KMC-SREI (Consortium)

K. RAMA CHANDRAVATHI
STAMP VENDOR (LIC No. 27/99 R.L.No. 20/2006)
6-3-347, Beside Banjara Durga Hotel, Panjagutta,
HYDERABAD - 500 082 Phone: HYDERABAD
Date : 12.01.2006

From :
Andhra Bank, Sultan Bazar Branch,
Koti, **HYDERABAD** – 500 001

To :
National Highways Authority of India,
G-5 & G-6, Sector-10, Dwaraka,
NEW DELHI – 110 075

Dear Sir,

Ref: **Amendment to BG No.2005/306 dated 28.10.2005 for Rs.9,37,50,000/-**
(Rupees Nine crore thirty seven lakh fifty thousand only)

With reference to the request made by **"M/S KMC-SREI (Consortium)"**, we amend the above Bank Guarantee as mentioned below :

For Andhra Bank

Malaya Kumar Sahoo M-616
Asst. Manager
Sultan Bazar (Hyd.) Br.

ANDHRA BANK
2005/306
dt 28.10.05
Date Amended as
12.01.2006

Contd....2

For Andhra Bank
Sultan Bazar

180

1. 'A' of 1st Page

"TO BE READ AS"

"NHAI vide Letter No. 'NHAI/Tech/NSEW/NS-2/BOT/KL-1/2005' dated 30.09.2005 has issued Letter of Acceptance to "M/S KMC-SREI (Consortium)" (the "Successful Bidder") for (i) Design, Construction, Development, Finance, Operation and Maintenance of Km 270.00 (Thrissur) to Km 316.70 (Angamali) and (ii) Improvement, Operation and Maintenance of Km 316.70 (Angamali) to Km 342.00 (Edapalli) on NH-47 together called the "Project" in the State of Kerala on Build, Operate & Transfer (BOT) basis (the Project).

"M/S KMC-SREI (Consortium)" has promoted and incorporated a Special Purpose Vehicle in the form of a limited liability company "M/S GURUVAYOOR INFRASTRUCTURE PRIVATE LIMITED" (the "Concessionaire") having its registered office in the State of Andhra Pradesh to enter in to a Concession Agreement for undertaking, inter alia, the Project and to perform and discharge all its obligations thereunder."

"INSTEAD OF"

"KMC-SREI (Consortium) (the "Bidder") has agreed in accordance with the Letter of Acceptance (LOA) dated 30.09.2005 issued by NHAI to construct and operate the (i) Design, Construction, Development, Finance, Operation of Km 270.00 (Thrissur) to Km 316.70 (Angamali) and (ii) Improvement, Operation and Maintenance of Km 316.70 (Angamali) to Km 342.00 (Edapalli) on NH-47 in the State of Kerala, Project Reference No.NS2/BOT/KL-1" Project on BOT basis (the "Project")."

2. 'B' of 2nd Page

"TO BE READ AS"

"In order to perform and discharge all its obligations concerning the "Project", the Concessionaire is required to give National Highways Authority of India (NHAI) a guarantee by a recognized bank based in India in the sum of Rs.9,37,50,000/- only (Indian Rupees Nine crore thirty seven lakh fifty thousand only) as security for compliance by the Concessionaire with its obligations under the Concession Agreement during the construction period."

"INSTEAD OF"

"The Bidder is required to give ("NHAI") a guarantee by a recognized bank based in India in the sum of Rs.9,37,50,000/- only (Indian Rupees Nine crore thirty seven lakh fifty thousand only) as security for compliance with its obligations under the Concession Agreement during the construction period."

For Andhra Bank

Malaya Ku. Sahoo M-616
Asst. Manager
Sultan Bazar (Hyd.) Br.

Contd....3

For KMC-SREI

2005/306
dt 28.10.05
Amended on
12.01.2006

For Guruvayoor Infrastructure Pvt. Ltd.
Hyd.

3. 'C' of 2nd Page

"TO BE READ AS"

"At the request of the Successful Bidder and/or the Concessionaire, the Guarantor has agreed to give NHAI the said guarantee on the terms set out herein."

"INSTEAD OF"

"The Guarantor has agreed to give NHAI the abovementioned guarantee on the terms set out herein."

4. Date in (1).'First Line' in Point 9 of Page-3 (2). in Point (b) of Page-5 (3). In Point (c) of Page-5

"TO BE READ AS"

"28.02.2009"

"INSTEAD OF"

"27.10.2008"

This letter is part and parcel of original Bank Guarantee and except above, all terms and conditions remain unchanged.

Not Withstanding any thing contained herein :

a) Our liability under this Bank Guarantee shall not exceed Rs.9,37,50,000/- (Rupees Nine crore thirty seven lakh fifty thousand only).

b) This Bank Guarantee shall be valid up to 28.02.2009.

c) We are liable to pay the Guaranteed amount or any part thereof under this Bank Guarantee only if you serve upon us written claim or demand on or before 28.02.2009.

FOR ANDHRA BANK

Malaya Kr. Sahoo M-616
Asst. Manager
Sultan Bazar (Hyd.) Br.

आंध्रा बैंक
ANDHRA BANK
B.G. No: 2005/306 dt 28.10.05
Date: Amended on 12.01.2006

For ANDHRA BANK

Chief Manager
Sultan Bazar, Hyderabad.

V283

100 Rs.

INDIA NON JUDICIAL

₹00 रु. Rs 100

भारत

एक सौ रुपये ONE HUNDRED RUPEES

ఆంధ్ర ప్రదేశ్ ఆంధ్ర ప్రదేశ ANDHRA PRADESH 08AA 441945

No 115487 Dt. 28/10/2005 Rs. 100/-

To N. Rao.

W/o/D/o Ramesh. H.No 4-D.

From KMC - SREI Consortium

K. RAMA CHANDRAVATHI
STAMP VENDOR (L.NO: 27/99 R.L.No: 20/2005)
6-3-367, Beside Banjara Durbar Hotel, Panjagutta,
HYDERABAD - 500 082 Phone No: 23351788

Place: HYDERABAD
Date : 12-01-2006

From :
Andhra Bank, Sultan Bazar Branch,
Koti, HYDERABAD – 500 001

To :
National Highways Authority of India,
G-5 & G-6, Sector-10, Dwaraka,
NEW DELHI – 110 075

Dear Sir,

**Ref: Amendment to BG No.2005/307 dated 28.10.2005 for Rs.6,25,00,000/-
(Rupees Six crore twenty five lakh only)**

With reference to the request made by **"M/S KMC-SREI (Consortium)"**, we amend the above Bank Guarantee as mentioned below :

For ANDHRA BANK
Manager/Sr. Manager M-616
Asst. Manager
Sultan Bazar (Hyd.) Br.

आंध्रा बैंक
ANDHRA BANK
Sultan Bazar,
HYDERABAD.
B.G. No: 2005/307
Dated 28-10-05
Date Amended on
12.01.2006

Contd.....2

For ANDHRA BANK

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1. 'A' of 1st Page

"TO BE READ AS"

"NHAI vide Letter No. 'NHAI/Tech/NSEW/NS-2/BOT/KL-1/2005' dated 30.09.2005 has issued Letter of Acceptance to "M/S KMC-SREI (Consortium)" (the "Successful Bidder") for (i) Design, Construction, Development, Finance, Operation and Maintenance of Km 270.00 (Thrissur) to Km 316.70 (Angamali) and (ii) Improvement, Operation and Maintenance of Km 316.70 (Angamali) to Km 342.00 (Edapalli) on NH-47 together called the "Project" in the State of Kerala on Build, Operate & Transfer (BOT) basis (the Project).

"M/S KMC-SREI (Consortium)" has promoted and incorporated a Special Purpose Vehicle in the form of a limited liability company "M/S GURUVAYOOR INFRASTRUCTURE PRIVATE LIMITED" (the "Concessionaire") having its registered office in the State of Andhra Pradesh to enter in to a Concession Agreement for undertaking, inter alia, the Project and to perform and discharge all its obligations thereunder."

"INSTEAD OF"

"KMC-SREI (Consortium) (the "Bidder") has agreed in accordance with the Letter of Acceptance (LOA) dated 30.09.2005 issued by NHAI to construct and operate the (i) Design, Construction, Development, Finance, Operation of Km 270.00 (Thrissur) to Km 316.70 (Angamali) and (ii) Improvement, Operation and Maintenance of Km 316.70 (Angamali) to Km 342.00 (Edapalli) on NH-47 in the State of Kerala, Project Reference No.NS2/BOT/KL-1" Project on BOT basis (the "Project")."

2. 'B' of 2nd Page

"TO BE READ AS"

"In order to perform and discharge all its obligations concerning the "Project", the Concessionaire is required to give National Highways Authority of India (NHAI) a guarantee by a recognized bank based in India in the sum of Rs.6,25,00,000/- only (Indian Rupees Six crore twenty five lakh only) as security for compliance by the Concessionaire with its obligations under the Concession Agreement during the construction period."

"INSTEAD OF"

"The Bidder is required to give ("NHAI") a guarantee by a recognized bank based in India in the sum of Rs. 6,25,00,000/- only (Indian Rupees Six crore twenty five lakh only) as security for compliance with its obligations under the Concession Agreement during the construction period."

For Andhra Bank

Malya K.U. Sahoo M-616
Asst. Manager
Sultan Bazar (Hyd.) Br.

Contd.....3

2005/307
dt 28.10.05
Amended on
12.01.2006

For Guruvayoor Infrastructure Pvt. Ltd.

Chief Manager

3. 'C' of 2nd Page

"TO BE READ AS"

"At the request of the Successful Bidder and/or the Concessionaire, the Guarantor has agreed to give NHAI the said guarantee on the terms set out herein."

"INSTEAD OF"

"The Guarantor has agreed to give NHAI the abovementioned guarantee on the terms set out herein."

4. Date in (1).'First Line' in Point 9 of Page-3 (2). In Point (b) of Page-5 (3). In Point (c) of Page-5

"TO BE READ AS"

"31.08.2006"

"INSTEAD OF"

"27.07.2006"

This letter is part and parcel of original Bank Guarantee and except above, all terms and conditions remain unchanged.

Not Withstanding any thing contained herein :

a) Our liability under this Bank Guarantee shall not exceed Rs.6,25,00,000/- (Rupees Six crore twenty five lakh only).

b) This Bank Guarantee shall be valid up to 31.08.2006.

c) We are liable to pay the Guaranteed amount or any part thereof under this Bank Guarantee only if you serve upon us written claim or demand on or before 31.08.2006.

FOR [illegible] BANK

Malay Kr. Saha M-616
Asst. Manager
Sultan Bazar (Hyd.) Br.

[illegible] BANK
[illegible].D.
2005/307
Dt 28.10.05
Date. Amended on
12.01.2006.

FOR [illegible] BANK

V223

Authority of India

Gateway Infrastructure Pvt. Ltd.

KMC - SREI (Consortium)
... COLONY, ROAD NO. ...
TEL (040) 23543541, 23543548
FAX (040) 23...

Letter No.1621/KMC/NHAI/15 BOT Projects/2005 Date: 28.02.2006

To

Mr.Pranavant

The General Manager (NS-II)

National Highways Authority of India

G-5 & G- 6, Sector - 10, Dwaraka

New Delhi - 110 075

Fax No. 011 - 25093513

Sir,

Sub: (i) Design, Construction, Development, Finance, Operation and maintenance of Km 270.00 (Thrissur) to Km 316.70 (Angamali) and (ii) Improvement, operation and maint7enance of Km 316.700 (Angamali) to Km 342.00 (Edapalli) on NH-47 together called the "Project" in the State of Kerala on Build, Operate & Transfer (BOT) basis: Project Reference No. NS2/BOT/KL-1 - Reg.

Ref: 1) Your Letter No. NHAI/Tech/NSEW/NS-2/BOT/TN-1/2006 dated 10.01.2006
2) Our Letter No. 1621/KMC/NHAI/KI-1(BOT)/2005 dated 28.10.2005
3) Our Letter No. 1621/GIPL/NHAI/KI-1/2005 dated 12.01.2006

As desired by you we enclose herewith the amendments to the following Original Bank Guarantees & amendments dated 12.01.2006 issued by Andhra Bank, Sultan Bazar Branch, Hyderabad, submitted towards Performance Security for the above work.

S.No.	Issuing Bank	B.G. No. & Date	Amendment Dated	Amount
1	Andhra Bank, Sultan Bazar Branch, Hyderabad	2005/306 dated 28.10.2005	12.01.2006	Rs. 9,37,50,000/-
2	Andhra Bank, Sultan Bazar Branch, Hyderabad	2005/307 dated 28.10.2005	12.01.2006	Rs. 6,25,00,000/-

The amendments to the above Bank Guarantees in Original are herewith enclosed.

Thanking you,

Yours faithfully,
KMC - SREI (Consortium)

B. Chandra Sekhar Reddy
Authorised Signatory

Encl : As above

National Highways Authority of India * New Delhi *

Gujarat Infrastructure Pvt. Ltd.

100Rs



ఆంధ్ర ప్రదేశ్ आंध्र प्रदेश ANDHRA PRADESH

09AA 525901

14970 Dt. 23/11/2006 100/-

To Raju

S/W/D of P.P.chary R/o Hyd

Whom KMC-SREI (Consortium) Hyd

K. RAMA CHANDRAVATHI
STAMP VENDOR (LNO: 3700 R.L.No. 20/2005)
6-3-347, Beside Ranjana Dutt Hotel, Panjagutta,
HYDERABAD - 500 082 Phone. No: 23351799

From :
Andhra Bank, Sultan Bazar Branch,
Koti, **HYDERABAD** – 500 001

To :
National Highways Authority of India,
G-5 & G-6, Sector-10, Dwaraka,
NEW DELHI – 110 075

Dear Sir,

Ref: **Amendment to Original BG No.2005/306 dated 28.10.2005 for Rs.9,37,50,000/- (Rupees Nine crore thirty seven lakh fifty thousand only) and amendment dated 12.01.2006 of BG No.2005/306 dated 28.10.2005**

With reference to the request made by "M/s. KMC-SREI (Consortium)", we amend the above Bank Guarantee as mentioned below:

Contd.....2

187 2005/306 28.10.2005
Amended on

Notwithstanding Clause in Page No. 5 of Original Bank Guarantee No.2005/306 dated 28.10.2005 :

a) Our liability under this Bank Guarantee shall not exceed Rs.9,37,50,000/- (Rupees Nine crore thirty seven lakh fifty thousand only).

b) This Bank Guarantee shall be valid up to 27.10.2008.

c) We are liable to pay the Guaranteed amount or any part thereof under this Bank Guarantee only if you serve upon us written claim or demand on or before 27.10.2008.

Notwithstanding Clause in Page No. 3 of Amendment dated 12.01.2006 of Original Bank Guarantee No.2005/306 dated 28.10.2005 :

a) Our liability under this Bank Guarantee shall not exceed Rs.9,37,50,000/- (Rupees Nine crore thirty seven lakh fifty thousand only).

b) This Bank Guarantee shall be valid up to 28.02.2009.

c) We are liable to pay the Guaranteed amount or any part thereof under this Bank Guarantee only if you serve upon us written claim or demand on or before 28.02.2009.

The above two clauses stand deleted.

This letter is part and parcel of Original BG No.2005/306 dated 28.10.2005 for Rs.9,37,50,000/- (Rupees Nine crore thirty seven lakh fifty thousand only) & amendment dated 12.01.2006 of BG No.2005/306 dated 28.10.2005 and except above, all terms and conditions remain unchanged.

For ANDHRA BANK

2005/306
dt 28.10.05
Amended on
28.02.2006

100Rs



ఆంధ్ర ప్రదేశ్ ANDHRA PRADESH 09AA 525902

S. No)4(97). Dt.23.12.05 Rs.100/-

Sold To.....Raju.....

S/o./W/o/D/o.....P. R. chary...Mo Hyd

On Whom.KMC + SREI.....

(Consortium) Hyd

K. RAMA CHANDRAVATHI
STAMP VENDOR (LNO:270 R.L.No. 20/2005)
6-3-347, Baride Sadan, Sister Hotel, Panjagutta,
HYDERABAD - 500 282 Phone No: 23351799

From :
Andhra Bank, Sultan Bazar Branch,
Koti, **HYDERABAD** – 500 001

To :
National Highways Authority of India,
G-5 & G-6, Sector-10, Dwaraka,
NEW DELHI – 110 075

Dear Sir,

Ref: **Amendment to Original BG No.2005/307 dated 28.10.2005 for Rs.6,25,00,000/- (Rupees Six Crore Twenty Five Lakh only) and amendment dated 12.01.2006 of BG No.2005/307 dated 28.10.2005**

With reference to the request made by "**M/s. KMC-SREI (Consortium)**", we amend the above Bank Guarantee as mentioned below:

Contd.....2

2005/307
dt 28.10.05
Amendt
28.02.2006

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Notwithstanding Clause in Page No. 3 of Original Bank Guarantee No.2005/307 dated 28.10.2005 :

a) Our liability under this Bank Guarantee shall not exceed Rs.6,25,00,000/- (Rupees Six Crore Twenty Five Lakh only).

b) This Bank Guarantee shall be valid up to 27.07.2006

c) We are liable to pay the Guaranteed amount or any part thereof under this Bank Guarantee only if you serve upon us written claim or demand on or before 27.07.2006

Notwithstanding Clause in Page No. 3 of Amendment dated 12.01.2006 of Original Bank Guarantee No.2005/307 dated 28.10.2005 :

a) Our liability under this Bank Guarantee shall not exceed Rs.6,25,00,000/- (Rupees Six Crore Twenty Five Lakh only).

b) This Bank Guarantee shall be valid up to 31.08.2006

c) We are liable to pay the Guaranteed amount or any part thereof under this Bank Guarantee only if you serve upon us written claim or demand on or before 31.08.2006.

The above two clauses stand deleted.

This letter is part and parcel of Original BG No.2005/307 dated 28.10.2005 for Rs.6,25,00,000/- (Rupees Six Crore Twenty Five Lakh only).& amendment dated 12.01.2006 of BG No.2005/307 dated 28.10.2005 and except above, all terms and conditions remain unchanged.

For AND[illegible]

2005/307
dt 28.10.05
Date Amended on
28.02.2006

भारतीय राष्ट्रीय राजमार्ग प्राधिकरण
(पोत परिवहन, सड़क परिवहन और राजमार्ग मंत्रालय)
National Highways Authority of India
(Ministry of Shipping, Road Transport & Highways)
G-5 & 6, Sector-10, Dwarka, New Delhi-110075
Phone 91-11-25074100/25074200
Fax 91-11-25093507/25093514
Extn. 2223/2318/2468/2553

NHAI/Tech/NS-2/BOT/KL-1/2006

2nd March, 2006

To

Andhra Bank,
Sultan Bazar Branch,
Koti, Hyderabad-500001

Sub: Confirmation of Bank Guarantees favoring National Highways Authority of India issued on behalf of M/s KMC-SREI Consortium/ Guruvayoor Infrastructure Private Limited in respect of Package No. NS-2/BOT/KL-1.

M/s KMC-SREI Consortium/ Guruvayoor Infrastructure Private Limited has submitted the ...nk Guarantees favoring National Highways Authority of India as Performance Security for the project of Design, Construction, Development, Finance, Operation and maintenance of Km ...70.00 (Thrissur) to Km 316.70 and (ii) Improvement, Operation and Maintenance of Km 316.70 ... Km 342.00 (Edapalli) on NH-47 in the State of Kerala: Package: NS2/BOT/KL-1, as per the ...etails given below.

...r. No.	BG No & Date	Amount (Rs.)	Valid upto
	2005/306 dated 28.10.2005 amendment dated 12.01.2006 and subsequent amendment dated 28.02.2006	9,37,50,000	28.02.2009
	2005/307 dated 28.10.2005 and amendment dated 12.01.2006 subsequent amendment dated 28.02.2006	6,25,00,000	31.08.2006

It is requested that issuance of above Bank Guarantees may please be confirmed ...mediately indicating Name, Designation & Code Number of the Officer(s) confirming the ...ance of the above Bank Guarantees on the printed official letter head with full details of the ... and its address. It is also requested to quote the reference number of this letter ...ecifically while confirming the issuance as above.

Yours faithfully

(Pranavant)
General Manager (NS-2)

...to:

...hra Bank, Registered Office, Dr. Pattabhi Bhavan, Saifabad, Hyderabad

...py to:

... Director, PIU, National Highways Authority of India, Hyderabad. He is requested to ...sonally obtain the confirmation from the issuing Branch of the Bank and forward the ...rmation report to the undersigned urgently in pursuance to NHAI Circular No. 91/2004 dated ...2004.

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भारतीय राष्ट्रीय राजमार्ग प्राधिकरण
(सड़क परिवहन एवं राजमार्ग मंत्रालय)
National Highways Authority of India
(Ministry of Shipping, Road Transport & Highways)
Project Implementation Unit
First Floor, Plot No. 25, Road No. 2, Castle Hills,
Masab Tank, Hyderabad - 500 057

Telephone 040-23542606
Tele Fax 040-23534144
email hyd@nhai.org

NHAI/PIU-HYD/12017/2006/158

6th March, 2006

Sh. Pranavant,
General Manager (NS-2),
National Highways Authority of India,
New Delhi- 110 075.

DGM(NS-2)SK
PA

Sir,

Sub: NHAI, PIU-Hyderabad – Forwarding of Confirmation of Bank Guarantees obtained – Reg.

Ref: NHAI/Tech/NS-2/ BOT/KL-1/2006, dated 02.03.2006.

With reference to the above, the following Bank has confirmed the issue of the said Bank Guarantees as detailed below.

Sl. No	Name of the Bank	Name of the Party	Amount (Rs.)	BG No. & Amendment Date	Details of the Confirmation letter Ref.
1	Andhra Bank Sultan Bazar, Hyderabad	M/s KMC-SREI Consortium/ Guruvayoor Infrastructure Ltd.,	9,37,50,000	2005/306 & dt.28.02.06	Lr.No 0205/BG/KMC Dt. 02.03.2006
2			6,25,00,000	2005/307 & dt.28.02.06	

The above confirmation letter received from the respective Bank is enclosed herewith in original.

Please acknowledge the receipt of the same.

Encl: As Stated.

Yours faithfully,

(GSVS Prabhakara Rao)
Manager (F & A)

आन्ध्रा बैंक
Andhra Bank
(A Govt. of India undertaking)

ANDHRA BANK
SULTAN BAZAR
HYDERABAD
Ph.No s 24757429,24757143,Fax No 24757558

Lr No. 0205/BG/KMC
02.03.2006

OFFICE OF THE PROJECT DIRECTOR
06 MAR 2006
PIU, HYDERABAD
NATIONAL HIGHWAYS AUTHORITY OF INDIA

The Project General Manager
National Highways Authority of India
G-5 & 6 Sector-10
Dwarka
New Delhi-110075

Sir,

Sub: Confirmation of Bank Guarantee issued on behalf of
M/s KMC-SERI Consortium/Guruvayoor Infrastructure Ltd
Your Lr.No.PIU-HYD/12017/2006/146 dated 03.06.2006

With reference to the above, we confirm that we have issued the following Bank Guarantees on behalf of the above mentioned party at the request of our client M/s KMC Constructions Ltd.

	BG No.	Date of Issue	Date of last Amendment	BG Amount (Rs)	Valid up to
	2005/306	28.01.2005	28.02.2006	9,37,50,000/-	28.02.2009
	2005/307	28.01.2005	28.02.2006	6,25,00,000/-	31.08.2006

Thanking you faithfully,

Yours faithfully,

(B Sankara Rao)
Manager-Advances
Andhra Bank

(Sankara Rao; S-268)
Mgr (Advances)
Sultan Bazar (Hyd.) Br.

National Highways Authority of India * New Delhi *

Guruvayoor Infrastructure Pvt. Ltd.

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भारतीय राष्ट्रीय राजमार्ग प्राधिकरण
(पोत परिवहन, सड़क परिवहन और राजमार्ग मंत्रालय)
National Highways Authority of India
(Ministry of Shipping, Road Transport and Highways)
जी-5 एवं 6, सेक्टर-10, द्वारका, नई दिल्ली-110 075
G-5 & 6, Sector-10, Dwarka, New Delhi-110075

NHAI/Tech/NS-2/KL-1/Conc./2005/212

21.03.2006

KMC-SREI Consortium, MCH No. 555, Arora Colony, Road No. 3, Banjara Hills, Hyderabad 500 034 Tel.: 040 2341385, 86 Fax: 040 23543538	**Guruvayoor Infrastructure Pvt. Ltd.** MCH No. 555, Arora Colony, Road No. 3, Banjara Hills, Hyderabad 500 034 Tel.: 040 2341385, 86 Fax: 040 23543538

Sub.: **(i) Design, Construction, Development, Finance, Operation of km 270/00 (Thrissur) to km 316.70 (Angamali) and (ii) Improvement, Operating and Maintenance of km 316.70 (Angamali) to km 342.00 (Edapalli) on NH-47 together called the "Project" in the State of Kerala on Build Operation and Transfer (BOT) basis: Project Reference No. NS-2/BOT/KL-1 – Reg.**

Sir,

In reference to aforesaid project particulars of the two Bank Guarantees, after taking into account the amendments dated 12.1.2006 and 28.2.2006 submitted by you towards performance security are as under:-

Sl. No.	Issuing Bank	BG No. and Date	Amount	Valid upto
1	Andhra Bank, Sultan Bazar Branch, Hyderabad	BG no. 2005/306 dated 28.10.2005	Rs. 9,37,50,000/-	28.2.2009
2	Andhra Bank, Sultan Bazar Branch, Hyderabad	BG no. 2005/307 dated 28.10.2005	Rs. 6,25,00,000/-	31.8.2006

2. The validity of these Bank Guarantees is on the presumption that both the tasks i.e. financial close and COD are accomplished within scheduled intended period. There may be a possibility of not achieving these tasks as intended for which Concession Agreement further allows concessionaire some period (180 days for financial close and 12 months for COD) by paying penalty to NHAI. In that case, these guarantees would have to be got extended. Hence, you are requested to submit an undertaking that these Bank Guarantees would be extended on the request of NHAI in case of default of concessionaire in not achieving the tasks as intended. The undertaking shall also cover that in case of failure to extend the BGs as above, this may be treated as Concessionaire's event of default for termination of Concession.

Necessary compliance is requested on or before 22.03.2006.

Yours faithfully,

General Manager (NS-1)

Guruvayoor Infrastructure Private Limited

MCH No. 555, Arora Colony, Road No.3, Banjara Hills, Hyderabad - 500 034. A.P.
Tel No. 040-23543541/23543545, Fax No. 040-23543538

Letter No.1621/KMC/NHAI/15 BOT Projects/2005 Date: 22.03.2006

To
Mr. Pranavant
The General Manager (NS-II)
National Highways Authority of India
G-5 & G- 6, Sector - 10, Dwaraka
New Delhi - 110 075
Ph No. 011 - 25074100, Extn: 1312
Fax No. 011 - 25074100, Extn: 2423

Sir,

Sub: (i) Design, Construction, Development, Finance, Operation and maintenance of Km 270.00 (Thrissur) to Km 316.70 (Angamali) and (ii) Improvement, operating and maintenance of Km 316.700 (Angamali) to Km 342.00 (Edapalli) on NH-47 together called the "Project" in the State of Kerala on Build, Operate & Transfer (BOT) basis: Project Reference No. NS2/BOT/KL-1 - Undertaking Reg.

Ref: 1) Your Letter No. NHAI/Tech/NS-2/KL-1/Conc/2005 dated 21.03.2006

As desired by you we enclose herewith an Undertaking for the extension of Bank Guarantees submitted towards Performance Security.

Thanking you,

Yours faithfully,

Director
Guruvayoor Infrastructure Pvt. Ltd.

Encl : Undertaking

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...ayoor Infrastructure Private Limited
...Arora Colony, Road No.3, Banjara Hills, Hyderabad - 500 ...
...No. 040-23...-41/23543545, Fax No. 040-23543538

UNDERTAKING

The following Bank Guarantees submitted towards Performance Security for the ... Design, Construction, Development, Finance, Operation and maintenance of ... (Thrissur) to Km 316.70 (Angamali) and (ii) Improvement, operating and ... of Km 316.700 (Angamali) to Km 342.00 (Edapalli) on NH-47 together ... Project" in the State of Kerala on Build, Operate & Transfer (BOT) basis: ... No. NS2/BOT/KL-1" would be extended on the request of National ... Authority of India (NHAI) incase of default of M/s. Guruvayoor ... Ltd. (Concessionaire) in not achieving the task as intended.

...suing Bank	B.G. No. & Date	Amount	Valid upto
... Bank, Sultan ...anch, Hyderabad	BG No. 2005/306 dated 28.10.2005	Rs. 9,37,50,000/-	28.02.2009
... Bank, Sultan ...nch, Hyderabad	BG No.2005/307 dated 28.10.2005	Rs. 6,25,00,000/-	31.08.2006

...ilure to extend the Bank Guarantees as above, this may be treated as ...nt of default for termination of Concession.

Director
Title of the Officer

Guruvayoor Infrastructure Pvt. Ltd.
Name of the Company

Date:

SCHEDULE-G

(SCHEDULE OF USER FEE)

SCHEDULE G

SCHEDULE OF USER FEE

TO BE PUBLISHED IN THE GAZETTE OF INDIA EXTRAORDINARY
PART – II – SECTION 3 SUB SECTION (ii)

GOVERNMENT OF INDIA

MINISTRY OF SHIPPING, ROAD TRANSPORT & HIGHWAYS

DEPARTMENT OF ROAD TRANSPORT AND HIGHWAYS

NEW DELHI the ....., 2006

Whereas, by the notification of the Government of India in the Ministry of Shipping, Road Transport & Highways (MoSRT&H), number S.O. 465 (E) dated 26/04/2002 issued under Section 11 of the National Highways Authority of the India Act, 1988 (68 of 1988), the Central Government has entrusted the section from **Km 270.00 (Thrissur) to km 342.00 (Edapalli)** of the National Highway number NH47 in the State of Kerela to the National Highways Authority of India (herein after referred to as the "Authority")';

AND, WHEREAS, the Authority has entered into an agreement with Guruvayoor Infrastructure Private Limited and having its registered office at MCH No. 555, Arora Colony, Road No 3, Banjara Hills, Hyderabad-500034 (herein after referred to as the "Concessionaire") for the development of the Thrissur-Angamali stretch from km 270.00 to 316.70 km to four lanes and improvements, operation and maintenance of stretch Angamali-Edapalli from km 316.70 to km 342.00 (which forms part of the said section of the said National Highway;

AND, WHEREAS, the Central Government has entered into an agreement with the Authority for the development of the said section of the said National Highway and to issue a Fee Notification to levy and collect the Fees from the said National Highway in terms of the aforesaid agreement entered into between the Authority and the said Concessionaire;

NOW, THEREFORE, in exercise of powers conferred by section 8A of the National Highways Act, 1956 (48 of 1956), read with rule 3 of the National Highways (Collection of Fees by any person for the use of section of National Highways/permanent bridge/temporary bridge on National Highway) Rules, 1997, the Central Government, having regard to the expenditure involved in building, maintenance, management and operation of the said section of the said National Highway No 7, interest on the capital invested, reasonable return, the volume of traffic and the period of such agreement entered into between the Authority and the

Concessionaire, hereby notifies that there shall be levied and collected Fees on mechanical vehicles for the use of the said section starting from **Km 270.00 (Thrissur) - Km 342.00 (Edapalli)** of the National Highway number NH47 in the State of Kerela at the rate specified in the Schedule below, and authorizes the said Concessionaire to collect and retain the said Fees on and from the date of commercial operation or publication of this notification in the Official Gazette whichever is later and till the termination date as mentioned in the Agreement.

Definitions, - In the notification, unless the context otherwise requires, -

(i) "Actual Fees" means the Fees actually charged on the road users for using **Km 270.00 (Thrissur) - Km 342.00 (Edapalli)** of the Project Highway as may be approved by the Authority and the base Fee given in the schedule to this notification;

(ii) "date of commercial operation or COD" means the date on which the commercial operations of the said section of the National Highway number NH47 in the State of Kerela begins, which shall be the date on which the Independent Consultant has issued the Completion Certificate or the Provisional Certificate upon completion of the said section of the said National Highway in accordance with the provisions of the Agreement entered into between the Authority and the Concessionaire;

(iii) "Termination Date" means the date on which the said Agreement entered into between the Authority and the Concessionaire expires pursuant to the provisions of the said Agreement or is terminated by Termination Notice;

(iv) "Local Traffic" means the following type of traffic in relation to the fee payable for car/jeep/van,

(a) "Local Traffic category I" means and includes local users falling into any of the following categories

(1) Residents of villages/towns/cities whose boundary falls within a radius of 10 Km of the fee collection booths (toll plaza).

(2) Establishments /Industrial units located within a radius of 10 Km of the fee collection booths (toll plaza).

(3) Employees of Establishments /Industrial units located or which have their office, within a radius of 10 Km of the fee collection booths (toll plaza); and

(4) Self employed persons/ businessmen having a place of work within a radius of 10 Km of the fee collection booth (toll plaza).

(b) "Local Traffic category II" means and includes local users falling into any of the following categories

(1) Residents of villages/towns/cities whose boundary falls within a radius of more than 10 Km but upto 20 Km of the fee collection booths (toll plaza).

(2) Establishments /Industrial units located within a radius of more than 10 Km but upto 20 Km of the fee collection booths (toll plaza).

(3) Employees of Establishments /Industrial units located or which have their office, within a radius of more than 10 Km but upto 20 Km of the fee collection booths (toll plaza); and

(4) Self employed persons/ businessmen having a place of work within a radius of more than 10 Km but upto 20 Km of the fee collection booth (toll plaza).

(v) Words and expressions used in this notification but not defined but defined in the Agreement entered into between the Authority and the Concessionaire in respect of section from **Km 270.00 (Thrissur) - Km 342.00 (Edapalli)** of the National Highway number NH47 in the States of Kerela shall have the same meaning as assigned to them respectively in the said Agreement.

SCHEDULE

Rates of base Fees to be recovered from the users of the National Highway number 7 from **Km 270.00 (Thrissur) - Km 342.00 (Edapalli)** in the State of Kerela, applicable as on 1st July, 1997.

The Fee shall be collected at plaza

S. No.	Category of Vehicle	Rate of base Fees per vehicle per one way trip (in rupees per km.)
(1)	(2)	(3)
1.	A car, passenger van or jeep	0.40
2.	Light Commercial Vehicle (LCV)	0.70
3.	Bus, Truck	1.40
4.	MAV (>2 Axle)	2.25

Notes:

1. Actual amount of fee to be charged for a particular year (from 1st September of a year to 31st August of the following year) will be computed as under:

2. The aforesaid Fee will be revised once in every year. The revised Fee shall be computed ("Computed Fee") as follows:-

Base Fee X $\frac{\text{WPI-B}}{\text{WPI-A}}$ X ....Km for one way journey

Where

- WPI-B = is the Wholesale Price Index available for the end of the preceding financial year.
- WPI-A = is the Wholesale Price Index on June 1997 i.e (131.4%)

WPI means Wholesale Price Index as released by the Office of the Economic Advisor, Ministry of Commerce and Industry, Government of India or any other index replacing the same.

3. When the same vehicle has to cross the said stretch of the National Highway more than once in a day, the user shall have the option to pay the Fee for multiple trips at 1.5 times the rates as given in the Schedule above while crossing the Toll Plaza in the first trip itself. If the vehicle has to use the said stretch continuously and frequently for entire month or even beyond that, the vehicle owner can have a monthly pass on payment of charges equal to thirty (30) times rate applicable for single trip as applicable to it as specified in the aforesaid Schedule.

For the purpose of this notification "day" shall be counted as continuous period of twenty-four hours.

4. The actual Fees to be charged shall be rounded off to the nearest five rupee.

5. The following type of vehicles shall be exempted from the fee specified above in the Schedule, namely: -

(a) Defense Vehicles;
(b) Police vehicles;
(c) Fire fighting vehicles;
(d) Ambulances;
(e) Funeral vans;
(f) Post and Telegraph Department's vehicles;
(g) Central and State Government vehicles on duty
(h) Vehicles with "VIP" symbols or officially belonging to:-
i. President of India,
ii. Vice President of India
iii. Governor of a State and Lt. Governor of a Union Territory
iv. A Foreign dignitary on State visit to India, and
v. A Foreign Diplomat stationed in India using cars with "CD"/ "CC" symbols

vi. Chairman of Rajya Sabha or Speaker of Lok Sabha or Chairman of a State Legislative Council or Speaker of a State Legislative Assembly or a Minister for the Union or State or Leader of Opposition in Lok Sabha or Rajya Sabha or State Legislatures having the Status of Cabinet Minister if he is sitting in the vehicle: Or

vii. Members of Parliament in the entire country or a Member of Legislative Assembly of a State or a Member of Legislative Council of a State, in the respective State if he produces his Identity Card issued by the Parliament or concerned Legislature of a State as the case may be.

viii. Belonging to winner of Gallantry awards such as Param Vir Chakra, Ashok Chakra, Maha Vir Chakra, Kirti Chakra, Vir Chakra and Shaurya Chakra, if such awardee produces his photo Identity Card duly authenticated by the Competent Authority for such award

(i) Different class of Defence personnel and vehicle carrying cargo meant for them in accordance with Indian Tolls (Army and Air Force) Act, 1901, rules including any amendments thereto.

6. The rates of Fees, the Categories of vehicles exempted from payment of Fee and the name, address and telephone number of Concessionaire to whom complaints, if any, should be addressed, shall be conspicuously and prominently displayed 500 meters ahead of the toll booths, 100 meters ahead of the toll booths and at the toll booths also, the height of the display boards and size of letters being such that it is easy for drivers to read the display boards and they shall be legibly written or printed in English, Hindi and the regional language of the area in which the stretch is situated.

7. The Concessionaire shall nominate an officer as in-charge of fee collection. The Concessionaire and also the said officer shall be responsible to ensure that Fees are collected at not more than the agreed rates and the Fee collected is smooth without causing undue hardship to the road users and for all matters connected therewith.

8. Concessionaire shall not collect any Fees from Local Traffic in excess of the following discounted rates;

(a) Car/Jeep/Van:

i) Local Traffic Category I: Monthly pass of Rs 150.00

ii) Local Traffic Category II: Monthly pass of Rs 300.00

(b) Buses:

Monthly passes for the State Transport buses may be given at the specified rate in favor of the State Government Transport on the certification of the competent authority (not less than General Manager, State Government Road Transport) certifying the number of buses plying in the route per day. In case of private local operators monthly passes shall be issued on production of

their route permit and timetable of the route operation duly certified by the District Transport Authority.

(c) School Buses:

Monthly Passes for School buses, for school students, crossing the toll plaza at a monthly rate of Rs 1000 (Rupees one thousand) after obtaining written request of the School Principal along with the recognition of the school and the registration of the bus.

(d) LCV/Trucks (Local Transport Operators):

Concessional Fee shall be from Local Transport Operators on production of proof for plying within 20 Km i.e. goods challan for origin and destination clearly specifying the return details of the vehicle. The Fee for such transport shall be Rs 25 (Rupees twenty five) for trucks for each entry and Rs 15 (Rupees fifteen) for LCV for each entry.

Provided however, that if a separate service lane is opened for free use by local traffic, the Concessionaire shall levy and collect Fee from such local traffic, if they use the four lane highway.

9. The Fee schedules mentioned in serial numbers 8 are applicable for the time being and will undergo change as and when announced by NHAI.

10. As and when a service lane is constructed, the Concessionaire shall not collect any fee from the users of such lane(s)

11. The Concessionaire shall publish substance of this notification and the scheme of discount to frequent and local users, as provided in the Concession Agreement, in two local newspapers (one of which shall be in vernacular language), which shall also state the date of commercial operation as per the provision of this notification, at least ten days prior to the date of commercial operation. Such substance shall also be repeated, ten days prior to giving effect to revised Fees as per this notification.

13. The actual Fees to be charged to users shall be computed by the Concessionaire and sent to Authority for validation as soon as possible after 31st March in every year, but at least forty-five days before the rate increase is to be effective. Authority shall provide any comments or request clarifications as soon as possible upon receipt of the Fee revision proposal but not later than fifteen days of receipt of the Fee revision proposal. If the Authority does not offer comments or seek clarification during this period the revised Fee, as proposed by the Concessionaire, shall be deemed to have been confirmed by the Authority.

SCHEDULE-H

(PROJECT COMPLETION SCHEDULE)

4	Mobilisation at site by concessionaire
5	Shifting of utilities including tree cutting
Construction Activities	
6	Bridges and CD Structures
7	ROB, Underpass & Grade Separator
8	New Carriageway
9	Existing Carriageway
10	Toll Plaza and Administrative Blocks
11	Safety Features
12	C.O.D.

SCHEDULE-I

(DRAWINGS)

SCHEDULE-I: DRAWINGS

The Project Highway Drawings, as defined in Clause 1.1, Definitions of the Concession Agreement shall consist:

A. Working drawings of all the components/elements of the Project Highway as determined by Independent Consultant and/or NHAI, and

B. As-Built drawings for the Project Highway components/elements as determined by Independent Consultant and/ or NHAI.

As-Built drawings shall be duly certified by the Independent Consultant.

Annexure "A" of this Schedule gives the list of drawings (only drawing as defined in Dictionary) of the main components/elements of the Project Highway required to be submitted by the Concessionaire.

Annexure A

LIST OF DRAWINGS TO BE SUBMITTED BY CONCESSIONAIRE SHALL INCLUDE BUT NOT BE LIMITED TO:

a) Drawings of horizontal alignment, vertical profile and cross-sections.

b) Drawings of interchanges, major intersections and grade separators.

c) General arrangement drawings of toll plaza layout, toll collection system and roadway near toll plaza.

d) Drawings of Administrative Base Camps and Control Centre.

e) Drawing of a bus-bay and bus shelters with furniture and drainage system.

f) Drawing of a truck parking layby with furniture and drainage system.

g) Drawings of road furniture items including traffic signage, markings, safety barriers etc.

h) Drawing of traffic diversion plans and traffic control measures.

i) Drawings of road drainage measures.

j) Drawings of typical details of slope protection measures.

k) Drawings of landscaping and horticulture.

l) Drawings of Pedestrian Crossings.

m) Drawings of Street Lighting.

n) Drawings of general arrangement of cross-drainage works.

o) Layout/ Configuration of HTMS.

		Test	Testing Procedure
1	Embankment and subgrade construction and cut formation		
1.1	Embankment and subgrade borrow materials	Quality Audit of the following tests performed during construction for soil type, density, moisture content and CBR as required by Ministry of Surface Transport specifications for Road and Bridge works • Moisture Content test as per IS : 2720 (Part 2) • Sand Content Test according to IS : 2720 (Part 4) • Plasticity Characteristics of soils according to IS : 2720 (Part 5) • Moisture Content-Dry Density relationship using heavy compaction according to IS: 2720 Part 8 • Determination of total soluble sulphate content as per IS : 2720 Part 37 • IS : 2720 (Part 40): Determination of Free Swelling Index of solutions	As per relevant parts of IS - 2720
1.2	Compaction	Quality Audit of the following Tests performed during construction as required by MORT&H specifications for Road and Bridge works. • Compaction density and • Determination of dry density of soils in place according to IS-2720, Part 28 by the Sand Replacement Method	As per IS-2720, Part 28

		• Dry density-moisture content relationship as per IS: 2720 Part 8 • Aggregate grading as per Job Mix Formula • Aggregate Impact value as per IS: 2386 (Part 4) or IS : 5640 • Particle size and shape as per IS : 2386 (Part I)	
2.2	Bituminous base and wearing courses	Quality Audit of quality control tests on aggregates and bitumen and on bituminous mixes as laid down in clause 903.4 of MORT&H specifications for Road and Bridge works. • Aggregate Impact Value as per IS2386 (Part 4) • Particle size and shape as per IS : 2386 (Part I) • Stripping value test as per AASHTO T182 • Water absorption as per IS : 2386 (Part 3) • Soundness Test as per IS : 2386 Part 5 • Marshall stability test as per ASTM D-1559	As specified in the codes IS 2386, parts 1,3,4 and 5. AASHTO T182 and ASTM D-1559
2.3	Cement concrete Pavement	Quality audit of sampling and testing of cubes and beams for strength of concrete and quality control tests on aggregates • Aggregate Impact Value as per IS : 2386 (Part 4) • Soundness Test as per IS: 2386 (Part 5) • Alkali Aggregate Reactivity IS : 2386 (Part 7) • Strength of Concrete (Tests on Cubes and beams) as per IS : 516 • Workability of fresh Concrete - Slump Test IS : 1199	As per relevant parts of IS 2386, IS 516 and IS1199

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Schedule for NS2/BOT/KL-1

		...ance during construction	The Auditing shall be carried out in accordance with the IRC special publication on Quality Assurance
3.2	Superstructure	Static load testing of any one span of the structure for carrying design load as per IRC SP 37-1991	Test shall be carried out in accordance with Annexure B
3.3	Bearings	Checking and verification of the bearings to ascertain proper functioning as per MORT&H Specifications.	The inspection shall be carried out in accordance with requirement laid in MORT&H specifications for Road and Bridge works and shall meet the prescribed criteria.
3.4	Expansion Joints	Checking and verification of the Expansion joints to ascertain proper functioning as per MORT&H Specifications	The inspection shall be carried out in accordance with requirement laid in MORT&H specifications for Road and Bridge works and shall meet the prescribed criteria.
3.5	Foundation & Substructure	Checking and verification of the Foundation settlement and rotation	The settlement of foundation for superstructure load at completion shall be measured with reference to a fixed datum. (For this purpose, the records of measurements taken before the superstructure concreting should also be available.
4.0	Highway Lighting System	Level of illumination	The illumination level shall be measured with luxmeter following the method as specified in its manual (Annexure C).
5.0	Traffic Signals	Test in accordance with the relevant clauses of IRC:93 and IS 7537	Meet the prescribed criteria in IRC 93 and IS 7537

for KSI/BOT/KL-1

7.0	Rest Area Operations	Test in accordance with the functioning of facilities built in RAO	specifications / codes stipulated in the country of manufacture. It should include manual operations in case of no power.
8.0	Emergency Telephone System	Independent Systems to be developed to operate on the Project site	Standard building safety procedures as presented by NBC
9.0	Traffic Signage and Pavement Marking	Tests in accordance with ASTM standard E:810 relevant clauses of section 800 of MORT&H specifications for Road and Bridge works published by IRC 1997	Real time test to be carried out to conform to the designed system. To follow ASTM Standard E:810 as per section 800 of MORT&H specifications for Road and Bridge Works published by IRC 1997

1 Schedule for Tests

1.1 The Concessionaire shall, not later than 30 (thirty) days prior to the likely completion of [Four-Lanning], notify the Independent Consultant and NHAI of its intent to subject the Project Highway to Tests, and not later than 10 (ten) days prior to the actual date of Tests, furnish to the Independent Consultant and NHAI a detailed inventory and particulars of all works and equipment forming part of [Four-Lanning].

1.2 The Concessionaire shall notify the Independent Consultant of its readiness to subject the Project Highway to Tests at any time after 10 (ten) days from the date of such notice, and upon receipt of such notice, the Independent Consultant shall, in consultation with the Concessionaire, determine the date and time for each Test and notify the same to NHAI who may designate its representative to witness the Tests. The Independent Consultant shall thereupon conduct the Tests itself or cause any of the Tests to be conducted in accordance with Article 16 and this Schedule-J.

2 Tests

2.1 **Visual and physical Tests:** The Independent Consultant shall conduct a visual and physical check of [Four-Lanning] to determine that all works and equipment forming part thereof conform to the provisions of this Agreement.

2.2 **Test Drive:** The Independent Consultant shall take test drive of the Project Highway by a Car and a fully loaded Truck to determine that the quality of service conforms to the provisions of this Agreement.

2.3 **Riding quality Test:** Riding quality of each lane of the carriageway shall be checked with the help of a calibrated bump integrator as mentioned at annexure A of this Schedule.

2.4 **Pavement Composition Test:** The thickness and composition of the pavement structure shall be checked on a sample basis by digging pits to determine conformity of such pavement structure with Specifications and Standards. The sample shall consist of one pit in each direction of travel to be chosen at random in each stretch of 5 (five) kilometers of the Project Highway. The first pit for the sample shall be selected by the Independent Consultant through an open draw of lots and every fifth kilometer from such first pit shall form part of the sample for this pavement quality Test.

2.5 **Cross-section Test:** The cross-sections of the Project Highway shall be checked on a sample basis through physical measurements of their dimensions for determining the conformity thereof with Specifications and Standards. For the road portion, the sample shall consist of one spot to be selected at random in each stretch of 1 (one) kilometer of the Project Highway. The first spot shall form part of the sample shall be selected bye the Independent Consultant through an open draw of lots and the spots located at every one kilometer from such first spot shall form part of the sample. For the bridge portion, one spot shall be selected at random by the Independent Consultant in each span of the bridge.

2.6 **Structural Test for bridges:** All major and minor bridges constructed by the Concessionaire shall be subjected to the Rebound Hammer and Ultrasonic Pulse Velocity tests, to be conducted in accordance with the procedure described in Special Report No. 17: 1996 of the IRC Highway Research Board on Non-destructive Testing Techniques, at two spots in every span, to be chosen random by the Independent Consultant.

2.7 **Environmental audit:** The Independent Consultant shall carry out a check to determine conformity of the Project Highway with the environmental requirements set forth in Applicable Laws and Applicable Permits.

2.8 **Safety Review:** Safety audit of the Project Highway shall have been undertaken by the Safety Consultant as set forth in Schedule-L and on the basis of such audit, the Independent Consultant shall determine conformity of the Project Highway with the provisions of this Agreement.

3 **Completion/Provisional Certificate**

Upon successful completion of Tests, the Independent Consultant shall issue the Completion Certificate or the Provisional Certificate, as the case may be, in accordance with the provisions of Article 16.4.

Schedule J

Annexure-A

TEST PROCEDURE FOR MEASURING ROUGHNESS INDEX OF THE RIDING SURFACE OF A FLEXIBLE PAVEMENT

EQUIPMENT – Bump Integrator Fitted in a Vehicle

Test Procedure:

The following test procedure shall be adopted for the test

1) Check that the installation and operation of the equipment is in order and meets the requirements prescribed in its operational manual. The tyre pressure of wheels should be as prescribed.

2) The instrument shall be calibrated prior to its use for measurement as prescribed in its operational manual.

3) The operators shall familiarise themselves with the Bump Integrator & other equipment associated with its operation using its Test Mode before commencing a survey.

4) Generally a speed varying between 30 km./hour-40 Km/hour shall be maintained during measurements. The readings shall be taken for each carriageway independently.

5) The equipment shall run on a lane in both the directions once and the average of two values taken for its roughness index.

6) Pavement unevenness/roughness of 2/3 lane carriageway shall be obtained from the average of the values of the 2/3 lanes recorded.

7) The roughness index value is obtained by using the internationally accepted software associated with the equipment from the measured Bumps.

8) All data shall be properly recorded with appropriate referencing and stored in a prescribed manner as in the operational manual.

9) The roughness measurements shall be properly calibrated using the procedure recommended in the World Bank Technical Publication No. 46.

Schedule-J

Annexure-B

LOAD TESTING OF A BRIDGE SUPERSTRUCTURE

The load test shall be carried out to check and establish the serviceability and working strength of the superstructure.

1.0 Test Load

The "Test Load" is the equivalent static load equal to the impacted working design Live Load (applied in addition to all dead loads) placed for maximum effect (bending moment, shear, deflection, etc. as the case may be) and applied either through an appropriate test loading truck or through loading platforms resting on tyre-contact area plates simulating the actual areas of wheels.

2.0 Load Application and Testing Procedure

I. Fix deflection gauges (supported on unyielding supports) under the superstructure, just touching its soffit, at the pre-marked critical 'points'.

II. Apply the test load in five equal increments (including the weight of platforms of trucks in the first increment), allowing about two hours in between completion of one load increment and commencement of the next. About an hour after completing a load increment, note the deflections and any crack patterns together with maximum crack widths.

III. After measuring the deflections, etc, one hour after applying the fifth increment, i.e. the final load increment, keep the test load maintained for about 24 hours and again measure the deflections and crack widths (if any)

IV. Remove the test load in five equal decrements, allowing about two hours in-between completion of one load decrement and commencement of the next. Note the deflections and crack widths (if any) at the end of each load decrement.

V. Note the deflection and crack widths (if any) 24 hours after removal of the test load in order to see whether the recovery is complete or there is any residual deflection, etc.

3.0 Acceptance Criteria

I. Increase and decrease in deflections at a point shall follow a linear relation, with actual deflections not exceeding the theoretically estimated ones by more than 10%;

II. The maximum crack width in reinforced concrete shall not exceed 0.25 mm to 0.30 mm (but no cracks in case of prestressed concrete);

III. The deflections at the end of the 24 hours of maintaining the test load shall not exceed the corresponding values at the start of this 24 hour period by 5% and

The residual deflection at any point 24 hours after complete unloading shall not exceed 10% of the maximum observed deflection at that point (i.e. recovery 90% or more).

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4.0 Observation

The cracks in reinforced concrete shall close upon removal of test load but may not completely disappear.

Schedule-J

Annexure-C

Testing Procedure for Illumination intensity by Luxmeter

Instrument	:	Luxmeter (make of renowned company)
Basis	:	Comparison with a calibrated Luxmeter through a standard lamp by renowned Photometric Lab.

Test Procedure:

Following steps shall be taken for the test

- Calibration of the luxmeter.
- Put off the lights to be tested.
- Take calibrated luxmeter reading.
- Put on the lights in the area to be tested
- Observe the luxmeter reading
- Difference (positive or negative) in addition with standard light luminance level will give the actual luminance of existing lighting system.

Note: The testing procedure shall be as per the Manual of the Luxmeter used.

SCHEDULE-K

(COMPLETION CERTIFICATE)

SCHEDULE - K

COMPLETION CERTIFICATE

(In case the Completion Certificate is being issued without the Provisional Certificate already being issued.)

I/We, (Name of Independent Consultant) acting as Independent Consultant on the Project "Design, Construction, Development, Finance, Operation and Maintenance of Km 270.00 (Thrissur)- Km 316.70 (Angamali), and Improvement, Operations and Maintenance of Km 316.70 (Angamali) to Km 342.007(Kanpalli) of section of NH47 in the State of Kerela, India on BOT basis" through the Concessionaire, Guruvayoor Infrastructure Private Limited hereby issue this Completion Certificate in-terms of sub-clause 16.4 of Concession Agreement since the said Project has been completed and successfully tested as per Schedule 'J' as stipulated in the said Concession Agreement and is ready for commissioning of traffic commercially as provided in the Concession Agreement dated (Date of Agreement between the said Concessionaire and the NHAI). The date of issue of this Completion Certificate shall be the COD as defined in the said Concession Agreement.

Dated _____

(Date of Issue)

Team Leader

Authorised Representative of the Independent Consultant

(In case the Completion Certificate is being issued with the Provisional Certificate already issued.)

We, [Name of Independent Consultant] acting as Independent Consultant on the Project **"Design, Construction, Development, Finance, Operation and Maintenance of** Km 270.00 (Thrissur)- Km 316.70 (Angamali), **and Improvement, Operations and Maintenance of** Km 316.70 (Angamali) to Km 342.00 (Edapalli) **of section of NH47 in the State of Kerela, India on BOT basis"** through the Concessionaire, **Guruvayoor Infrastructure Private Limited** hereby issue this Completion Certificate in-terms of sub-clause 16.4 of Concession Agreement since the said Project has been completed and successfully tested as per Schedule 'J' as stipulated in the said Concession Agreement and all the Punch List items as mentioned in the Provisional Completion Certificate issued on .....completed as provided in the Concession Agreement dated

Dated _____

(Date of Issue)

Team Leader

Authorised Representative of the Independent Consultant

SCHEDULE – K,

PROVISIONAL COMPLETION CERTIFICATE

Provisional Completion Certificate

I/We (Name of Independent Consultant) acting as Independent Consultant on the Project, "**Design, Construction, Development, Finance, Operation and Maintenance of** Km 270.00 (Thrissur)- Km 316.70 (Angamali), **and Improvement, Operations and Maintenance of** Km 316.70 (Angamali) to Km 342.00 (Edapalli) **of section of NH47 in the State of Kerela**, India on BOT basis" through the Concessionaire, **Guruvayoor Infrastructure Private Limited** hereby issue this Provisional Certificate of Completion in-terms of sub-clause 16.5 of Concession Agreement dated (Date of Agreement), between the said Concessionaire and the NHAI, on the request of the said Concessionaire subject to the appended Punch List containing a list of outstanding items since the tests stipulated in Schedule 'J' have been successfully carried-out and all parts of Project Highway can be legally, safely and reliably placed in commercial operations though certain works and things forming part thereof are not yet complete as indicated in the said Punch List. All the items of the said Punch List shall be completed by the said Concessionaire with in 120 (one hundred and twenty) days of the date of issue of this Provisional Certificate of Completion. The date of issue of this Provisional Completion Certificate shall be the COD, as defined in the said Concession Agreement (Date of Agreement between the said Concessionaire and NHAI).

Dated _____

(Date of issue)

_____
Team Leader

_____
Authorised Representative of the Independent Consultant

DULE-L

RATION & MAINTENANCE

QUIREMENTS)

OPERATION AND MAINTENANCE REQUIREMENTS

1. Introduction

The Concession Agreement stipulates that length of Project Highway shall be constructed, operated and maintained during the Concession Period by the Concessionaire in accordance with scope defined in Schedules B & C and thereafter transferred to National Highways Authority of India (NHAI). In addition, the Concessionaire is also responsible for improvement and operation and maintenance of the Additional Highway considered for the BOT package as mentioned in Schedule A. This Schedule elaborates the operation and maintenance requirements of the Concession and is to be read together with the Concession Agreement for this purpose. For clarification of doubt, the period during which the Concessionaire shall comply with the O&M requirements covers the entire Concession Period including the Construction Period. In particular, during the Construction Period, the Concessionaire is required to operate and maintain the existing two lanes as provided in the Concession Agreement and this Schedule. The Concessionaire shall operate and maintain the Project Highway such that during the Construction Period, at least two lanes are ordinarily open to traffic at all times and from Commercial Operations Date (COD), lane availability at the end of each year of the Concession will be a minimum of 99% on a cumulative basis. For this purpose, lane availability at the end of each year will be computed as follows:

$$\frac{\text{(Length in Km x no. of lanes x number of days since COD)} - \Sigma \text{ (lane kms closed x number of days for which closed)}}{\text{(Length in Km x no. of lanes x number of days since COD)}}$$

Note:

- In the above formula the lane Km closed does not include the Additional Highway considered for BOT package if the same has not been completed by the time the Concessionaire completes developments to Project Highway.
- If the Additional Highway considered for BOT package is completed in all respects and handed over to Concessionaire, the above formula shall include total length of BOT package from the day of handing over the Additional Highway to the Concessionaire.
- Any Lane closure due to emergency reasons shall be excluded for computing lane availability.

2. Operation and Maintenance (O&M) Requirements

2.1 The Concessionaire shall take all such actions and do all such things (including without limitation, organising itself, adopting measures and standards, executing procedures such as inspection procedures, highway patrols, and engaging and managing contractors, agents and employees) as will secure:

a) The safety of users of the Project Highway, workers or other persons on the Project Highway and/or facilities thereon.

b) Unimpaired performance of statutory duties and functions of NHAI and other Authorities in relation to the Project Highway and/or other adjoining roads and facilities;

and, subject to paragraphs a) and b) above, ensure that:

1.1. adequate safety measures, taking into account Schedule 'S', are taken up on the Site during the Construction and Operation periods.

1.2. delay to users of the Project Highway and of adjoining roads or facilities is minimised;

1.3. risk of adverse effects on the environment and on the amenity enjoyed by the owners and occupiers of property and/or land adjacent to the Project Highway, adjoining roads and facilities is minimised;

1.4. accidents and emergencies on the Project Highway and facilities thereon are responded to as quickly as possible and their adverse effects minimised;

1.5. risk of disturbance or damage or destruction to property of third party is minimised;

1.6. members of the public are treated with due courtesy and consideration;

1.7. users are given adequate information and forewarning of any event on or any other matter affecting the Project Highway which will enable them to minimise any adverse consequences on them of that event or matter;

1.8. members of the public and others are given adequate opportunity to bring to the attention of the Concessionaire any matters affecting its ability to meet the O&M Requirements;

1.9. Traffic data and data relating to the operation and maintenance of the Project Highway and Project Facilities and events on the Project Highway are collected and disseminated such that NHAI and other persons or bodies with statutory duties or functions in relation to the Project Highway or adjoining roads are able to perform those duties and functions efficiently;

1.10. the Project Facilities shall be operated and maintained in order to fulfil the requirements set forth in the Concession Agreement and in this Schedule L;

1.11. The Scope for operation and maintenance includes but not limited to following:

- Improvement – this includes improvement in the existing assets as per requirement of this Agreement and safety audit if any in consultation with IC.
- Road maintenance – this includes routine maintenance, major maintenance, periodic preventive maintenance, disaster maintenance and inspections;
- Traffic Management – incident management; enforcement of regulations together with the relevant authorities, hazard response; information gathering and dissemination, road patrols and surveillance;
- Safety – accident prevention; after care; user behaviour; education; enforcement; data collection and analysis.
- Facility management – including periodic inspections, routine maintenance, rehabilitation and expansion planning
- Road property management – management of access, encroachment and ribbon development
- Toll fee collection – provision of the appropriate equipment and systems, revenue collection, administration and auditing
- General responsibilities – including budgeting, compliance with legal and accounting requirements, and public relations

Planning of Operations and Maintenance Centre. – including the basic planning, comment on the detail design, and design co-ordination.

Maintaining public relations unit to interface with and attend to suggestions from users of the highway, the media, Govt. agencies and other external agencies.

The limit of responsibilities of the Concessionaire shall be as described below:

In general the limit of the Concessionaire 's responsibility is to maintain all areas within the Right-of-Way (RoW) of the Project Highways inclusive of all facilities such as interchanges, street lighting facilities, traffic light facilities, emergency telephone networks and other facilities constructed by the Concessionaire within the Project Highways.

Limit of maintenance by the Concessionaire for another road joining or crossing the concession limit, shall be according to the following conditions:

Where the other road crosses an underpass, the Concessionaire shall be responsible to maintain the crossing structure, viz., culverts, bridges and their abutments and related facilities, such as drainage, turfing, etc. The Concessionaire shall not be responsible for maintenance of the road surface, or the roadside drains of the other roads that are 100m beyond the RoW of Project Highway.

For the road that crosses an overhead bridge, and the bridge is not a part of an interchange, the Concessionaire shall be responsible for maintenance of the surface of the bridge, joints repairs, drainage linked to the bridge and its abutments.

The Concessionaire shall operate and maintain all the street lighting, traffic light system, structures, roadway surface and the related facilities such as drainage, turfing, etc within the interchanges, and such maintenance shall be extended until the end of the flare and the deceleration and acceleration lanes of the interchanges.

The Concessionaire shall be responsible for maintaining all cross roads indicated in Schedule B up to a length of 100 meters from the Right-of-Way of the Project Highways, and their flares to junctions at any interchange within the Project Highway, whichever is more.

For setting out the limit of maintenance for the Concessionaire, National Highways Authority of India shall be responsible for negotiating with the local authorities or where required, with other relevant third parties. The Concessionaire shall maintain all the drainage system within the Right-of-Way including the culvert crossings and the drains. However, the Concessionaire shall not be liable to maintain rivers and the streams under the jurisdiction of Irrigation Department, except when such maintenance is required as a result of exceptional discharge.

TRAFFIC MANAGEMENT AND LANE CLOSURE

1. Traffic Management during the entire Concession Period is an important activity that the Concessionaire has to attend to ensure safety of the road users as well as the construction workers simultaneously throughout the concession period. It is an usual activity to carryout various types of construction works at different stages and at different periods as per site requirements. Also, it is a vital activity during unforeseen and/or emergency situations arising on account of natural causes or accidents or administrative reasons.

2. Traffic Management is required during planned /-scheduled construction and maintenance activities. However, traffic management will also be called for during unscheduled activities such as

(i) Emergency situation arising on account of
   a) Force Majeure;
   b) Accident/Incident on the Project Highway;
(ii) Special repairs required on account of failure of an element of the Project Highway; and
(iii) Default of the Concessionaire with respect to an operational activity on the Project Highway.

The basic principles to be followed for traffic management and lane closure on the Project Highway shall be as follows:

1. Work programme schedule shall be prepared such that diversion roads for the main traffic are minimized. The existing two lane carriageway is utilized to the maximum extent possible.

2. Measures shall be taken that the traffic is guided from a closed lane onto the operating lane without its conflict with the traffic from the opposite direction.

3. The activity of renewal of pavement surface and/or strengthening of the pavement structure shall not be taken up in a continuous length of more than 2 kilometres at a time to avoid long detour of the traffic.

4. The traffic diversion road where provided shall be appropriately designed for the traffic plying on the highway. It shall also be properly maintained during its operation period.

5. During Traffic detour involving traffic diversion adequate safety measures, as in Schedule 'S' shall be followed.

6. Proper and adequate information about the maintenance activity shall be notified to the users of the Project Highway in advance and displayed at the Site during the Operation Period.

2.4. Traffic Management plan and programme for a planned scheduled construction and/or maintenance activity shall be prepared in advance of that activity keeping 2.2.1 above in view and got approved by the Independent Consultant/NHAI as the case may be.

In case of un-scheduled activities, described in 2.2.2 (i) to (iii) above, an emergency traffic management for the affected reach of the highway shall be prepared and implemented in consultation with the Independent Consultant immediately. This emergency traffic management plan shall take into account the various requirements spelt out in the Concession Agreement as well as in this Schedule.

Lane closure is a vital activity during construction and/or maintenance in the Concession Period that the Concessionaire shall carryout in an organized, planned and disciplined manner.

Lane Closure involves traffic management in the affected reach of the highway, as such it is always a time bound activity and the Operation and Maintenance Manual incorporates it accordingly. In case where the Concessionaire fails to perform in time, a penalty shall be levied on the Concessionaire for the delay in reopening the closed lane to the traffic in terms of the Concession Agreement.

The basic principles to be followed in preparation of a planned lane closure shall be as follows:

1. The activity of renewal of pavement surface and/or strengthening of the pavement structure shall be taken up in one lane of the 2/3 lane carriageway so that at least one lane of that carriageway is available to the traffic.

2. The activity of renewal or strengthening, item 2.5.1 below, shall not be carried out in a continuous length of more than 2 km in rural section and 1 km in urban section so that the closure of a lane is not more than 2 days and 1 day in rural and urban sections respectively.

3. Lane closure adopted for diverting the main traffic on account of the traffic management during construction works of the Project Highway shall be governed by the approved programme of Construction Works.

Lane Closure in short lengths less than or equal to 500 metres for carrying out a routine maintenance activity defined in item 4.2.1.1 of this Schedule shall not be for more than a continuous period of 1 day.

The lane closure needed on account of emergency shall be distinguished from the lane closure described in item 2.4.2.3 above. The lane closure on account of the Emergency shall be dealt with under sub clause 18.9, Emergency De-Commissioning, Article XVIII Operation and Maintenance, Chapter IV, Project Development and Operation of this Agreement.

Traffic Management and Lane Closures Requirements during various situations arising on the Project Highway needing Traffic Management are detailed below:

2.5. Initial Construction Stage

2.5.1. *Rural Section*

i) The widening of the existing 2 lane carriageway shall be generally eccentric to make a four/six (4/6) lane divided carriageway facility. A new 2/3 lane carriageway separated from the existing carriageway with a 4.5m central median will be constructed in the first instance and then strengthening and widening of existing 2 lane carriageway shall be undertaken.

ii) The construction sequence in this case will be as under:

a) 2/3 new lanes will be constructed initially. There will be no conflict area for the main traffic using the existing two lanes during this construction stage. It shall be ensured that the construction traffic does not conflict with the main traffic in this stage.

b) On completion of the 2/3 new lanes throughout, the total traffic will be diverted on it and the existing 2 lanes will be widened with paved shoulders /additional lane with paved shoulder depending upon the new carriageway configuration upto the existing road level. Thereafter, entire width including the existing 2 lanes and the widened portion shall be given bituminous base courses uniformly.

2.5.2. *Urban Section*

i) The widening of the existing 2 lane carriageway shall be generally concentric to make it a 4/6 lane divided carriageway facility. The divider will be a 1.5 m wide central median.

In addition, service road will be provided on either side of the 4/6 lane carriageway facility.

ii) The construction sequence in this case will be as under:

a) Service roads and side drains on both the sides will be constructed initially. There will be no conflict area for the main traffic, which will be using the existing two lanes. It will be ensured that the construction traffic does not conflict with the main traffic at exit and entry points.

b) On completion of the service roads on both sides, the main traffic will be diverted on them direction wise and the existing 2 lanes will be widened to 2/3 lanes on each side duly accounting for the 1.5 m wide central median. On completion of the widening upto the existing road level, the median will be constructed. On its completion, the existing road will be strengthened in such a manner that the bituminous base courses and the wearing course layers are laid uniformly in 2/3 lanes and paved shoulder on either side of the 1.5 m wide central median. During this operation, the construction traffic will not be conflicting with the main traffic on the service roads.

c) On completion of the divided lane carriageway of the Project Highway, the main traffic from the service roads shall be restored on them.

nd Maintenance Stage

plicable for the entire Operations Period for the Project Highway during the
Period. Various important activities to be carried out during this stage are:

periodic maintenance activities:

Renewal of the wearing surface of the road pavement once every 5 years;

Strengthening course to be provided on 'as required' basis

ance activities arising out of the specific need(s) on account of the site conditions

ngthening course required on account of the Benkelman Beam Deflection (B.B.D).
es in excess of the prescribed criteria obtained during regular testing as per the
ncession Agreement requirement;

aring course required on account of the IRI values higher than the prescribed criteria
ined during regular testing as per the Concession Agreement requirement;

lized repairs in short lengths less than 500 m on account of pot holes, cracking,
idence in isolated spots or in scattered areas.

ler to the execution of the said activities, para 2.6.1 above the main traffic will have
to an extent dependent on the site requirement.

NCY STAGE

uld arise any time in an emergency situation and shall have to be addressed to on its
The extent of the traffic management shall be assessed as per the site requirement

y situation could be faced in the following three situations.

period between the award of the work and commencement of the construction
nancial close.

the existing two lane facility is only available. The traffic management will have
ccordingly. Either the existing one lane will have to be closed passing the traffic
e and its adjoining shoulder or both the existing lanes will be closed and a
rovided.

period when construction works are in progress.

availability of the carriageway at site shall decide the nature and extent of the

period when the Project Highway is under operation and/or maintenance, the
ergency requirement in this case will determine the type and extent of the traffic

ment in emergency situation shall be provided immediately in consultation with
Consultant

3. OPERATIONS

3.1. Introduction

3.1.1 The Concessionaire shall in consultation with the Independent Consultant evolve an Operations and Maintenance Manual (Maintenance Manual) as per sub-clause 18.2 of this Agreement.

3.1.2. The said Maintenance Manual shall have two separate sections, namely

(i) Section I - Operations; and

(ii) Section II - Maintenance

These are briefly described in items 3.2 and 4 of this Schedule respectively.

3.2. Section I - Operations

It shall prescribe procedures and systems for activities including but not limited to the following for the regular and emergency operations of the Project Highway and Project Facilities thereon.

3.2.1. Regular Operations

- Permitting smooth and uninterrupted flow of traffic during normal operating conditions.
- Functioning of the Toll System including charging and collecting the fees from the road user in accordance with this Agreement.
- Functioning of the lighting system;
- Functioning of the Patrolling System
- Functioning of rescue and medical aid services
  - Ambulance
  - Fire Brigade
  - Tow away truck and cranes
- Functioning of the Highway Traffic Management System
  - Emergency Call Boxes (ECBs) for Road Users
  - Central Control System
- Functioning of the Project Facilities
  - Administrative, Operational and Maintenance Base Camp
  - Rest Areas
  - Truck Parking Laybys
  - Electrical Services at Laybys, Bus Stops and Rest Areas
  - Potable Water supply system including supply of drinking water at truck parking laybys, rest areas etc.
  - Public toilets and other sanitary facilities
  - Pickup Bus stops
  - Solid waste disposal system including those from litterbins.

2.2. Emergency Operations

Minimising disruption to traffic in the event of accidents and/or incidents affecting the safety and use of the Project Highway by providing a rapid and effective response and maintaining liaison procedures with emergency services.

- Reasonably smooth and safe movement of traffic during emergency activities such as special repairs during floods, storms, hurricanes and earthquakes.
- Failure of a system due to human error, electrical or mechanical failure.

3.3. The Concessionaire shall keep regular record of accidents that occur including the nature of accident, location of occurrence, time and date in the prescribed format, included in the Maintenance Manual and shall forward the monthly particulars of the same to the Independent Consultant and NHAI regularly in the first week of the following month.

3.4. The Concessionaire shall programme inspections of the Project Highway for its smooth operations in terms of the Concession Agreement classified in the following categories :

- Visual Inspection
- Close Inspection
- Thorough Inspection

and described herein under

3.5. **Visual Inspection**

Visual Inspections are broad general inspections carried out quickly and frequently by highway /bridge maintenance engineers having knowledge of road structures. The purpose of this visual inspection is to report the obstacles to traffic and fairly obvious deficiencies, which could lead to accidents or maintenance problems. Such inspections should be frequent. The visual inspection may be carried out by visual assessment with careful observation of the specific object/item of the Project Highway for identification and for quantification of the deficiencies or damages of the Project Highway.

3.6. **Close Inspection**

The close inspection may be visual and/or supplemented by standard instrumental aids for assessment of defects / deficiencies of Project Highway with careful observation of specific elenrent(s). The close inspection may be daily 7 periodic but it is more intensive and would require detailed examination of elements of the Project Highway. It should cover all the aspects of the specific element of Project Highway against a checklist. The close inspections are to be carried out quite frequently depending upon the nature of structure of Project Highway. This inspection is to be carried out by the Highway/Bridge Engineer having good knowledge of road structures with theoretical background to analyse the nature, and extent of defects/deficiencies, suggest suitable remedial measures to rectify/remedy them and quantify repair work.

3.7. **Thorough Inspection**

A thorough inspection is comprehensive and detailed for assessment of defects/deficiencies of the Project Highway by visual inspection or with aid of standard equipment and non-destructive testing where necessary. Such an inspection is to be carried out on the basis of comprehensive checklist of items related to the materials, condition and situation of the structure etc. The

list is to be prepared meticulously well in advance of inspection. The thorough inspection ...ld be undertaken during the most critical weather condition, which is generally rainy season ...a. During rainy season the Road/Bridge structures are under severe condition, thereby the ... and deficiencies of the Project Highway are more pronounced. The inspections carried out ... the said period offer the most critical evaluation of the performance of the structure.

...horough inspections are all the more important for Bridges, Culverts and drainage ...res, as well as road pavements during adverse weather condition of monsoon period.

... being a qualified Highway/Bridge engineer, the inspection team leader must be familiar ...esign and construction features of the Highway /Bridges to be inspected so that the ...on can be properly and accurately assessed for a meaningful report and quantification of ... works. The competence of team leader to recognise any structural distress/deficiencies and ... its seriousness with complete recommendation for appropriate repairs is important pre-...es for entrusting this assignment to him.

...ency of Inspections

...pection frequency of various items of Project highway has been indicated in the Table L-1 ...er. The frequency of inspection can be suitably revised in consultation with the ...dent Consultant if the emergencies so warrant.

Table L-1: Objective and Frequency of Inspection

...nd minimum frequency of inspections under normal circumstances shall be as under. If ... arise, the interval of inspection may be reduced)

Item	Daily	Monthly	Quarterly	Before and after rainy season
Pavement	+	++		•
Expansion joints	+	++		•
Kerb	+	++		•
Shape	+		++	•
Turfing		+		•
Pitching & masonry		+		•
Retaining wall		++		•
Shoulder drain	❖	++		
Median drain	❖	++		
Side slope drain	❖	++		
Bridge catch basin	❖	++		
Gullies and catch pits	❖	++		

...2/BOT/KL-1

Object	Item	Daily	Monthly	Quarterly	Before and after rainy season
Bridges	Superstructure		+	++	•
	Substructure		+	++	•
	Head walls and aprons		+	++	•
	Painting		+		•
	Hand rail		++	•	
Culverts	RC Culverts				•
	HP Culverts				•
Guard rails	Shoulders	+		++	•
	Medians	+		++	•
Traffic operation facilities	Signs	⁘	•		•
	Marking	⁘	++	++	•
	Delineator	⁘	++	++	
	Lighting	⁘	++	++	
Other facilities	Vegetation / landscaping	⁘	++	•	
	Toll plaza	⁘	++	++	•
	Way side amenities	⁘	++	•	
Traffic conditions		⁘	•	++	
Encroachments		⁘	•		

LEGEND

+ *visual inspection*

++ *close inspection*

• *thorough inspection*

⁘ *visual inspection during rainy season only*

MAINTENANCE

Introduction

1. The Concessionaire shall maintain the Project Highway in traffic-worthy condition and the Project Facilities in usable condition throughout the Concession Period or any extension thereof in terms of the Concession Agreement through regular maintenance and preventive maintenance of the various items and elements of the Project Highway.

The Concessionaire shall maintain the existing 2/3 lanes of the Project Highway and already constructed 4/6 lanes of the Project Highway during construction of new lanes in such manner that the unevenness index of the pavement does not exceed 3000 ... present roughness value of the existing pavement, whichever is lesser and it is free of pot holes.

The following MORT&H and IRC publications shall be referred for preparation of the said Section - II Maintenance of the "Operation and Maintenance Manual"

- MORT&H Manual for Maintenance of Roads.
- IRC-SP-35-1990, Guidelines for Inspection and Maintenance of Bridges.
- The manufacturer's Maintenance manual(s) of the equipment including that of the Toll Collection System to be used in the Project Highway Operations shall form part of the said O&M Manual.

Maintenance Section of Maintenance Manual

The Section II Maintenance, of the Operation and Maintenance Manual, shall include the activities described hereinunder amongst other activities required for the regular and preventive maintenance of the equipment during the Operations Period, so that the Project Highway is maintained in a manner that at all times it complies with the specifications and standards and at the time of Divestment of Rights and Interests by the Concessionaire in terms of Article XXXIII of this Agreement it is in sound, durable and functional condition.

Regular Maintenance

It consists of the routine maintenance and periodic maintenance throughout the Concession Period and extension thereof, if any, for all elements of the Project Highway.

Routine Maintenance

The Concessionaire is required to perform all routine maintenance activities along the project road. The Routine Road Maintenance means planned ongoing works and activities required to ensure public safety, repair small defects and to maintain the road and the entire RoW in the required condition.

The Concessionaire is required to develop maintenance sheets for each component of the works. The Concessionaire has to utilise mechanised equipment, method and innovative solutions and technology to perform these obligations and include such process in the Maintenance Manuals.

Maintenance activities are to be carried out in accordance with relevant IRC Codes, Guidelines Special Publications as are applicable to National Highways, MORT&H specifications and technical circulars with all updates. In the absence of any definite provisions on any particular matter related to the specifications and/or standards, reference may be made to the latest codes and specifications of the Bureau of Indian Standards (BIS), AASHTO, ASTM, British Standards or any

other International Standards. But where even these are silent, the work shall conform to sound engineering practice with the approval of the IC. The requisite Quality Control Tests as per specifications and codes are to be carried out by the Concessionaire at his cost as per the directions of the IC.

Routine Maintenance broadly includes:

(i) Maintenance of pavement
(ii) Maintenance of turfed areas.
(iii) Maintenance of landscaping
(iv) Maintenance of drainage system
(v) General cleaning including CD structures
(vi) Cleaning, maintenance of toll plaza and other buildings within concession limits.
(vii) Maintenance of main line structures.
(viii) Maintenance of Right-of-Way fences.
(ix) Maintenance of Highway Accessories.
(x) Maintenance of guardrails.
(xi) Other miscellaneous responsibilities such as stand by/on-call, emergency plant & equipment, stray animal catching operations etc.
(xii) Provision of traffic and safety control devices during the routine maintenance works or any accidents.

4.3. Periodic Maintenance of Pavement

The framework of activities relating to pavement maintenance and rehabilitation in respect of flexible and rigid pavement are given in the flow charts in Appendix 3.1 and Appendix 3.2 respectively. The Concessionaire shall set forth in the Operations and Maintenance Manual the detailed procedures to be followed under each of these activities, and also choose the operational and performance criteria from the performance standards set forth in this Schedule.

4.3.1. Pavement Riding Quality

The riding quality of the pavement shall be ensured by satisfying the minimum requirements given herein under.

i) Surface roughness of the Project Highway on completion of construction shall be 2000 mm/km as measured by vehicle mounted Bump Integrator.
ii) Surface roughness shall not exceed 3000 mm/km during the service life of pavement at any time. A renewal coat of bituminous concrete shall be laid every 5 years after initial construction or where the roughness value reaches 3000 mm/km whichever is earlier to bring it to the initial value of 2000 mm/km.

4.3.2. Structural Condition of the Pavement

i) The structural condition of the flexible pavement of the Project Highway shall be assessed every year by taking Benkelman Beam Deflections and working out

characteristic deflections of homogeneous sections of the Project Highway as p IRC-81-1997. Wherever the characteristic deflection exceeds 1.2 mm a bituminous overlay shall be provided appropriately designed according to IRC-81-1997 or l latest versions or amendments to it.

II) Recycling of existing crust using milling as an option can be explored by th Concessionaire in consultation with the IC to maintain the FRL at the same level throughout the concession period. However, while adopting such measures, th residual strength of existing pavement shall be estimated and equivalent thickness of new material added before laying the designed overlay. The design of profile with altered pavement treatments shall be finalised in consultation with IC.

III) In the case of cement concrete pavement, joints shall be thoroughly inspected every year and the loss of sealing compounds made good.

Preventive Maintenance

Preventive Maintenance shall include the activities related to each element and the system as a whole of the Project Highway to ensure that during the Concession Period and at its end, it is in sound, durable and functional condition.

Special Repairs

Damages occurring due to natural calamities like heavy floods, sand storms, hurricanes, cyclones, earthquakes to any element or system of the Project Highway, shall be rectified and the system restored to function as per programme prepared in consultation with Independent Consultant. All such activities shall fall under 'Maintenance' and shall form a part of the said Maintenance Manual.

Minimum Requirements of Maintenance Activities

Major Breaches in the Roadway

Major breaches in the roadway of any type endanger safety of traffic and cause obstruction in movement of vehicles. These breaches shall be repaired urgently. Steps as mentioned in O&M manual shall be followed by the Concessionaire for repairing the breaches.

The Concessionaire shall ensure speedy restoration of traffic and take immediate action to repair the damages as permanent measures for the Project Highway. The restoration of traffic shall be made within 24 hours of its occurrence. The permanent measures shall be completed within a period of one week.

Minor cuts, rutting or blockage

Minor cuts, rutting and damages on Project Highway which do not completely obstruct the traffic but endanger the safety of traffic, shall be attended to on an urgent basis. For this purpose any cut which is in width more than 1 m shall be repaired within 24 hours. Any minor blockage,

which partially obstructs the traffic and endangers safety, shall be removed by the Concessionaire immediately.

1.4.3. Branches of trees

The branches of the roadside trees if hanging closer than 5.5m over the road level of the Project Highway shall be cut, trimmed or lopped within 24 hours.

1.4.4. Shoulders

The shoulder (Earthen/Hard) shall be maintained in such a way that the shoulder drop off shall not be more than 25 mm for a length of 10m in a section length of 100m and/or there shall not be any false ditch causing the water to drain in reverse direction i.e. towards pavement instead of away from pavement surface, the same shall be rectified within 2 days as described below:

If the shoulders are deformed or scoured and are lower than 25mm from the adjacent carriageway, these shall be corrected by excavation, filling, dressing and compacting a material matching the existing material and it shall conform to the relevant MORT&H Specifications. In case of earthen shoulder repairs shall be carried out as per MORT&H Specifications 3003.

1.4.5. Drainage / Side Drains.

1.4.5.1. The Concessionaire must ensure that all drainage elements and structures are without any obstructions, which may reduce their normal cross section and impede the free flow of water. They should not have silting more than 25% of their size at any part of length.

1.4.5.2. All the Pipe and Box culverts shall have less than 10% deteriorated barrel and have more than 90% of the diameter/size open. There should be no evidence of flooding with end protection intact and no dip on the road over culvert indicating structural weakness.

1.4.5.3. Routine maintenance under this category shall cover pipe drainage system, slot drains, porous drains, gullies, catch-pits, open grills, ditches, side drains and median drains etc.

1.4.5.4. If the side drains / median drains where provided, and other drainage structures have been silted up in such a manner that it is causing obstruction in flow of water, the same shall be cleared off regularly within 7 days after detection in order to keep the drains free from obstructions all the time.

1.4.5.5. If the drainage system of Project Highway is covered and damaged, it obstructs the flow of water causing damage to the road pavement. Such damaged structures shall be reconstructed to required shape, size and proper slope within 21 days after detection or as instructed by IC.

Cross Drainage Works & Other Structures

The Concessionaire shall set forth in the Operation and Maintenance Manual, the detailed procedures to be followed for the maintenance and repairs of bridges and other structures keeping in view IRC-SP-35: 1990 'Guidelines for the Inspection and Maintenance of Bridges' [illegible] with the Independent Engineer. The flow chart for Bridge and Culverts maintenance activities in given in Appendix 3.3.

The scouring of piers and abutments of bridges and culverts shall be observed carefully particularly before and after rainy season and suitable remedial measures as deemed fit looking to site conditions shall be taken in consultation with IC.

The bridge deck must be clean and have minimal spalls, cracks or scaling. The drains /scuppers on the deck must be clean and functional always.

The Super-structure should not have any cracks or loss of section. There should be no spalling and have proper vertical clearance and opening height. Paint on the super structure must be in good shape.

The sub-structure should not have spalls, cracks and scaling. The bearing assembly should be functional and lubricated periodically. Abutment /pier seats should be clean and sound.

The joints on the structures shall not be loose and should be sealed always.

Retaining walls should not have spalling or cracks and its weep holes must be open always. There should be no indication of settlement or rotation.

If any settlement cracks are appearing in substructure and superstructure of the CD works beyond permissible limits, the same shall be carefully observed and suitable remedial measures as per sound engineering practice taken.

The treatment for the damaged culverts/bridges shall be assessed at site after ascertaining the damaged portion as per site exigencies. The repair shall be carried out expeditiously in consultation with IC.

Pavement

As part of pavement maintenance the pavement shall be treated for various distresses occurring as described below.

Cracking

Cracking of bituminous pavements shall include all types of cracks such as hairline, alligator, longitudinal, transverse, shrinkage, reflective and edge cracking, linear and slippage etc. For any given section of the pavement, the cracked area should not be more than 10% of the pavement

ce of that section and/or the cracked area shall not exceed 0.5 sq.m at a place. The treatment be completely done within 7 days after their detection. The treatment shall be followed as bed below:

the width of the cracks is less than 3mm and resulting into settlement of pavement up to 10 m in depth and exceeding in area more than 0.5 sq.m. at a place, such cracking shall be aled by fog sealing in accordance with the MORT&H Specification 3004.

the width of the cracks is more than 3mm and resulting into settlement of pavement up to mm in depth and exceeding in area more than 0.5 sq.m. at a place, such cracked surface all be repaired by slurry sealing in accordance with MORT&H Specification 516.

the cracked portion has settled more than 10mm and its area exceeds 0.5 sqm, such areas all be repaired by patching as per MORT&H Specification 3004.

ease of alligator cracks, the permanent repair by full depth patching shall be carried out. e slippage cracks shall be repaired by removing the affected bituminous layer and lacing it with surface patch. In edge cracking, if shoulders are not providing adequate eral support, the shoulder shall be reconstructed with good quality materials.

g

y 50 m section of the pavement, there shall not be ruts deeper than 10 mm and/or the of rutting should not be more than 5m. The treatment shall be completely done within 15 after their detection. The pavement surface shall be rectified/corrected as per directions t in IRC 82-1982 and based on sound engineering practice at such locations.

gations and Shoving

gations and shoving in the pavement area exceeds 1 sq. m at any place and depth / height gation / shoving exceeds 10mm, the same shall be rectified/corrected within 2 days after tion, as per directions laid out in IRC 82-1982 and based on sound engineering practice.

ent or Grade Depressions

ttlements and grade depressions exceed 1 sqm in area and their depth is within 10mm, ects shall be treated within 3 days after detection as per directions laid out in IRC 82- based on sound engineering practice.

al or Swell

50 m section of the pavement, there shall not be upheaval or swell that exceeds 0.5 sq. ea; if its height is more than 10mm, the same shall be treated within 7 days after its n as per as per directions laid out in IRC 82-1982 and based on sound engineering

4.4.7.6. **Ravelling**

For any 50 m section of the pavement, if the ravelling of bituminous surface is not more than 3% of the pavement surface of that section and/or the ravelled area does not exceed 1 sq.m. at a place, the same shall be rectified within 7 days after their detection by slurry seal treatment.

4.4.7.7. **Potholes**

There shall not be any pothole on the pavement surface. Irrespective of the size and depth, the potholes shall be repaired by patching / pothole filling in accordance with MORT&H Specification 3004. The potholes shall be repaired immediately if causing a threat to safety; other potholes shall be repaired within 2 days after their detection.

4.4.7.8. **Skid Hazards**

The skid resistance of the pavement surface shall be maintained in such a way that the skid number is a minimum of 55 when tested as per BS 812 Part 114ASTM-274. Skid hazards, irrespective of size, shall be corrected by improving the surface drainage and skid resistance including cleaning the surface of contamination, surface treatments or milling or resurfacing.

4.4.7.9. **Bleeding or Flushing**

For any 50 m section of the pavement, if the bleeding surface area is more than 1% of the pavement surface of that section and/or the bleeding surface area does not exceeds 0.25 sq.m. at a place, the same shall be treated immediately within a day after its detection in accordance with IRC:82-1982 or any other relevant guidelines in consultation with the IC.

4.4.7.10. **Edge deformation/Breaking**

For any 100 m section of the pavement, if the edge breaking is more than 1m and/or the width of edge breaking is more than 0.1m at a place, the same shall be treated immediately within a day after its detection in accordance with IRC:82-1982 or any other relevant guidelines in consultation with the IC.

4.4.7.11. **Loss of Cover Aggregate**

If the loss of cover aggregate occurs in area exceeding 1 sqm of the pavement, treatment of seal coat shall be applied.

4.4.7.12. **Longitudinal / Transverse Streaking**

If the longitudinal and transverse streaking appears on the pavement surface in area exceeding 5sqm, the same shall be treated by application of new surface treatment or by a second treatment over the streak surface.

If any defects other than those mentioned above occur on the pavement of the Project Highway, the same shall be rectified/corrected by the Concessionaire as per directions laid out in IRC 82-1982 and based on sound engineering practice.

Other Maintenance Activities

Maintenance of Traffic Signals

The traffic signals shall be maintained at all times as per clause 18 of IRC: 93 -1985 and shall be periodically inspected, maintained and repaired so as to be in satisfactory working condition all the time.

Maintenance of Highway Lighting System

1. Maintenance of all lighting installations and related appurtenances shall be as per relevant clauses of IS: 1944 (Part I-V) 1981.

2. Lighting wherever provided shall be maintained by the Concessionaire in a condition nearly similar to original condition.

3. The faults shall be repaired instantly and lighting restored. Missing and damaged items shall be replaced instantly.

4. Cleaning shall be done at regular intervals to be mentioned in the Maintenance Manual to ensure that lighting is not below the specified standard.

5. All installations shall be safeguarded against weathering and ageing effects by repainting and other preventive measures.

6. The servicing of stand-by power generation units shall be carried out in accordance with the manufacturer's instructions.

Maintenance of Highway Signs and Pavement Markings

All traffic signs and markings shall always be kept clean, visible and in correct alignment and position.

Any damage to traffic signs, which reduces or threatens to reduce full and clear visibility, shall be rectified within twenty four (24) hours of its occurrence. If they are used as base for posters, the posters shall be removed and the signs cleaned within 24 hours. Signs shall be washed using detergent solution followed by clear water to maintain their visibility and reflectivity unimpaired due to dust etc.

Any part of traffic signs damaged due to weathering, corrosion, vandalism or any other cause shall be replaced by the Concessionaire within seven days.

y mandatory signs including those for traffic safety and toll, 'damaged beyond repair' shall replaced within 2 days and all other signs with similar condition shall be replaced within 3 ys.

ropriate devices for measuring the luminosity and reflectivity shall be used to check bility and reflectivity of signs, delineators and markings. These shall be replaced by similar erial if the reduction in the level of these two requirements falls below 50% of the original el.

ment marking with thermo plastic paint shall be carried out soon after any overlay/renewal is provided.

tenance of Pickup Bus Stops

enance of pickup bus stops shall include attending to repairs to the bus-bay pavement and o various parts of the passenger shelter and connected facilities as and when necessary. acement of irreparable items shall be done within 2 days.

enance of Control Centre

shall be periodic inspection and maintenance of the Control Centres. This shall include ing to repairs and maintenance (both regular and periodic) to various parts of the building nnected services and facilities as and when necessary, and replacement of irreparable of work. Cleaning & disinfecting of the water supply systems, inspection and inage/sanitation systems and electrical installations shall be as per relevant clauses of al Building Code (NBC).

nance of Emergency Telephone system including its equipment shall include periodic g, checking of the system, replacement of components, attending to all necessary repairs er incidentals to keep the system in working condition.

vehicles shall be maintained in smooth running condition at all times. In the event of any being off the road for maintenance or on account of breakdown, substitute vehicle shall led immediately.

nd of the Concession Period or the extended period thereof, Control Centres together equipment in working order shall be handed over to NHAI.

ance of Buildings

nce of buildings shall include routine maintenance and attending to repairs to various the building and connected services as and when necessary, and replacement of le items of work, cleaning & disinfection of the water supply systems, inspection and nce of drainage/sanitation systems and electrical installations shall be as per relevant NBC.

5.6.2. At the end of the concession period or the extended period thereof, all buildings shall be in useable condition and handed over to NHAI.

5.7. **Maintenance of Road Furniture and Facilities**

5.7.1. Maintenance of road furniture and facilities shall include attending to repairs to various parts of the road furniture and connected services as and when necessary, and replacement of irreparable items of work in reasonable period.

7.2. All the hectometre stones, Kilometre stones and 5th Km stones shall be kept 100% clear of obstruction; and up to 5% surface damage shall be rectified within 3 days after detection and shall bring it to its original state. If the surface damage is more than 10%, the same shall be removed and replaced with new ones meeting IRC standards.

7.3. At the end of the concession period or extended period thereof, all road furniture and facilities in useable and in working order shall be handed over to NHAI.

Maiatenance of Highway Landscape

1. Maintenance of Highway Landscape shall include attending to repairs to elements of the landscape connected services as and when necessary, and replacement of irreparable items of work.

2. Trees shall be maintained as per the guidelines in IRC: SP: 21-1979 and no indiscriminate felling of trees shall be resorted to while upgrading, widening and improving the highway. The felling of trees shall be undertaken in consultation with the Independent Consultant and after obtaining due permission of the Forest Department, as applicable.

3. While borrowing earth from roadside land for routine maintenance it shall be ensured that no earth is removed around root of trees. All borrowing operations shall be as per IRC: 10-1961.

. Maintenance operations include numbering and maintaining a register of all road side trees within the Right of Way.

. The routine maintenance such as trimming and shaping shall also cover those hedges and trees within the RoW, which affect the performance of the Project Highway.

Cutting or clearance to safeguard visibility at intersections, road bends, accesses and signs shall be carried out in such a way as to avoid permanent damage to hedges and trees. Hedges and trees overhanging carriageways shall be trimmed to provide a minimum headroom of 5.5 metres at all times.

5.8.7. Turfing within the RoW shall be mown as to achieve a visual pattern in harmony with adjacent areas. Mowing shall be done when the height of cut reaches 150 mm.

5.8.8. The grass/turf within RoW shall be maintained in such away that the roadway is free [illegible] and the availability of sight distance at [illegible] curves etc. The grass/turf around crash barrier, headwalls, paved ditches etc. shall be maintain neatly.

5.8.9. The Operation and Maintenance Manual shall include a maintenance and management plan f trees, shrubs, turfing and hedges to sustain their development in a manner pleasing in appearance.

Incident Management

5.1. Scope

- The Concessionaire shall initiate, co-ordinate and maintain an Incident Management System (IMS) and supply regular incident statistics to NHAI.

- Incident Management entails a set of co-ordinated activities initiated by the Concessionaire when an incident (an extraordinary event resulting in the reduction of road capacity or creates a hazard for users) occurs, in order to minimise the effects of the incident and restore normal capacity and safety levels to all affected road facilities as efficiently as possible.

- If at the commencement date, there is no existing IMS at the site, then the Concessionaire should develop and implement an IMS within a period of not more than 3 months from the commencement date.

- NHAI shall assist the Concessionaire to identify relevant agencies (e.g. rescue, fire, hazardous materials, traffic, police, ambulance, alternative routes, cleanups) and their representatives and to liase with these representatives on behalf of the Concessionaire.

The Concessionaire shall set up a steering committee, which shall include representatives of the various relevant agencies, to identify current & potential issues and problem areas which need addressing.

The incident management centre shall be continuously staffed on a 24 hour basis. The Concessionaire shall record all incoming calls, along with the description of the nature of the call and the corresponding action taken.

The Concessionaire shall record and maintain records of the details of all the SOS calls received (e.g. collision, dangerous material, breakdown, etc).

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ther occurrence of any major incident, resulting in multiple loss of life, significant periods of
d closure or major route rehabilitation work, an incident debriefing report shall be produced
d forwarded to NHAI within one month of occurrence.

els of Service

ng levels of service apply to the incident management system:

plementation of fully functioning IMS system – 3 months after commencement

ffing – 24 hrs/day and 365 days/year

sponse time to a single incident – ½ an hour after receiving notification

ltiple incidents – as soon as possible

dent debriefing reports – 1 month

ering committee monitoring report – quarterly

Management

pe & Levels of Service.

ng scope of operations and levels of service applies to facilities under management:

Concessionaire shall comply with all the requirements of the relevant Indian Laws on
upational Health and safety, and the necessary certification/documentation proving
pliance shall be made available by the Concessionaire at any time.

Concessionaire shall take all necessary measures to minimize accident occurrences on the
way section. For this purpose he shall liaise with the relevant local agencies such as Police,
tal, Fire Brigade, Highway Police, etc. as required.

Concessionaire shall maintain a comprehensive register and database of all accidents
ring on the Project Highway Section. The Concessionaire shall utilize this data to define
dentify "Black Spots" and the like, make the necessary analysis of the cause of the "Black
and make appropriate recommendations to NHAI for counter measures.

oncessionaire shall provide educational programs for the improvement of safety for the
of Roads under operation. This shall occur four times per annum. This shall be carried out
issuing of pamphlets, billboards, etc. The Road Patrols shall in addition take every
unity at events such as accidents and the like to educate Users.

oncessionaire shall repair all damaged fencing that prevents access to animals and
ians to the highway. In addition the Concessionaire shall recommend to NHAI for
tion of additional fencing where necessary to prevent access to the Highway.

Concessionaire shall assume full responsibility for the safety of employees by providing
ing safety clothing and safety equipment.

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n, the Concessionaire shall be responsible for the security of the project:

ecurity guards shall patrol the toll plazas and route facilities areas shall be provided by the Concessionaire. These guards shall operate on a 24 hour basis, for 365/6 days per year.

e Concessionaire shall be responsible for maintaining/upgrading all facilities for site security, cluding fencing, intercom system, emergency communications system, access control system d the like.

Asset Management

ope

e Concessionaire shall ensure the maximum availability and efficient utilisation of the assets NHAI. This shall also include the protection of the right of way from encroachments and er unauthorised activities.

addition to the main carriageways, the Concessionaire shall also provide for the management rest areas, bus bays, bus parking areas and other facilities for highway users, so that these ilities operate without hindrance to the through traffic.

cessionaire shall maintain the buildings, plaza facilities in a manner that projects a well d professional image to the motoring public. This shall require the Concessionaire to:

the plaza neat and litter free at all times.

ntain the vegetation, lawns and shrubs etc

ntain the parking areas and approaches neat and litter free.

ntain all the toll plaza such that the walls remain freshly painted, the woodwork neat, and all tural defects immediately attended to.

Concessionaire shall ensure that any visual defects of the buildings, occasioned by accident ar and tear are rectified within one week.

oachments:

Concessionaire's enforcement of the requirements of NHAI shall be a significant obligation the Contract. NHAI shall define the Right of Way and their requirements with respect to horised accesses, encroachments and the like".

the date of the commencement of O&M period, the Concessionaire shall be required to ine all encroachments and unauthorised accesses to the highway. The Concessionaire st the encroachments with a description, location and extent of each encroachment, draw ethod statement and programme for the removal of the accesses or encroachments for al by NHAI. All encroachments shall be removed, and unauthorised accesses closed 3 months of the commencement of O&M period.

Inspections

Full and component inspections of the highway section shall be undertaken at appropriate intervals. The Concessionaire shall draft inspection procedures for each part and component of the Highway Section that requires periodic inspection.

Inspection Reports and Remedial Measures

Periodicity of inspections for maintenance activities by the Concessionaire shall be regulated as per this Agreement and governed by the exigencies of the situation. The said inspections shall be followed by reports to the Independent Consultant and NHAI. Based on reports, detailed investigations shall be undertaken by the Concessionaire itself and/or on advice of the Independent Consultant and NHAI as the case may be.

The Concessionaire shall carry out any maintenance, repair or rehabilitation works found necessary by these investigations in accordance with the Maintenance Manual and this Agreement.

Maintenance of Facilities for Road Users

The Concessionaire shall ensure that all the Project Facilities provided for users of all categories are kept in a neat, hygienic and tidy condition. Special attention shall be given to the preparation of food items so that they are cooked with unadulterated ingredients in a hygienic manner.

Items of Maintenance

The Concessionaire shall maintain the Project Highway, Project Facilities and Project Assets in working and orderly condition at all times during the Concession Period or any extension thereof.

The specifications and standards for maintenance items shall be governed and regulated as per Schedule 'D' of this Agreement.

INVESTMENT

The Concessionaire shall take action(s) in terms of Article XXXIV Defects Liability and Article XXXIV Miscellaneous of this Agreement prior to proceeding with Transfer of the Project Highway, Facilities and Assets thereon to NHAI.

The Concessionaire shall obtain a Transfer Certificate as per Schedule T, appended to this Schedule, from the Independent Consultant, who shall issue it after satisfying itself that the Project Highway and Facilities and Assets thereon have been constructed, operated and maintained in terms of this Agreement during the Concession Period and meet the divestment requirements as per this Agreement for the issue of Vesting Certificate (Schedule V) by NHAI. The Concessionaire shall take action(s) under Article XXXIII Divestment of Rights and Interests of this Agreement after obtaining the Transfer Certificate (Schedule T-) from the Independent

for NS2/BOT/RI-I

...nt as spelt out in 5.2 above in order to obtain Vesting Certificate (Schedule V) from

...nce of the Vesting Certificate (Schedule V) by NHAI as per sub clause 33.4 of Article ... Divestment of Rights and Interest in the Project shall result in the completion ...nsfer of the Project Highway in terms of this Agreement.

Schedule L1

TRANSFER CERTIFICATE

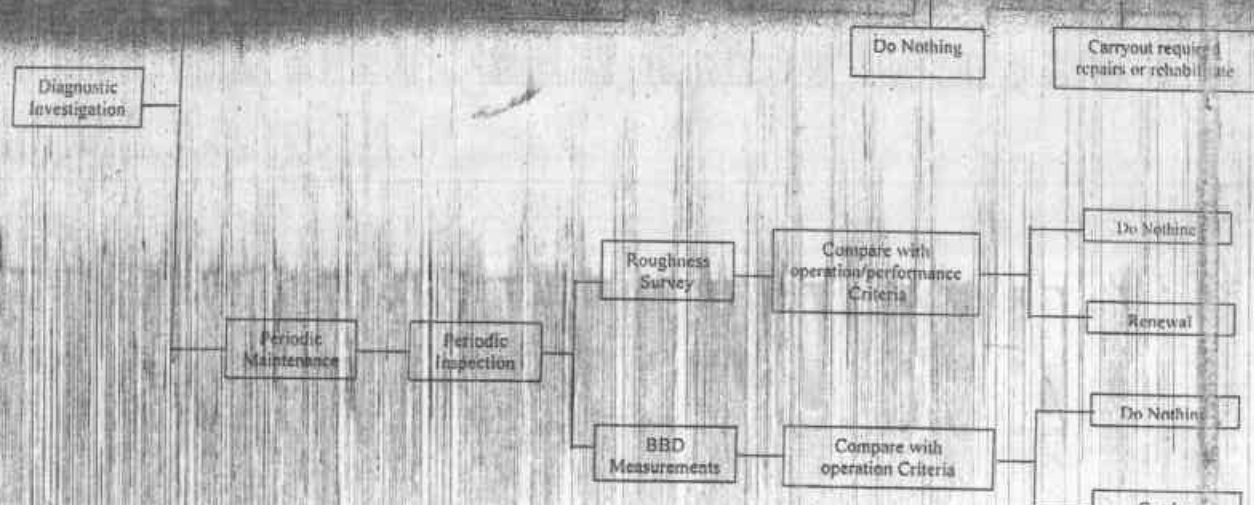
(name of the Independent
certificate, designated Transfer Certificate for widening of the existing 2-lanes to
way facility including rehabilitation of existing 2-lanes, from Km 34.14
(Jadcherla), section of National Highway No. 7 in the State of Andhra
erate and Transfer (BOT) basis by the Concessionaire **GMR Jadcherla**
LIMITED on Build, Operate and Transfer (BOT) basis as per the Concession
onal Highway Authority of India (NHAI) and the said Concessionaire, being
way has been constructed, operated and maintained during the Concession
nd operational condition on completion of the said concession period, and it
er by the said Concessionaire to NHAI or its nominee. The transfer of the
with facilities thereon shall be effected on the strength of this certificate.

(Independent Consultant)

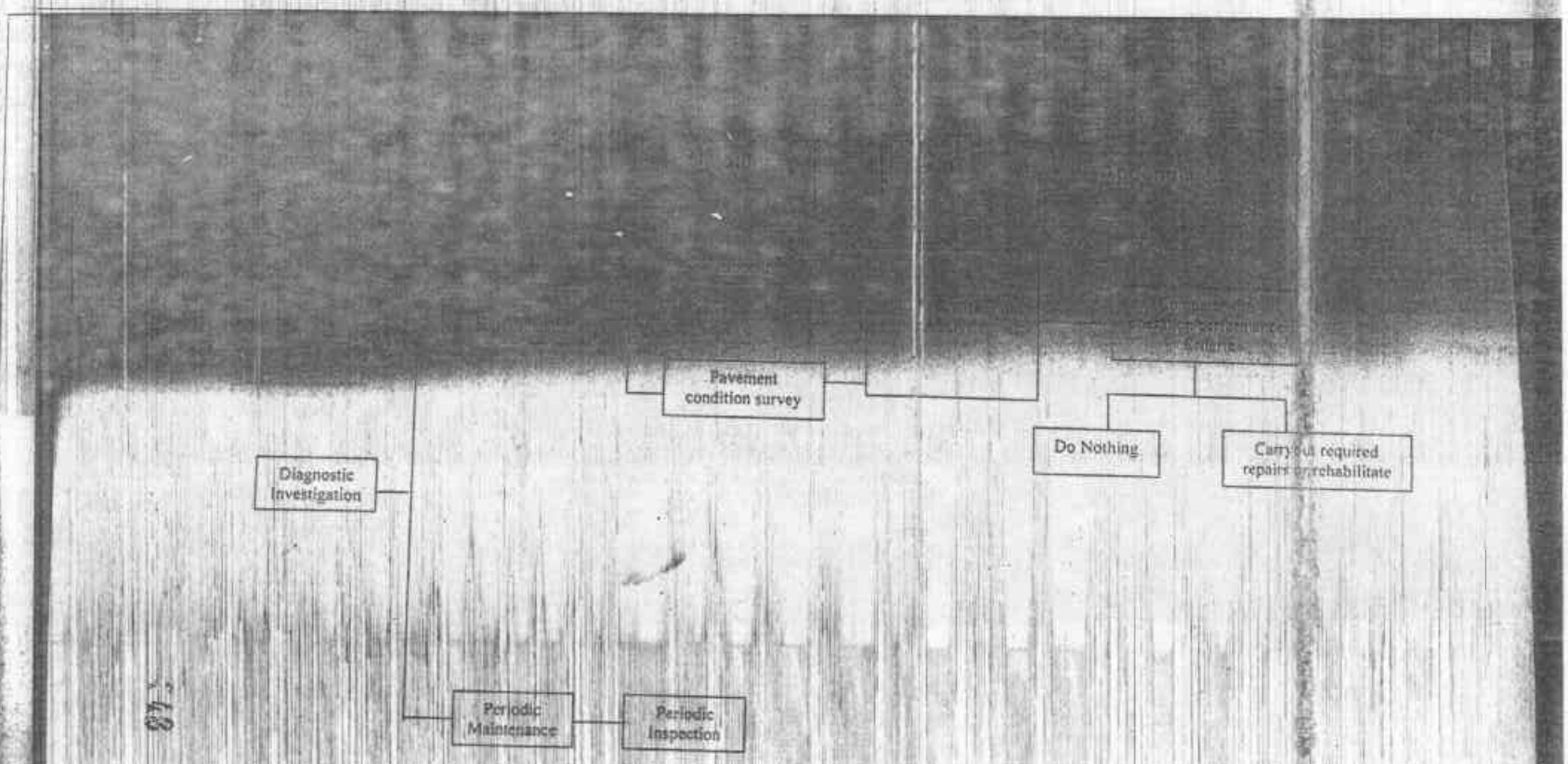
Schedule L — Appendix – 3.4

Equivalent Rating Conditions

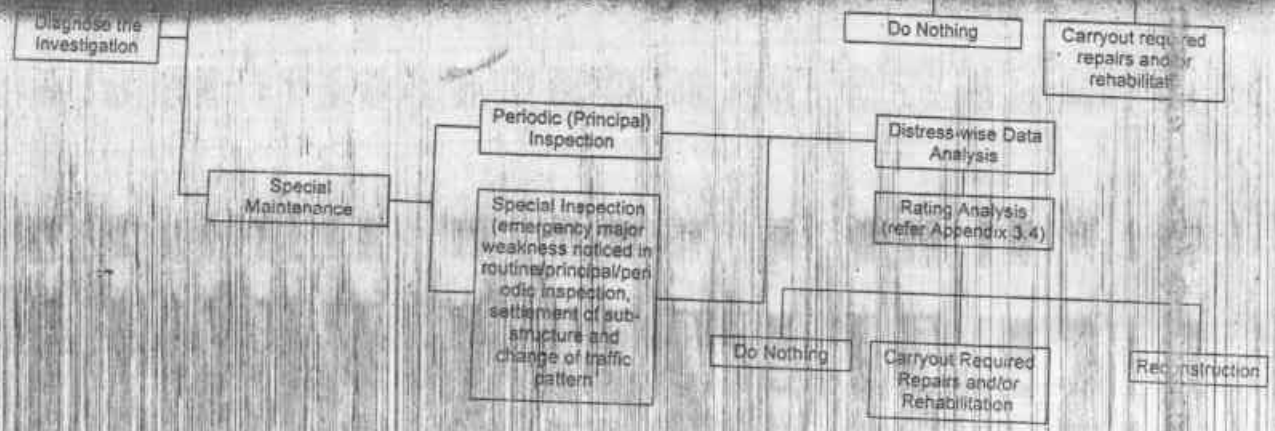
Status	Rating
on completion as per specification and standards	9
no repairs needed	8
potential exists for minor maintenance	7
potential exists for major maintenance	6
potential exists for minor rehabilitation	5
potential exists for major rehabilitation	4
repair or rehabilitation required immediately	3
need for repair or rehabilitation is urgent. Facility should be closed until the indicated repair is complete	2
facility is closed. Study should determine the feasibility for repair	1
facility is closed and is beyond repair	0



FLOW CHART FOR FLEXIBLE PAVEMENT MAINTENANCE



FLOW CHART FOR RIGID PAVEMENT MAINTENANCE



FLOW CHART FOR BRIDGES AND CULVERTS MAINTENANCE

SCHEDULE-M

MONTHLY FEE STATEMENT

(COLLECTION STATEMENT)

SCHEDULE M

MONTHLY FEE COLLECTION STATEMENT

"Design, Construction, Development, Finance, Operation [illegible] of Km 270.00 (Thrissur)- Km 316.70 (Angamali), and Improvement, [illegible] and Maintenance of Km 316.70 (Angamali) to Km 342.00 (Edapalli) of [illegible] in the State of Kerela, through a concession on Build, Operate and [illegible] (BOT) basis"

[illegible] commencement of fee collection: ..... (D/M/Y)

[illegible] month ending.....

[illegible]

	Fee rates on commencement	Rates during year before last year w.e.f. ..... (Date)	Rates during previous year applied w.e.f. ..... (Date)	Present rates applied w.e.f. ..... (Date)

[illegible] during month under report (Amount in Rs. Lacs)

	Previous Month		Corresponding Month during Previous Year		Current Month	
	Nos.	Amount	Nos.	Amount	Nos.	Amount

[illegible] to be provided separately for Through Tolled Traffic, Local [illegible] Traffic on the Project Highway.

LETTER

SELECTION CRITERIA FOR

(SELECTION OF CONSULTANT)

SCHEDULE N

SELECTION CRITERIA FOR INDEPENDENT CONSULTANT

lection of the Independent Consultant shall consist of the following steps:

Issue of Request of Proposal for selection of Independent Consultant by NHAI

Evaluation of Firms Credentials

Evaluation of Technical Proposal.

Evaluation of Financial Proposal of the firm.

Calculation of the combined score of a firm based on Technical and Financial score

Negotiation and selection of Independent Consultant.

ECTION COMMITTEE

election committee shall do the selection; NHAI shall nominate the members of this mittee.

AILS OF THE SELECTION PROCESS

Issue of Request of Proposal for selection of Independent Consultant by NHAI

NHAI will issue a Request for Proposal (RFP) for selection of Independent Consultant through single stage bidding process. This RFP shall include a Letter of Intent (LoI) and the Terms of Reference (ToR) besides information (Data Sheet) to the firms and the proposed form of contract. It shall contain the guidelines for the preparation of proposals by the firms and submission. ToR shall include the following details:

1. Project background
2. Objectives
3. Scope of services
4. Interaction with NHAI
5. Reporting requirement
6. Performance clause
7. Consultant's Proposal
8. Period of Services

The LoI shall state the intention of the NHAI to enter into a contract for the provision of consulting services and the date, time and address for submission of proposals.

The Proposal should be submitted in Three Parts in 3 separate envelopes / packages and put together in one single outer envelope/package. The three parts of the proposal will be:

Part 1: Firms Credentials,
Part 2: Technical Proposal, and
Part 3: Financial Proposal

The proposal must be submitted in a hard bound form (hard bound implies binding between two covers through stitching or otherwise whereby it may not be possible to replace any paper without disturbing the document - spiral bound form, loose form, etc. will be not accepted) with all pages numbered serially, along with an index of submissions. All figures quoted in the financial Proposal should be covered with a transparent adhesive tape

Evaluation of Firms Credentials

The envelop containing the firms credentials (Part 1 of the proposal) would first be opened and evaluated based on the following criterion

S.no	Description	Marks
1	Year of Establishment of Firm	10
2	Average annual turnover (last three years)	10
3	Number of Key personnel	10
4	Experience of the firm in DRP preparation for Highways projects during the last 7 years.	10
5	Experience of the firm in DPR preparation/design review/supervision of major highway structures of length more than 200m during the last 7 years.	10
6	Experience of the Firm in as Independent Consultant or in Construction Supervision for Highway projects during the last 7 years.	50
	TOTAL	100

firms should score at least 70 marks for qualifying to the next stage.

Evaluation of Technical Proposal

The technical proposals (Part 2 of the proposal) received from short listed firms shall be evaluated for selection of firms based on the following:

Evaluation Criteria for Technical Proposal

S.No.	Description	Marks
1	Specific Experience of the firm related to the	20

	assignment	
2	Adequacy of the proposed work plan and methodology in response to the ToR	05
3	Qualifications and competence of key staff for the assignment	75
	Total	**100**

Sub criteria for Specific Experience of the firm related to the assignment

Experience as Independent Consultant / Construction Supervision in Highway Projects	12
Experience in DPR preparation for Highway Projects	4
Experience in Construction Supervision/DPR /Design Review of Major structures having length of more then 200 meter.	4

Sub criteria for Adequacy of the proposed work plan and methodology in response to the ToR

Comments & Suggestions on TOR	1
Quality of Approach and Methodology	3
Work Programme & Manning Schedule	1

Sub criteria for qualification of key staff

General qualifications	25
Adequacy for the project	70
Experience in Region and language	5

lification and competence of key staff for the assignment. The weightage for various key are as under:-

Key Personnel	Marks.
n Leader Cum Senior Highway Engineer	20
or Pavement Specialist	7
or Bridge Design Engineer	8
way Design Engineer	8
e/Structural Engineer	10
IS/Toll Expert	6
l Safety Expert	6
or Quality cum Material Expert	10

The technical proposal should score at least 75 points to be considered responsive for financial evaluation.

Evaluation of Financial Proposals

The Financial proposals (Part 3 of the proposal) of the firms shall be opened and evaluated as under:

The financial score of the lowest bidder shall be 100 marks. The financial score for the remaining bidders shall be calculated in proportionate to the lowest bidder by the following formula:

Financial Score of 'X' = {100 X Bid price of lowest bidder} / {Bid price of 'X'}

Calculation of the combined score of a firm

The combined score of the firm will be calculated as under:

The weightage given to the technical proposal : 80%

The weightage given to financial proposal : 20%

The combined score of bidder 'X' = 0.20{Financial score of bidder 'X'} + 0.80{Technical score of bidder 'X'}

Negotiation and Selection of Independent Consultants

The combined score of technical and financial proposals shall be calculated and the firm scoring maximum marks shall be called for negotiations. After satisfactory agreement of all matters by both the parties, NHAI will appoint the said firm as Independent Consultant for the initial term of 48 months.

SCHEDULE D

TERMS OF REFERENCE OF
INDEPENDENT CONSULTANT)

SCHEDULE O

TERMS OF REFERENCE OF INDEPENDENT CONSULTANT

SECTION I: LETTER OF INVITATION

Independent Consultancy Services for 4/6 laning of 15 projects on North-South & East-West Corridors (NHDP - Phase II) in the States of Tamil Nadu, Andhra Pradesh, Karnataka, Kerala and Uttar Pradesh on BOT or BOT (Annuity) Basis

The National Highways Authority of India (NHAI) invites proposals for Independent Consultancy Services on the basis of international Competitive Bidding for the following 15 packages in the State of Tamil Nadu, Andhra Pradesh, Karnataka, Kerala and Uttar Pradesh on North-South & East – West Corridor under NHDP programme.

Details of packages to be given.

The BOT projects basically comprises up-gradation and construction of 4/6-lane highways, construction and rehabilitation of bridges and culverts, construction of high embankment/elevated structures/ROBs etc. along the existing highways including realignment and bypasses. The proposed construction work will involve use of modern equipments and construction practices.

NHAI intends to appoint Consultants to act as Independent Consultants for implementation of the above BOT projects. As per Terms and Conditions of the Concession Agreement (s), the Independent Consultant is required to: (i) independently review activities associated with design, design review, construction and operation and maintenance of the project on behalf of both NHAI and Concessionaire so as to ensure compliance of requirements of Concession Agreement (ii) report to NHAI on the Financial and Technical aspects of the project, (iii) assist the parties to the Concession Agreement in arriving at an amicable settlement of disputes, if any.

The interested consultancy firms may obtain the RFP from NHAI office from address given below up to [ ] on all working days within 1000 hrs and 1700 hrs. IST by payment of non-refundable Demand Draft amounting to Rs. 5,000/- drawn in favour of "National Highways Authority of India" payable at any schedule bank in New Delhi. The RFP document is also available on NHAI website from [ ]. The Consultant who down load the RFP document from the website will be required to pay the non-refundable fee of Rs. 5,000/- at the time of the submission of the document.

...valuation and selection of Consultant a "single stage" process has been ...roposal should be submitted in three parts in three separate ...and put together in one single outer envelope/package. The three parts of ...Part-I: Firms credential, (ii) Part 2: Technical Proposal and (iii) Part-3: ...Financial Proposal. Part I of the proposal would be first opened and evaluated and the firms ...ying marks as mentioned in RFP would be considered for further evaluation. ...sal of only those firms, who score qualifying marks in the technical ...opened and evaluated. The final selection of the firm would be based on ...chnical and financial proposal. The weightage to technical and financial ...& 20% respectively.

...for the assignment as independent consultant will be for [48] months.

...ndividually or in joint venture/association may apply for _____. A firm cannot be a part of other joint ...for applying in more than _____ package. In case of Joint ...aximum _____ firms are permitted.

...ponsible for any delay, loss or non-receipt of RFP document sent by ...HAI shall not be responsible for any delay in receiving the Proposal ...to accept/reject any or all applications without assigning any reason

...roposal (firms credentials, technical proposal and financial proposal) ...hard bound form (hard bound implies binding between two covers ...erwise whereby it may not be possible to replace any paper without ...-spiral bound form, loose form, etc. will be not accepted) with all ..., along with an index of submission. All figures quoted in the ...be covered with a transparent adhesive tape. In the event, any of ...herein have not been adhered to, NHAI will reject the Proposal.

...eceived not later than 1100 hrs on [ ] in the manner specified in ...ddressed given below.

...rity of India
...arka

...Ext 1312
...Ext 2423

SECTION 2. INFORMATION TO CONSULTANTS

INTRODUCTION

[illegible] assignment named in the attached Letter of Invitation. Your proposal could form the basis for future negotiations and ultimately a contract between your firm and the NHAI.

A brief description of the assignment and its objectives are given in the Terms of Reference (TOR).

The assignment shall be implemented in various stages such as Design, Construction Supervision, and Operation and Maintenance supervision. Continuation of services for the next stage shall be subject to satisfactory performance of the previous stage, as determined by the NHAI.

To obtain first hand information on the assignment and on the local conditions, you are encouraged to pay a visit to the NHAI before submitting a proposal and attend a pre proposal conference as specified in the data sheet. You must inform yourself of local conditions and take them into account in preparing your proposal.

Please note that (i) the costs of preparing the proposal and negotiating for the contract, including a visit to site, are not reimbursable as a direct cost of assignment and (ii) NHAI is not bound to accept any of the proposals received by it and reserves the right to annul the selection process at any time prior to contract award, without thereby incurring any liability to the Consultants.

I wish to remind you that in order to avoid conflict of interest situations, any firm associated with the Concessionaire of the Project Highway and its Design and/or Supervision Consultant and/or the Contractor(s) as Design Consultant and/or Construction Supervision Consultant is not eligible to participate in the bidding.

Consultant have an obligation to disclose any situation of actual or potential conflict that impacts their capacity to serve the best interest of their Client, or than may reasonably be viewed as having this effect. Failure to disclose said situations may lead to the disqualification of the Consultant or the termination of its Contract.

It is the NHAI's policy that the consultants observe the highest standard of ethics during the selection and execution of such contracts. In pursuance of this policy, the NHAI:

Defines, for the purpose of this paragraph, the terms set forth below as follows:

(i) "corrupt practice" means the offering, giving, receiving, or soliciting, directly or indirectly, of anything of value to influence the action of a public official in the selection process or in contract execution;

(ii) "fraudulent practice" means a misrepresentation or omission of facts in order to influence a selection process or the execution of a contract;

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(13)

(iii) "collusive practices" means a scheme or arrangement between two or more consultants with or without the knowledge of the Client, designed to establish prices at artificial, noncompetitive levels;

(iv) "coercive practices" means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in a procurement process, or affect the execution of a contract.

will reject a proposal for award if it determines that the Consultant recommended for award has, directly or through an agent, engaged in corrupt, fraudulent, collusive or coercive practices in competing for the contract in question;

will declare a firm ineligible, either indefinitely or for a stated period of time, to be awarded a contract if it at any time determines that the firm has engaged in corrupt or fraudulent practices in competing for, or in executing, a contract; and

will have the right to require that a provision be included requiring consultants to permit the NHAI to inspect their accounts and records relating to the performance of the contract and to have them audited by authorized representatives of NHAI.

Consultants, their Sub-Consultants, and their associates shall not be under a declaration of ineligibility for corrupt and fraudulent practices. Furthermore, the Consultants shall be aware of the provisions on fraud and corruption stated in the specific clauses in the General Conditions of Contract.

Consultants shall furnish information on commissions and gratuities, if any, paid or to be paid to agents relating to this proposal and during execution of the assignment if the Consultant is awarded the Contract, in the Financial Proposal.

The Data Sheet indicates how long Consultants' Proposals must remain valid after the submission date. During this period, Consultants shall maintain the availability of Professional staff nominated in the Proposal. The Client will make its best effort to complete negotiations within this period. Should the need arise, however, the Client may request Consultants to extend the validity period of their proposals. Consultants who agree to such extension shall confirm that they maintain the availability of the Professional staff nominated in the Proposal, or in their confirmation of extension of validity of the Proposal, Consultants could submit new staff in replacement, who would be considered in the final evaluation for contract award. Consultants who do not agree have the right to refuse to extend the validity of their Proposals.

CLARIFICATIONS AND AMENDMENT OF RFP DOCUMENTS

Consultants may request a clarification of any of the RFP documents up to the number of days indicated in the Data Sheet before the Proposal submission date. Any request for

clarification must be sent in writing by paper mail, cable, telex, facsimile, or electronic mail to the Client's address indicated in the Data Sheet. The Client will respond by cable, telex, facsimile, or electronic mail to such requests and will send copies of the response (including an explanation of the query but without identifying the source of inquiry) to all invited consultants who intend to submit proposals.

At any time before the submission of Proposals, the Client may for any reason, whether at its own initiative or in response to a clarification requested by an invited firm, modify the RFP documents by amendment. Any amendment shall be issued in writing through addenda. Addenda shall be sent by mail, cable, telex, facsimile or electronic mail to all invited consultants and will be binding on them. The Client may at its discretion extend the deadline for the submission of Proposals.

PREPARATION OF PROPOSAL

You are requested to submit your proposal in Three Parts in 3 separate envelopes / packages and put together in one single outer envelope/package. The three parts shall be:

Part 1: Firms Credentials,
Part 2: Technical Proposal and
Part 3: Financial Proposal.

The proposal shall be written in the language specified in the data sheet.

Firms Credentials

This submission shall contain the following information/ details and should not include any other information

...ar of Establishment of Firm
...erage annual turnover (last three years)
...mber of Key personnel
...perience of the firm in DRP preparation for Highways projects during the last 7 years.
...perience of the firm in DPR preparation/design review/supervision of major highway structures ...ength more than 200m during the last 7 years.
...erience of the Firm as Independent Consultant or Supervision Consultant for Highway ...ects during the last 7 years.

Technical Proposal

You are expected to examine all terms and conditions included in the documents. Failure to provide all requested information will be at your own risk and may result in rejection of your proposal.

During preparation of the technical proposal you may give particular attention to the following:

...O for N...VB...Kal

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The estimated man months for the assignment are stated in the Terms of Reference for your information. The proposal shall however be based on the number of professional staff months estimated by the firm.

[illegible] majority of the professional staff proposed must be permanent staff of the firm.

No alternative to key professional staff may be proposed and only one Curriculum Vitae (CV) may be submitted for each position and

A good working knowledge of the language specified in the data sheet is essential for key professional staff on this assignment. Reports must be in the language (s) specified in the data sheet.

Joint venture are allowed as detailed in the data sheet

Your technical proposal must provide the following information, using but not limited to the formats attached in the Appendix I.

A brief description of the firm's organisation and an outline of recent experience of the Consultants and, in the case of Joint Venture, for each partner, on assignments of a similar nature. The information which you shall provide on each assignment should indicate, *inter-alia*, the profiles of the staff provided, duration, contract amount and firm's involvement.

Any comments or suggestions on the ToR and a description of the methodology (work plan) which the firm proposes to execute the services, illustrated with bar charts of activities.

The composition of the proposed staff team, the tasks which shall be assigned to each and their timing;

CVs recently signed in blue ink on each page by both the proposed professional staff and the authorised representative submitting the proposal. Key information should include years with the firm and degree of responsibility held in various assignments. Photocopy or unsigned CVs shall not be evaluated.

Estimates of the total time effort (person x months) to be provided for the services, supported by bar chart diagrams showing the time proposed (person x months) for each professional staff and

Any additional information requested in Data Sheet.

The technical proposal must not include any financial information.

Financial Proposal

In preparing the Financial Proposal, consultants are expected to take into account the requirements and conditions of the RFP documents. The Financial Proposal should follow the standard Forms. It lists all costs associated with the Assignment, including (a) remuneration

for NST/RQT/ST-1

for staff (foreign and local, in the field and at headquarters); and (b) rentals/fixed rates/reimbursable such as subsistence (per diem, housing), transportation (international and local, for mobilization and demobilization), services and equipment (vehicles, office equipment, furniture, and supplies), office rent, insurance, printing of documents, surveys and training, if it is a major component of the assignment. If appropriate, these costs should be broken down by activity and if appropriate into foreign and local expenditures.

The Financial Proposal should clearly identify as a separate amount, the local taxes (including social security), duties, fees, levies and other charges imposed under the applicable law, on the consultants, the sub-consultants, and their personnel (other than nationals or permanent residents of the government's country); unless the Data Sheet specifies otherwise.

Consultants may express the price of their services in the Local currency (Indian Rupees) and/or US Dollar at the rate prevalent at the time of submission of the proposals. The Client may require consultants to state the portion of their price representing local cost in the national currency if so indicated in the Data Sheet.

SUBMISSION, RECEIPT AND OPENING OF PROPOSALS

The original proposal shall be prepared in indelible ink. It shall contain no inter-lineation or overwriting, except as necessary to correct errors made by the firm itself. Any such corrections must be initiated by the person or persons who sign(s) the Proposals.

An authorized representative of the firm shall initial all pages of the Proposal. The representative's authorization in *original/notarized* is confirmed by a written power of attorney accompanying the Proposal.

You must submit one original proposal only. The envelope must be clearly marked.

"DO NOT OPEN, EXCEPT IN PRESENCE OF THE EVALUATION COMMITTEE"

This outer envelope shall include three separate envelopes, each clearly marked as "Part 1: Firms Credentials", "part 2: Technical Proposal" or "Part 3: Financial Proposal" (each envelope indicating original or copy as appropriate).

The proposal must be submitted in a hard bound form (hard bound implies binding between two covers through stitching or otherwise whereby it may not be possible to replace any paper without disturbing the document - spiral bound form, loose form, etc. will be not accepted) with all pages numbered serially, along with an index of submissions. All figures quoted in the Financial Proposal should be covered with a transparent adhesive tape.

Your complete Proposal must be delivered on or before the time and date stated in the data sheet.

OPOSAL EVALUATION

ree -stage procedure shall be adopted in evaluating the proposals : (i) Firms Credentials, securing the qualifying marks mentioned in Clause 5.2 will be eligible for Technical evaluation (ii) Financial evaluation (ii) Technical Evaluation, firms securing the qualifying marks ioned in Clause 5.3 will be eligible for Financial evaluation and (iii) Financial uation.

atials

Evaluation Committee appointed by the NHAI shall carry out its evaluation applying the ation criteria and point system specified in the data sheet. The firms should score at least arks for qualifying to the next stage

oposal

Evaluation Committee appointed by the NHAI shall carry out its evaluation applying the ation criteria and point system specified in the data sheet. Each responsive proposal shall ibuted a technical score (St.) The technical proposal should score at least 75 points to sidered responsive for financial evaluation.

posal

the evaluation of technical proposal is completed, the Client may notify those tants whose proposals were considered non-responsive to the RFP and Terms of ice, indicating that their Financial Proposals will be returned unopened after ting the selection process. The Client shall simultaneously notify the consultants that cured the minimum qualifying mark, indicating the date and time set for opening the al Proposals. The opening date should allow Consultants sufficient time to make ments for attending the opening. The notification may be sent by registered letter, elex, facsimile, or electronic mail.

ancial Proposals shall be opened publicly in the presence of the consultants' tatives who choose to attend. The name of the consultant, the quality scores, and the l prices shall be read aloud and recorded when the Financial Proposals are opened. ut shall prepare minutes of the public opening.

aluation Committee will correct any computational errors. When correcting tional errors, in case of discrepancy between a partial amount and the total amount, or word and figures the formers will prevail. In addition to the above corrections, and items described in the Technical Proposal but not priced, shall be assumed to be in the prices of other activities or items. In case an activity or line item is quantified ancial Proposal differently from the Technical Proposal, (i) if the Time-Based form ct has been included in the RFP, the Evaluation Committee shall correct the ation indicated in the Financial Proposal so as to make it consistent with that in the Technical Proposal, apply the relevant unit price included in the Financial

Proposal to the corrected quantity and correct the total Proposal cost, (ii) if the Lump-Sum form of contract has been included in the RFP, no corrections are applied to the Financial Proposal in this respect. Prices shall be converted to a single currency using the selling rates of exchange, source and date indicated in the Data Sheet. The evaluation shall exclude those taxes, duties, fees, levies, and other charges imposed under the applicable law; and those applied to foreign and non-permanent resident consultants.

The Evaluation Committee shall determine if the financial proposal is complete and without computational errors. The lowest financial proposal (Fm) shall be given a financial score (Sf) of 100 points. The financial score of the proposals shall be computed as follows : Sf = 100 x Fm//F (F-amount of financial proposal).

Proposals shall finally be ranked according to their combined technical (St) and financial (Sf) scores using the weights indicated in the data sheet.

NEGOTIATIONS

Prior to the expiration period of validity of proposal, the NHAI shall notify the successful firm who submitted the highest scoring proposal in writing by registered letter, cable telex or facsimile and invite it to negotiate the contract.

Negotiations normally take two to five days. The aim is to reach agreement on all points, and initial a draft contract by the conclusion of negotiations.

Negotiations shall commence with a discussion of your technical proposal, the proposed methodology (work plan), staffing and any suggestions you may have made to improve the ToR. Agreement must then be reached on the final ToR, the staffing and bar charts, which shall indicate activities, staff, periods in the field and in the home office, staff months, logistic, and reporting. Special attention shall be paid to optimize the required outputs from the firm within the available budget and to define clearly the inputs required from the NHAI to ensure satisfactory implementation of the assignment.

It is the responsibility of the Consultant, before starting financial negotiations, to contact the local tax authorities to determine the local tax amount to be paid by the Consultant under the Contract. The financial negotiations will include a clarification (if any) of the firm's tax liability in the Client's country, and the manner in which it will be reflected in the Contract; and will reflect the agreed technical modifications in the cost of the services. Unless there are exceptional reasons, the financial negotiations will involve neither the remuneration rates for staff nor other proposed unit rates.

Changes [illegible] shall then be reflected in the financial proposal, using proposed unit rates (or negotiated unit rates, including the man-month's rates).

Having selected [illegible] among other things, on the basis of an evaluation of proposed key professional [illegible] expects to negotiate a contract on the basis of the staff named in the proposal and [illegible] in contract negotiations, will require assurance that this staff shall be

actually available. NHAI shall not consider substitutions during contract negotiations except in cases of unexpected delays in the starting date or incapacity of key professional staff for reasons of health.

The negotiations shall be concluded with a review of the draft form of Contract. The NHAI and the firm will finalise the contract to conclude negotiations.

AWARD OF CONTRACT

After completion of negotiations with the consultants, the Client shall award the Contract to the selected Consultant. However, after signing of the Contract, the Client may return the unopened Financial Proposals to the unsuccessful Consultants.

The successful firm with whom the contract is signed is expected to commence the assignment on the date and at the location specified in the data sheet.

8. CONFIDENTIALITY

ation relating to evaluation of proposals and recommendations concerning awards shall not be d to the consultants who submitted the proposals or to other persons not officially concerned process, until the winning firm has been notified that it has been awarded the contract.

DATA SHEET

(As Mentioned in Information to Consultants)

Information to Consultants

rence shall be held at: no pre-proposal conference shall be held.

be valid for 120 days after the last date of submission.

be requested 15 days prior to last date of submission. The address for

vant,
II)
Highways Authority of India
ector 10, Dwarka,

25074100

uments and correspondence will be English

ventures or sub-consultant are: Joint Venture consisting of maximum two
In case of JV the experience of both the firms shall be counted. In case of
ultant the experience of associated firm/sub-consultant shall not be
key personnel of the associated firm would be considered for evaluation.

ll have working knowledge of English and all the reports etc shall be

e requested to consult Tax Consultants for details.

local cost in INR.

omission: 1100 hrs on 16.8.2005.

	Marks
Firm	10
(last three years)	10
	10
DRP preparation for Highways projects during the	10
DPR preparation/design review/supervision of major more than 200m during the last 7 years.	10

ence of the Firm as Independent Consultant or Supervision Consultant way projects during the last 7 years.	50
	100

uld score at least 70 marks for qualifying to the next stage.

ints assigned to Technical Evaluation criteria are :

No.	Description	Marks
	Specific Experience of the firm related to the assignment	20
	Adequacy of the proposed work plan and methodology in response to the ToR	05
	Qualifications and competence of the key staff for the assignment	75
	Total	100

Specific Experience of the firm related to the assignment

Independent Consultant / in Construction Supervision in Highway	12
DPR preparation for Highway Projects	4
Construction Supervision/DPR /Design Review of Major structures of more then 200 meter.	4

dequacy of the proposed work plan and methodology in response to the ToR

Comments & Suggestions on TOR	1
Quality of Approach and Methodology	3
Work Programme & Manning Schedule	1

competence of key staff for the assignment. The weightage for various key staff are

Personnel	Marks.
Senior Highway Engineer	20
Pavement Specialist	7
Bridge Design Engineer	8

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Highway Design Engineer	8
Bridge/Structural Engineer	10
[illegible] Expert	
Road Safety Expert	6
Quality com Material Expert	10

Qualification of key staff

General qualifications	25
Adequacy for the project	70
Experience in Region and language	5

Proposal should score at least 75 points to be considered responsive for financial

Currency for price conversion is INR. The conversion rate shall be RBI Reference as applicable 7 days prior to the last date for submission of proposal.

Weightage given to technical proposal is 80%.

Weightage given to financial proposal is 20%.

Commencement of Assignment: The firm shall begin carrying out the services within one month signing of the Consultancy Agreement.

SECTION 3. FORMATS FOR SUBMISSION OF FIRMS CREDENTIALS

Should contain the following information in enclosed format attached at Appendix A.

Establishment of Firm

Annual turnover (last three years)

Key personnel

The firm in DRP preparation for Highways projects during the last 7 years.

The firm in DPR preparation/design review/supervision of major highway structures more than 200m during the last 7 years.

The Firm as Independent Consultant or Supervision Consultant for Highway in the last 7 years.

Firm to submit Certificate of Incorporation and audited balance sheet for the last three years (i.e. FY 2003-2004 and FY 2004-2005). In case audited balance sheet FY 2004-2005 is not available, firm may submit the audited balance sheet of 2001-2002. For claiming experience of highway projects completion certificate from employer should be enclosed. The

roposal should also contain the details of the key personnel viz. their name, qualification, expertise ea, experience and years of association with the firm.

ppendix A

irms credentials (to be filled by each of the constituent firm in case of JV).

Name of the packages to be applied for:-

Year of establishment of firm.

onsultant	Year of Establishment	Country	Type of Organisation			
			Individual	Partnership	Corporation	Other
ad rtner						
her rtner						

Office/Business Address/Telephone nos./Cable Address.

Consulting firms former name and year of establishment.

Narrative description of firms (Use other sheet, if necessary)

Name of, not more than two (2) principals who may be contacted with title and telephone number /fax number.

Number of Personnel in the Organisation.

ipline	Number
Personnel	With experience more than 10 years and associated with the firm with at least 1 year.

Financial Statement of the last three years.

Particulars	2004-2005	2003-2004	2002-2003
Annual turnover from Consulting business			
Total Assets			
Current Assets			
Total Liabilities			
Current Liabilities			
Net Worth			
Working Capital			

et Profit.			

The amount shall be stated in INR.

The currency conversion rate for the respective years shall be mentioned for other international currencies.

The application with amount sated in currencies other than INR shall be treated as non responsive.

GHWAY PROJECTS HANDLED BY THE CONSULTING FIRMS DURING THE ST SEVEN YEARS (Only those projects be included, which are supported the certificated the Engineer/Employer mentioning that the consultancy work has been completed sfactorily or has been substantially completed in case of project supervision works stantial completion means 90% works in financial value having been executed) sfactorily.

No.	Projects Name/Year	Type of Services Rendered	Length of Projects (kms)	Employer	Duration.
1	2	3	4	5	6

porting Statements to Employer's Certificates may be furnished giving full details of the cts carried out as below:

e of the Project: _____

er's Name and Address: _____

_____

pletion (Actual and Estimated): _____

ription of Project: _____

ription of Services Provided by the Firm:

_____

the information in the above Expression of Interest forms is true to the best of my

PRESIDENT/MANAGING DIRECTOR OR
AUTHORIZED SIGNATORY#

AND SWORN to before me this
date of 2005

at _____

Power of Attorney as described or valid authorisation.

NOTARY PUBLIC

4. FORMAT FOR SUBMISSION OF TECHNICAL PROPOSAL

	Technical proposal submission form.
	Firm's references
	Firm's comments and suggestions on the Terms of Reference and on data, services, and facilities to be provided by the NHAI.
	Approach paper on methodology and work plan for performing the assignment.
	Composition of the team and task(s) of each team member
	Curriculum vitae of proposed professional staff.
	Time schedule for deployment of professional personnel
	Activity (works) schedule.

mission Form.

To: (Name and Address of Client)

_____

_____

_____

to provide the consulting services for the above in accordance with your (Date), and our Proposal. We are hereby submitting our Proposal, which posal and a Financial Proposal sealed under a separate envelope.

ring the period of validity of the Proposal i.e. before (Date) we undertake f the proposed staff. Our Proposal is binding upon us and subject to the n contract negotiations.

bound to accept any Proposal you receive

Yours sincerely,

Authorised Signature
Name and Title of Signatory:
Name of Firm:
Address:

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APPENDIX-3.2 FIRM'S REFERENCES

Relevant Services Carried Out in the Last Seven Years
That Best Illustrate Qualifications

Provide information on each reference assignment for which your firm/entity, corporate entity or as one of the major companies within an association, was

	Country :
	Professional Staff Provided by Your Firm:
	No. of Staff :
pletion Date	No. of Staff-Months :
Year)	Approx. Value of Services (in Current INR)
any:	No. of Months of Professional Staff. Provided by Associated Consultants :
ded by Your Staff :	

of Highway projects completion certificate from employer

COMMENTS AND SUGGESTIONS OF CONSULTANTS ON THE FERENCE AND ON SERVICES AND FACILITIES TO BE PROVIDED BY

Reference :

facilities to be provided by the NHAI

APPENDIX 8-4 : APPROACH PAPER ON METHODOLOGY AND WORK PLAN FOR PERFORMING THE ASSIGNMENT

...OSITION OF THE TEAM PERSONNEL, AND TASK(S) OF

...ACH TEAM MEMBER

...ACHED STAFF

	Position	Task

	Position	Task

APPENDIX B-6 : FORMAT OF CURRICULUM VITAE (CV) FOR PROPOSED PROFESSIONAL STAFF

...osition : .....

...me : .....

...ignation : .....

...e : .....

...ame : .....

...Firm/Entity : ..... Nationality : .....

...of Professional Societies : .....

...Assigned : .....

...cations :

...ne of staff member's experience and training most pertinent to tasks on assignment. ...e of responsibility held by staff member on relevant previous assignments and give ...ons. Use about half a page.]

...ege/university and other specialised education of staff member, giving their names, ...nd degrees obtained. Use about one quarter of a page.]

Employment Record:

position, list in reverse order every employment held. List all positions held by graduation, giving dates, name of employing organisations, titles of positions held, nments. For experience in last ten years, also give types of activities performed where appropriate. Use about three-quarters of a page.]

ndicate proficiency: excellent, good, fair, or poor; in speaking, reading, and

me and Address) certify that I have not left any assignment with the NHAI / contracting firm (firm to br supervised now) for any continuing work ng my assignment. I will be available for the entire duration of the current If I leave this assignment in the middle of the complition of the work, NHAI bar me from taking any assignment in any of the NHAI works for an to be decided by NHAI. I have no objection if my services are extended by future.

.....Date : .....

e authorised representative of the Firm] *Day/Month/Year.*

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			1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	11th	12th and subsequent years	Number of Months
1															Subtotal (1)
2															Subtotal (2)
3															Subtotal (3)
4															Subtotal (4)
-															-
-															-

1	.....													
2	.....													
3	.....													
4	.....													
.	.....													
.	.....													

B. **Completion and Submission of Reports**

S.No	Reports :	Programme : (Date)
1	Monthly reports (Design and Construction)	
2	Quarterly Reports	
3	Various others reports as provided in the Concession Agreement such as Completion Report	

SECTION 5. FORMAT FOR SUBMISSION OF FINANCIAL PROPOSAL

C-1 Financial proposal submission form

C-2 Summary of costs

C-3 Breakdown of local currency costs

C-4 Breakdown of foreign currency cost

APPENDIX C-1 : FINANCIAL PROPOSAL SUBMISSION FORM

[Name of Firm) TO :

National Highways Authority of India
G-5&6, Sector-10, Dwarka
New Delhi (India) - 110045

ndersigned, offer to provide the consulting services for the above in accordance with your or Proposal dated [Date], and our proposal. Our attached financial proposal is for the sum of n words and figures]. This amount is exclusive of the local taxes which we have estimated at n Words and Figures).

ial proposal shall be binding upon us subject to the modifications resulting from contract s, up to the expiration of the validity period of the proposal, i.e., [Date].

ke that, in competing for (and, if the award is made to us, in executing) the above contract, tly observe the laws against fraud and corruption in force in India namely "Prevention of Act 1988".

and gratuities, if any, paid or to be paid by us to agents relating to this proposal and ution, if we are awarded the contract, are listed below:

ddress	Amount and Currency	Purpose of Commission or Gratuity
.....	.....	.....
.....	.....	.....

you are not bound to accept any proposal you receive.

ature

of Signatory

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C-2 : SUMMARY OF COSTS

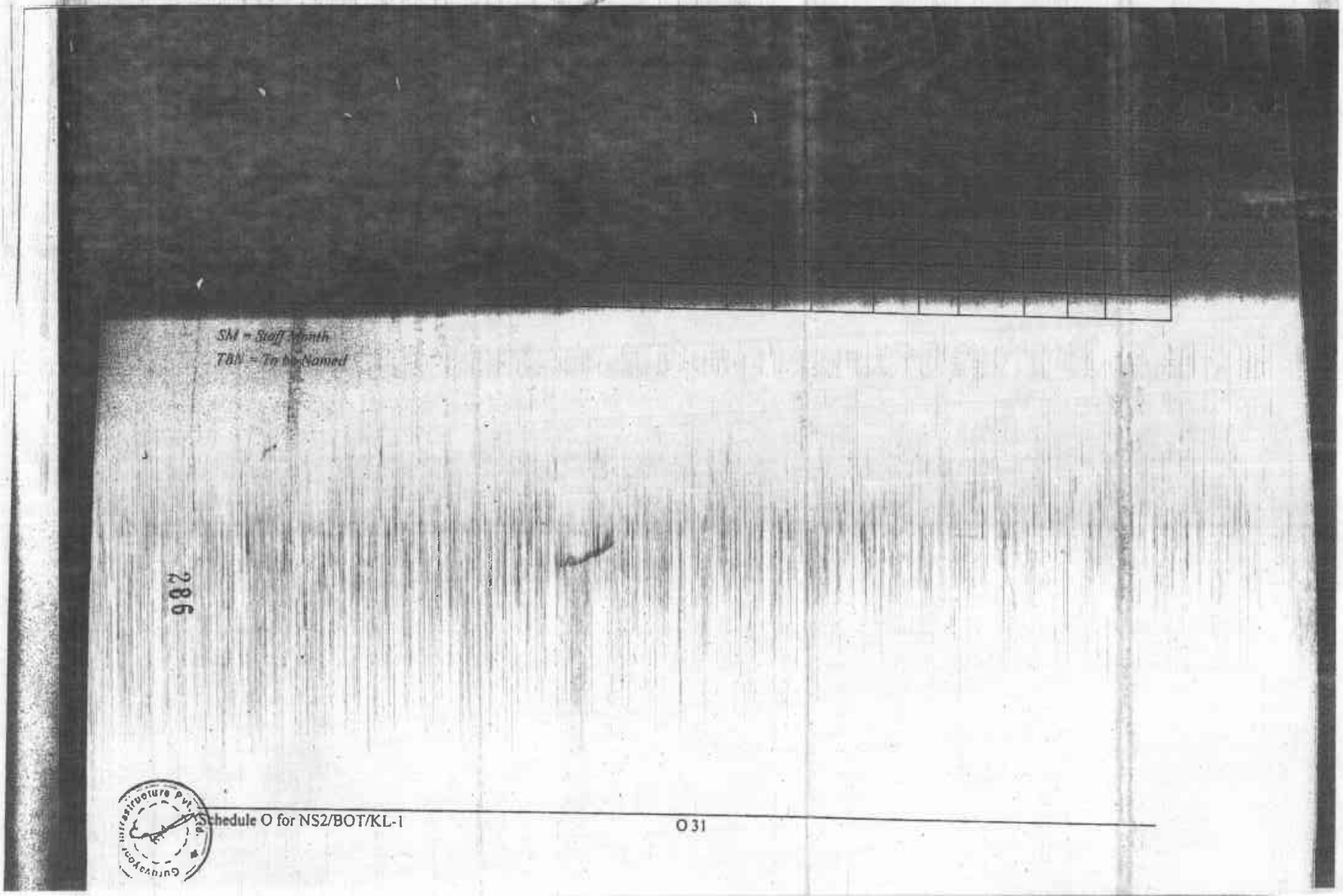
escription	Amount (LC)*	Amount (FC**)
ocal Consultants		
emuneration for Local Key Personnel		
upporting Staff		
ransportation		
ity Travel to Site		
ffice Rent		
ffice supplies, Utilities and ommunication		
ffice Furniture and Equipment		
eports and Document Printing		
urvey Equipment		
btotal Local Consultants		
reign Consultants		
nuneration for Expatriate Staff		
bilization and Demobilisation		
ommodation for Consultants' Staff		
er Costs		
otal Foreign Consultants		
l Cost Net of Tax		
l & Foreign Consultants)		
ayable in India on fees for technical es provided by foreign consultants, ding duties on equipment imported.		
ltancy Services Tax payable in		

TOTAL COSTS (Including Tax)**		

Currency FC** in US Dollar (1+1)

ceiling cost of the consultancy is as shown in the Summary of Costs. Payments will be made
ulations of the Conditions of Contract.

| | | |


SM = Staff Month
TBN = To be Named

	Name	Staff Months	Billing Rate ( )	Amount ( )
			Total :	

...ation	Qty.	Nos. of months	Rate/ Month	Amount
...by the Consultants ...rental, drivers, ...repairs,				
Total				

...NO	Rate	Amount

...nance,

Total

...Communication (Fixed Costs)

287

O 32

Item	Months	Monthly Rate	Amount in Rs.
Office Supplies			
Drafting Supplies			
Computer Running Costs			
Domestic and International Communication			

TOTAL: .....

Office Furniture and Equipment (Rental)

Description (*)	Unit	Quantity	Rate ( )	Amount ( )
Office Furniture (Purchase)				
Equipment (Purchase)				

Description (*)	Unit	Quantity	Rate ( )	Amount ( )
			Total	

and Document Printing

cription*	No. of Volumes	No. of Copies per Volume	Rate per Copy ( )	Amount
orts Construction)				
eports				
s reports as se Concession ich as Report				
			Total	

APPENDIX C-4 BREAK UP OF COSTS IN FOREIGN CURRENCY

Description	Currency*	Amount
Remuneration for Expatriate Staff		
Mobilisation and Demobilisation		
International Airfares		
Inland travel in Home Country		
Inland Travel in Overseas Country		
Excess Luggage Allowance		
Unaccompanied Luggage Allowance		
Relocation/Storage Allowance		
Miscellaneous Travel Expense		
Temporary Lodging during Mobilisation/demobilization		
Establishment		
Exit charges		
Accomodation of Consultant's Expatriate Staff		
Costs		
TAL COSTS ( )		

*Plus local currency (INR).

to Expatriate Staff

	Name	Years 1 to 3		
		Rate ( )	SM	Amount ( )
		Total:		

nd Demobilization

irfares (Reimbursable)

	Round trips	Dependents

home office to site at
trip conform to the
lass fares
Home Country (Fixed Rate)

el between consultants
irport

verseas Country (Fixed Rate)
from the airport to hotel

lowance (Reimbursable)

per single trip to conform to the

Unaccompanied Luggage Allowance (Fixed Rate)

cost per family per round trip

x ___kg x____

Relocation/Storage Allowance (Fixed Rate)

long term staff with an assignment of more than 12 months

mily(es) x____

Travel Documents and Miscellaneous Costs (Fixed Rate)

vel documents, visas, health certificates, etc.

Short term staff, first trip

___x____

Short term staff subsequent trips

____x_____

Long term staff first trip

- Family (es) x____

Long term staff subsequent trip

- Family(es) x____

Total _____

ary Lodging during Mobilization/Demobilization (Reimbursable)

ily x____ day(s) x_____

292

0.37

Establishment allowance (Fixed Rate)

Expenses for legal documents in country extension
permits, work permits, etc.

(a) For short term staff assignments less than 6 months

___x_____ _____

(b) Long term staff

___person(s) x___trip (s)_____

Total: _____

harges (Reimbursable)

or expatriate staff with assignments of
an 6 months _____ per exit at cost

son(s) x_____trip(s) ___ _____

ommodation for Consultants' Expatriate Staff (Fixed Rate)

Diem allowance Short Term Staff

___ staff months of _____ days is _____ days
bursement of the cost will be on actual day basis.

lays x_____ _____

g of Long Term Expatriate Staff (Fixed Rate)

g including furniture, costs for utilities and maintenance has to be
ed for 1 family

nths x ___

s (Reimbursable)

of documents

for purchase of documents, books, maps
International standards etc. to be
sed at cost. Allow as ceiling amount

TOTAL

294

Highway shall include but not be limited to the following:

Road works
Fee Collection system including buildings and related structures, hardware and software
Communication systems
Administration and Maintenance Depots
Rest Area and Fuel and Service facilities
Rest areas
Lighting system
Interchanges
Bridges
Service Roads
By byes, Bus bays

SECTION 6: TERMS OF REFERENCE

BACKGROUND

India (GoI) through Ministry of Shipping, Roads & Highways contemplating to enhance the traffic capacity and safety for efficient goods as well as passenger traffic on the heavily trafficked National . The Project under consideration aims at developing section of in Schedule A, by widening the existing 2-lanes to 4/6 lanes dual luding strengthening of the existing 2-lanes on Build, Operate and ...ns.

the process of Land Acquisition for acquiring land to accommodate ...ies along the Project corridor and shall make the land available to ...e as per the provisions of the Concession Agreement. NHAI will ...nd to be acquired on the award of concerned Revenue Authority.

...e shall make necessary arrangements clearing the encumbrances ...corridor under the directions of the concerned agencies and officials

...hall operate and maintain the Project Highway by itself, or ...ractors including tolling contractor, if any, after carrying out ...ply with Standards and Specifications spelled out by the NHAI ...ement.

...nt an Independent Consultant (IC) to oversee the activities of ...ing Design, Construction, Operation and Maintenance of the

...vice are to:

...behalf of the NHAI to review all activities associated with ...ction and O&M to ensure compliance of requirements of ... order to have a sound Project.

...ancial and technical aspects of the project, after visiting the ...

...Concession Agreement in arriving at an amicable settlement ...

...of the lenders and fulfil various reporting requirements of ...

...the impact of widening proposal on the Archaeological structures, if any.

...the Project report prepared by the Concessionaire, with respect to the traffic, ...agement (only for BOT Projects), traffic management, etc.

...the implementation schedule of Engineering, Design, Procurement and ...ion of the Project submitted by the Concessionaire.

...he Planning and Design of way-side amenities, toll plazas, toll collection ...(only for BOT Projects), communication facilities, emergency relief ...ents, traffic operation and safety arrangements.

...ll Project contracts including Detailed Engineering and Design Consultancy ... Construction Supervision Consultancy contract , any other EPC contract, O ...ontract and Tolling contract (only for BOT Projects), made by the ...naire.

...he environmental management plan for the Project Highway during ...on and Operation and Maintenance phases.

...uality assurance and quality control provisions during the design, ...n and maintenance stages.

...afety of the Project Highway both during Construction and Operation and ...e stages.

...and assist in resolving disputes between NHAI and Concessionaire

e of documents

r purchase of documents, books, maps
International standards etc. to be
ed at cost. Allow as ceiling amount

TOTAL

294

O 39

...OF REFERENCE

...CKGROUND

...India (GoI) through Ministry of Shipping, Roads & Highways ...contemplating to enhance the traffic capacity and safety for efficient ...goods as well as passenger traffic on the heavily trafficked National ... The Project under consideration aims at developing section of ...in Schedule A, by widening the existing 2-lanes to 4/6 lanes dual ...luding strengthening of the existing 2-lanes on Build, Operate and ...basis.

...the process of Land Acquisition for acquiring land to accommodate ...ities along the Project corridor and shall make the land available to ... as per the provisions of the Concession Agreement. NHAI will ...and to be acquired on the award of concerned Revenue Authority.

...shall make necessary arrangements clearing the encumbrances ...corridor under the directions of the concerned agencies and officials

...shall operate and maintain the Project Highway by itself, or ...ractors including tolling contractor, if any, after carrying out ...mply with Standards and Specifications spelled out by the NHAI ...reement.

...nt an Independent Consultant (IC) to oversee the activities of ...ing Design, Construction, Operation and Maintenance of the

...vice are to:

... behalf of the NHAI to review all activities associated with ...ction and O&M to ensure compliance of requirements of ... order to have a sound Project.

...ancial and technical aspects of the project, after visiting the

...ncession Agreement in arriving at an amicable settlement

...of the lenders and fulfil various reporting requirements of

SCOPE OF SERVICES

The Project Highway provides for widening and strengthening of existing two lanes Section [illegible] and its Operation and Maintenance (O&M) on BOT basis. The work also includes the [illegible]g of existing bridges and culverts and construction of new bridges and culverts for [illegible] carriageway. The Project Highway shall include but not be limited to the following:

- Road works
- Fee Collection system including buildings and related structures, hardware and software
- Communication systems
- Administration and Maintenance Depots
- Rest Area and Fuel and Service facilities
- Rest areas
- Lighting system
- Interchanges
- Bridges
- Service Roads
- Lay byes, Bus bays
- Traffic safety, Landscaping, arboriculture and other Project facilities.

Concession Agreement envisage the appointment of an Independent Consultant (IC) by National Highways Authority of India (NHAI). The IC shall be, in principle, responsible [illegible] of Designs, Drawings, Construction, Progress Monitoring, affirmation of all [illegible]ons done by the Concessionaire, etc. The IC shall be involved in day-to-day [illegible]ation of the Project. The Concession Agreement also envisages the appointment of [illegible]t by the Concessionaire to undertake the design related work and the day-to-day [illegible]udit and quality control of Construction, monitoring of progress, certification of [illegible]e Contractor(s) to be appointed by the Concessionaire for the Project Highway.

[illegible]ndent Consultant shall supervise that all the requirements of the Concession [illegible] and various schedules are met by the Concessionaire and in case of any [illegible] deviations; he shall inform NHAI and the Concessionaire. The responsibility of [illegible]g various stages of Design Review, Construction and Operation and Maintenance [illegible]ollows but not be limited to :

[illegible]gn Review Stage

- [illegible]ew the adequacy of the geotechnical and sub-soil investigations for road, bridge [illegible] other structures and building works, hydrological investigation and the [illegible]graphical survey.
- [illegible]ew the Designs and working drawings prepared for the construction of various [illegible]onents of the highway, bridges / structures, analysis of rates, estimates, reports [illegible]her deliverables.

the impact of widening proposal on the Archaeological structures, if any.

the Project report prepared by the Concessionaire, with respect to the traffic, agement (only for BOT Projects), traffic management, etc.

the implementation schedule of Engineering, Design, Procurement and tion of the Project submitted by the Concessionaire.

he Planning and Design of way-side amenities, toll plazas, toll collection (only for BOT Projects), communication facilities, emergency relief ents, traffic operation and safety arrangements.

ll Project contracts including Detailed Engineering and Design Consultancy Construction Supervision Consultancy contract , any other EPC contract, O Contract and Tolling contract (only for BOT Projects), made by the naire.

he environmental management plan for the Project Highway during tion and Operation and Maintenance phases.

uality assurance and quality control provisions during the design, n and maintenance stages.

afety of the Project Highway both during Construction and Operation and e stages.

and assist in resolving disputes between NHAI and Concessionaire.

agement Information System to NHAI.

n Stage

f the IC are to supervise the works on a day-to-day basis and to approve and workmanship of the works. During the construction phase it should datory that, IC's key staff should check at least 25-30% of Request for FI) pertaining to each item of construction and close them. IC's Team at least close 5-10% of RFI as per such provisions of inspection in the greement. He/she shall have no authority to relieve the Concessionaire duties or to impose additional obligations. The IC shall administer the s and ensure that the Contractual Clauses, whether related to quality or works, are respected. Request for Inspection (RFI) is a formal n the Concessionaire (or EPC contractor) to Independent Consultant to aspects of work or activity pertaining to construction or development ighway. Submission of a RFI for construction activity must be made a hours in advance of the time the Concessionaire (or EPC contractor) ork on the RFI activity.

rove works programme.

testing results and Mix Designs and to order special tests of completed works, and/or order removal and substitution of and/or works as required.

ice and quality control during Construction period.

truction work is accomplished in accordance with the technical

delays and recommend to the NHAI the remedial measures to

'As Built' drawings for each component of the works prepared

asures provided for the traffic and Project workers.

sion of the Project Completion Schedule and the Concession Concessionaire is entitled and shall notify the NHAI accordingly.

In resolving disputes between NHAI and Concessionaire during

riving at any cost variation and its impact on Concession

it to the NHAI

icate after checking the results of prescribed tests, with the

icate duly appended with a list of outstanding items (Punch Concession Agreement) established after joint inspection with Concessionaire requests for it, after approval of NHAI. .

scope, while calculating the cost implications to the ing with such Change of Scope Notice, the rates shall be the concerned State PWD (NH) current schedule of rates book. In case an item is not covered under the above-tes, the rate of such item shall be worked out by the of the prevailing market rate so far as found reasonable

e in all matters concerning construction safety and care of to request the concessionaire to provide any necessary

ce Stage

aning, replacement of equipment/consumables, roadside enance and repairs to equipment, pavements, bridges, civil works. Maintenance shall not include the extension

any existing pavements, bridges, structures and other civil works unless part of the ject Highway.

iew work plan and schedules of various operation and maintenance activities

iew Operation and Maintenance manual prepared by the Concessionaire.

iew the performance of Operation and Maintenance (O & M) activities including uipment, service, traffic operation and safety, toll plazas and fees collection system ly for BOT Projects), landscaping, environmental issues and way side amenities.

mediate and assist in resolving disputes between NHAI and Concessionaire during &M stage.

iate necessary action to undertake maintenance obligations of the Concessionaire isk and cost of the Concessionaire in the event of his failure to carry out O&M.

dertake audit of the traffic using the Project Highway at least once a month.

iew and inspect the Project Highway at least once a month during the O&M iod and issue an Inspection Report of such inspections.

iew the accident record on the Project Highway and suggest remedial measures.

nsfer/Termination

isfy itself that the entire divestment requirement have been met by the ncessionaire.

other activities as per provisions of the Concessionaire Agreement

ERACTION WITH NHAI

Independent Consultants shall interact with the NHAI on a regular basis. NHAI generally hold meetings every month to review the progress etc. during the s of Design and Construction, and every second month during the Operation and tenance stage. Within 30 days of the receipt of the Drawings, the Independent ultant shall review the same and convey its comments/observations to the essionaire with particular reference to the conformity or otherwise with the fications and standards setforth in the Agreement.

TING REQUIREMENT

ndependent Consultants shall prepare and submit to the NHAI three copies and ssionaire two copies each of the following reports.

n Review Phase

Monthly Progress Report.

truction Phase

Monthly and Quarterly Inspection Report covering all aspects such as Progress Monitoring, Quality Assurance (QA)/Quality Control (QC) etc.

...ation and Maintenance Phase

Monthly and Quarterly report on existing condition of facility including advise on all aspects of Operation And Maintenance, Toll Booths, Bridges or other Structures, Traffic Management & Safety, Telephone, Ambulance, etc.

Monthly report on audit of the traffic using the Project Highway at least once a month.

Monthly and quarterly reports for Lane Availability (Including non-availability) (only in case of BOT (Annuity))

Certification of Annuity Claims (only in case of BOT (Annuity))

...ous other reports as provided in the Concession Agreement such as Completion ...t.

...RMANCE CLAUSE

...endent Consultants shall be expected to fully comply with all the provisions of ...erms of Reference', and shall be fully responsible for supervising that Designs, ...uction and maintenance and operation of the facility takes place in accordance ...e provisions of the Concession Agreement and other schedules. Any failure of ...dependent Consultant in notifying to NHAI and the Concessionaire on non-...iance of the provisions of the Concession Agreement and other schedules by ...ncessionaire, non-adherence to the provision of ToR and non-adherence to the ...hedule prescribed under ToR shall amount to non-performance.

...TANT'S PROPOSAL

...from the list of the key professionals, as mentioned herein below, the ...endent Consultant shall appoint its authorised representative, who shall issue ...alf of the IC, the Provisional Completion Certification and Completion ...ate along with the Team Leader and shall carry out any such task as may be ... by NHAI. The IC shall take prior approval of NHAI before issuing ...onal Completion Certification and Completion Certificate. The proposal ...ed shall also include the name of the authorised representative along with the ...ation letter and power of attorney.

...y personnel to be fielded by the Consultants shall be as below :

...ader Cum Senior Highway Engineer
...avement Specialist
...ridge Design Engineer

...S2/BOT/KL-1

Highway Design Engineer
Bridge/Structural Engineer
ITS/Toll Expert
Road Safety Expert
Quality cum Material Expert

addition to above, consultants are required to propose other key personnel, sub-
fessional staff and other field engineers as detailed in **Enclosure B.** and the
mum qualification requirements for the same is enclosed in **Enclosure–A.**

The job-description and minimum qualification for key personnel mentioned above
proposed as **Enclosure–A.** However, higher marks shall be accorded to the
didate with higher relevant qualification and experience. The Consultant should
free to submit their proposal on the basis of the man-months which they consider
necessary to undertake the assignment. All the key personnel mentioned in para
above shall be evaluated at the time of evaluation of technical proposal.
Consultants are advised in their own interest to frame the technical proposal in an
ective manner as far as possible so that these could be properly assessed in respect
marks to be given as part of evaluation criteria. The bio-data of the key personnel
be signed on every sheet by the personnel concerned and the last sheet of each
shall also be signed by the authorised signatory for the Consultant. The key
nel shall also certify at the end of their bio-data proforma that they have not left
ny NHAI works without completing of their assignment and have not accepted
ny offer at the time of signing of the bio-data and as such shall be available to
ing the Independent Consultant, if the Project is awarded. In case the key
nel leave the assignment without approval of NHAI, NHAI would be at liberty
ake appropriate action against that key personnel including debarment.

SERVICES

The services of an Independent Consultant will be in phases as per Article XX -
ent Consultant, of Concession Agreement.
ointment of the Independent Consultant shall initially be for a period of 48
Estimated Design and Construction schedule for completion of the Project
mercial operation is 30 months. The proposed manpower deployment for this
shall be matching the activities to be performed during the said period. The
ed for services during the deployment of key personnel during this period
shown in **Enclosure B.**
The services of the Independent Consultant shall be for a maximum period
each time till completion of the Concession period and transfer of the
Highway.

Enclosure A

QUALIFICATION OF KEY PERSONNEL

ADER CUM SENIOR HIGHWAY ENGINEER

nior most position and the expert engaged as the team leader shall be responsible for entire Project preparation and implementation activities of the Concessionaire. He ll the Designs being prepared by the Concessionaire, ensure execution of works on pecification and standards, and continuously interact with the NHAI and the . He shall undertake Project site visits and shall guide, supervise, coordinate and work of other experts in his team as well as those of the Concessionaire. The uld have a proven record of supervising, organising and managing of Project d construction of highway projects of large magnitudes, as defined below, financed l lending agencies and others. Knowledge of Project management shall be an added

quires a Senior Highway Engineer who shall be a graduate in Civil Engineering lifications and specialisation in highway engineering. He should have a minimum rience of highway engineering including 5 years of experience in similar capacity, involved for at least 5 years for Highway Development Projects in developed hould have handled as Team Leader or similar capacity at least two Project Construction supervision work of major highway Project of four laning/ six- y costing more than Rs. 2000 million or of at least 50 km length.

MENT SPECIALIST

be continuously interacting with the Concessionaire, to ensure life cycle cost viable design of pavement including appropriate rehabilitation / strengthening of ne pavement which is significantly distressed. He shall also be responsible for adherence to maintenance standards during Construction and Operation period. requires a pavement specialist with thorough knowledge and understanding of practices' in the field of Design, Construction and maintenance of flexible/rigid including latest codal stipulations and specifications.

uld be a graduate in Civil Engineering with higher qualification and vement Design. He should have a minimum of 15 years of professional ent Design, Construction and its maintenance out of which 5 years should be r 4 laning of major highway projects. This position also requires experience es. The candidate should have involved in at least 2 major highway projects.

T/KL-1

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O 47

SENIOR BRIDGE DESIGN ENGINEER

Senior Bridge Design Engineer shall be responsible for checking the designs of bridges, interchanges and any other structure to be constructed in the Project highway. He shall review the rehabilitation measures to be proposed by the Concessionaire for existing structures based on site condition and structural requirement basis. His expertise shall include computer aided design methods for Civil/Structural Engineering with particular reference to structural design.

He should be a graduate in Civil Engineering from a recognized University. Post Graduation in Civil Engineering would be preferred. Bridge Design Engineer should have a minimum of 10 years experience in Bridge Design out of which a minimum of 10 years experience in similar capacity for major highway bridges is required. He should have handled at least 4 major highway bridges. Experience in other countries, involvement in innovative bridge designing works with computer aided software and involvement in designing of bridges more than 200m span would be preferred.

HIGHWAY DESIGN ENGINEER

Highway Design Engineer shall be responsible for the review of highway designs and using sophisticated computer software. Should be a graduate in Civil Engineering from a recognized University (higher qualifications will be preferable); His expertise shall include computer aided design methods for Civil/Highway Engineering with particular reference to CAD applications to the geometric design for highway rehabilitation and/or upgrading projects.

Highway Design Engineer should have a minimum of 15 years experience in Highway Designing, out of which a minimum of 5 years in major highway engineering projects. He should have designed at least 2 major road four laning improvement projects. He should have exposure of computer software programmes for design of highways. Experience in other countries would be desirable.

RESIDENT STRUCTURAL ENGINEER

Resident Engineer shall be responsible for supervising the works of bridges, interchanges and other structure to be constructed by the Concessionaire for this project. He shall also inspect rehabilitation and repair works to be undertaken by the Concessionaire.

He requires a graduate in Civil Engineering, (preference would be given to Post Graduation in Structural Engineering). He should have minimum 15 years experience out of which 10 years in Construction of bridges/interchanges/any other structures including rehabilitation. He should have supervised at least two major highway bridges. The candidate should have thorough understanding and experience with international 'best practices', and of latest construction technology.

HTMS/TOLLING SYSTEM EXPERT

...e a senior Systems Engineer having experience of at least 15 Years. He ...preparation of standards for projects of toll collection and HTMS. He ... degree in Civil Engineering/Electronics/Computer Science/other relevant ...xperience of international latest practices in the field of HTMS and tolling. ...xperience on at least 2 similar projects in similar capacity.

ROAD SAFETY EXPERT

...be a graduate in Civil Engineering preferably Post Graduation in ...afety Engineering. He should have at least 15 years of experience out of ...in road safety works. The candidate should have undertaken at least 2 ...udits, including at least 1 in design stages. The candidate should have ... the fields of road safety management plan. Preference would be given to ...ave been involved in preparation of road safety policy for any ...experience for preparing road safety management plan for inter-urban ...ed and developing countries would be desirable.

...ATERIAL EXPERT

...ert shall review the test results of bore holes, quarry and borrow area ...rength characteristics and suitability for using them in construction. He ...onaire's field laboratories to ensure that they are adequately equipped ...fill the specified testing requirements of the contract. He shall look into ...of the construction works and supervise the setting-up of the various ...shers and bituminous mixing plants to ensure that the specified ...ments are fully met.

...uate in Civil Engineering, preferably Post Graduation in Geotechnical ...ve a minimum of 15 years of professional engineering experience ...capacity for major highway projects. He should have handled at least ...in similar capacity. He should have exposure quality assurance ... using modern technology.

...duate in Civil Engineering/Survey Engineering. He should have at ...e field of surveying out of which 3 years should be for highway ...olved in at least 1 similar highway projects. This position requires ...dern computer based method of surveying with total station digital

ANT HIGHWAY ENGINEER

didate should be Graduate in Civil Engineering with 3 years experience. He should have
t least 1 road project.

XPERT

d be Graduate in Civil Engineering/Computer Science having experience in computer
design method for highway engineering. The incumbent should have 3 years experience
ld have handled at least 1 road project.

ONMENTAL ENGINEER

didate should be Graduate in Civil Engineering/Environmental Engineering or other
qualification. He should have at least 6 years experience out of which 2 years in highway
. He should have good knowledge of MOEF guidelines/requirements for mitigation

ANT BRIDGE ENGINEER

idate should be Graduate in Civil Engineering with 3 years experience. He should have
least 1 major bridge project.

ANT QUALITY CUM MATERIAL ENGINEER

idate should be Graduate in Civil Engineering with 3 years experience or diploma in
neering with 5 years experience. He should have handled at least 1 road project.

CAL ENGINEER

date should be Graduate in Electrical Engineering from recognised institute. He should
t 6 years experience.

Enclosure B

MANMONTH INPUT FOR KEY PERSONNEL OF INDEPENDENT CONSULTANTS

Key Personnel	Man month in Construction	Man month in O & M
Team Leader Cum Senior Highway Engineer	33	3
Senior Pavement Specialist	7	2
Senior Bridge Design Engineer	7	0
Highway Design Engineer	30	12
Bridge/Structural Engineer	30	6
HTMS/Toll Expert	3	2
Road Safety Expert	3	1
Senior Quality cum Material Expert	30	6
Sub Total	143	32
Sub Professional		
Survey Engineer	30	2
Assistant Highway Engineer	2 X 30	12
CAD Expert	8	0
Environmental Engineer	8	2
Assistant Bridge Engineer	2 X 30	6
Assistant Quality cum Material Engineer	2 X 30	6
Electrical Engineer	6	2
Sub Total	232	30
Total	375	62

alification and experience of Sub Professional would not be accounted in the However, Consultant would have to get their CVs approved from NHAI before The other inputs like traffic engineer, financial expert, legal expert etc. would also y the Consultant as a Head Quarters input out of the contingency provision.

HEDULE-P

FFIC SAMPLING)

SCHEDULE P

TRAFFIC SAMPLING

ndependent Consultant shall have the right to undertake traffic sampling for the rmination and/ or verification of the actual traffic on the Project Highway. This ugh Automatic Traffic Count -cum-classifier.

f traffic sampling, the Concessionaire shall procure a portable type automatic -classifier and provide it to the Independent Consultant. The traffic count -cum- light weight and portable with weather resistant casing. The system shall be ng and recording all types of vehicles plying on the Project Highway and of her vehicle category as per user needs. The vehicle classification shall be user n length of vehicle and number of axles. It would have the following main

ion of piezo electric sensor and inductive loops. The sensor shall be portable as o that either of these could be used as per the needs.

ic unit shall be micro processor based and programmable through a key board. le electronic display with requisite number of entry ports and exit to em. The vehicle counting/classification interval shall be programmable from nin. (24 hours). The system shall count and classify vehicle by each lane.

The system shall be capable of recording for later analysis on an individual date, speed, direction, lane, number of axles, axles spacing and site stem should be able to record and store vehicle data for a period of at least

system shall have the capability of data retrieval through removable floppy direct data transfer through a serial link to a portable computer and via telephone link by modem.

shall have software and manuals to analyse the data from output of vehicle and head-way. It should have capability of graphic/tabular

Gujarat Infrastructure Pvt. Ltd.

of portable automatic traffic counter cum classifier, it shall be validated and sample counts to establish the reliability and acceptability of Automatic Traffic sifier both by Concessionaire and the Independent Consultant.

be done at intervals of 15 days by continuous 24 hrs counting for three days. If are observed in three days counting at the frequency of 15 days, the frequency to 1 month after a period of one year. The sensor/loops shall be permanently the traffic on all the approaching lanes, in accordance with the instructions of shall be located about 5 kms away from the toll plaza transitions taking care traffic is possible in between. The portable logic unit shall be plugged to these ounting is to be done. Portable sensor can be utilised for traffic counting at any or the need.

periodical counts, the Independent Consultant shall have the right for traffic est from the NHAI. The traffic count as obtained from the samples shall be ic on the Project Highway at the locations of the counting.

SCHEDULE 9

ESCROW ACCOUNT AGREEMENT)

SCHEDULE Q

DRAFT
ESCROW ACCOUNT AGREEMENT

Among

Guruvayoor Infrastructure Private Limited (THE COMPANY)

And

.....

As Lenders Representative

And

.....

As Escrow Agent

And

NHAI

...ect to ... Agreement(s) between the Concessionaire and Senior ... Lenders ... that position in the cashflows shall not be changed)

...EEMENT (the "Agreement") is made on the ..... day of ..... 200... by and

...Infrastructure Private Limited, a company incorporated in India whose registered ...India (the "Company");

.....and having its registered office at ..... as Senior Lenders Representative (the "Lenders ...e");

.....and having its registered office at .....(the "Escrow Agent").

...ways Authority of India (NHAI), Government of India, as Employer and Sub-...r (the "NHAI").

...any is undertaking a project for ""Design, Construction, Development, Finance, ... and Maintenance of Km 210.00 (Thrissur)- Km 316.70 (Angamali), and ...ent, Operations and Maintenance of Km 316.70 (Angamali) to Km 342.00 ...of section of NH47 in the State of Kerela, through a concession on Build, Operate ...r (BOT) basis"

...any has entered into a Concession Agreement dated as of ..... 200... with NHAI ...cession Agreement") wherein NHAI has granted Concession to Company for the ...d to above, on BOT basis.

...ny has entered into Financing Documents with Senior Lenders wherein Senior ..."Lenders") have agreed to lend and advance to the Company Rupee amounts ...crores and foreign currency amounts aggregating US Dollars ...on terms thereof;

...SCHEDULE-I

of the terms of the Concession Agreement and the Financing Documents is that the pany is required to establish an Escrow Account, inter alia, on terms and conditions factory to Senior Lenders.

CONSIDERATION FOR THE PREMISES IT IS AGREED BY THE PARTIES AS WS:-

efinitions and Construction

efinitions: Each capitalized term used herein and not otherwise defined shall have the efinition assigned to such term in the Concession Agreement or the Substitution greement as the case may be

Account" means the Escrow Account to be opened by the Company in accordance with is Agreement;

Authorised Investment" means any authorised investments which Lenders Representative ay, from time to time permit the Company to make in accordance with this Agreement;

Business Day" means any day on which banks are open for business in ..... or in elation to any notice or communication to be made under this Agreement, a day on which anks are open for business in the place of receipt of such notice or communication;

Company Account" shall mean any bank account of the Company, other than the Escrow ccount.

Enforcement Notice" means any enforcement procedure commenced by the Lenders epresentative under any of the Security Documents;

Escrow Account" means an Escrow Account established in terms of and under this greement;

vent of Default" means an event of default as defined and detailed in the Financing cuments;

the lawful currency of India;

in relation to any Permitted Payment, the date(s) specified for such

mitted Payment" means the Payments Agreed to in this Agreement excluding ent to the Company Accounts as more particularly given in clause3.3.1;

uired Balance" means on any Date in relation to the Sub-Account of the Escrow unt, an amount in INR/Dollars which if proportionately built over the months, would sufficient to meet Permitted Payment on the Payment Date(s).

rity Documents" means all or any of the Documents executed, delivered or furnished ecure the Financial Assistance under the Financing Documents including but not ed to the Deed of Hypothecation, Mortgage Deed, Equitable Mortgage, Deed of antee, Pledge Agreement, Undertakings, Negative Lien and other incidental or lemental documents related thereto.

-Accounts" means the Sub-Accounts of the Escrow Account, into which the monies n relation to Permitted Payment would be credited every month and paid out if due f not due in a month then appropriated proportionately in such month and retained in ub Account and paid out therefrom on the Payment date.

r" means each twelve month period ending on March 31.

truction

ment:

he context otherwise requires, the singular includes the plural and vice versa;

, and the use of bold typeface shall be ignored in its construction;

e to a Clause, or Schedule is, unless indicated to the contrary, a reference to a clause to this Agreement;

to this Agreement shall be construed as references also to any separate or agreement contained in it;

wise" and "whatsoever" shall not be construed to be as any any preceding words or matters specifically referred to;

or "including" are to be construed without limitation;

(e) references to a person shall include such person's successors and permitted assignees or transferees.

(f) references to agreements, documents or other instruments include (subject to all relevant approvals) a reference to that agreement, document or instrument as amended, supplemented, substituted, novated or assigned from time to time.

(g) words "herein", "hereto" and "hereunder" refer to this Agreement as a whole and not to any particular Clause in which such word may be used;

(h) words importing a particular gender include all genders;

(i) "person" includes any individual, partnership, firm, trust, body corporate, government, governmental body, authority, agency, unincorporated body of persons or association;

(j) reference to a public organisation shall be deemed to include a reference to any successor to such public organisation or any organisation or entity which has taken over the functions or responsibilities of such public organisation;

(k) references to "Party" means a party to this Agreement and references to "Parties" shall be construed accordingly; and

(l) references to any law shall include references to such law as it may, after the date of this Agreement, from time to time be amended, supplemented or re-enacted.

(m) words and expressions not expressly defined herein shall subscribe the meanings ascribed thereto in the Concession Agreement

2. ESCROW ACCOUNTS

2.1 Acceptance of Appointment of Escrow Agent

2.1.1 The Escrow Agent hereby agrees to act as such and to accept all payments and other amounts delivered to or held by the Escrow Agent pursuant to the terms of this Agreement. The Escrow Agent shall hold and safeguard the Escrow Account during the term of this Agreement and shall treat the amount in the Escrow Account as monies of the Company / NHAI with the Escrow Agent, as agent for the benefit of the Company or its nominee, successors or assigns, in trust in accordance with the terms of this Escrow Agreement. In performing its functions and duties hereunder, the Escrow Agent shall act as agent for the Lenders

...ny also hereby declares that all right, title and interest in and to the Escrow ...e Authorised Investments and Permitted Payments made from the Escrow ...hall be vested in the Escrow Agent and held in trust for the Senior Lenders ...gh Lender's Representative, NHAI and the Company in accordance with the ... Agreement and as their respective interests are provided for herein. Amounts ... the Escrow Account from time to time shall be held by the Escrow Agent in ...ceived and applied as provided in and in accordance with the Agreement. No ...s than the Lenders Representative, NHAI and the Company shall have any ...nder as the beneficiaries of or as third party beneficiaries under this

... Company/NHAI in the monies held in Escrow Account are set forth in their ...his Escrow Agreement and Company/NHAI shall have no other rights against ...nies in the Escrow Account.

...nt of Escrow Account

... (30) days prior to seeking any disbursement (including issue of guarantees ... of Financial Assistance), the Company shall establish the Escrow Account ...ow Agent.

... of the Account

...gent shall maintain the Escrow Account in accordance with the terms of this ...d its usual practices and applicable regulations and pay the maximum rate of ...e to its customers on the balance in the said account from time to time.

...ocedures

...Agent and the Company shall agree (after consultation with the Lenders ...) on the detailed mandates, terms and conditions and operating procedures ... Account but in the event of any inconsistency between this Agreement and ... terms and conditions or procedures, this Agreement shall prevail.

...ccount shall be established with the ..... Branch of the Escrow ...The Escrow Account shall be denominated in INR.

sits

Company

s, confirms and undertakes that it shall deposit and/or credit the Escrow Account

all its receivables;

all proceeds received pursuant to any insurance claims; and

all monies received from any other sources in relation to and in respect of the Project.

make other deposits of the Company's other funds into the Escrow Accounts at any Provided however that the terms of this Agreement shall apply to such other funds sited in the Escrow Account by the Company.

rees, confirms and undertakes that it shall deposit and/or credit the Escrow Account

all Fees collected by NHAI in exercise of its rights under Concession Agreement;

Revenue Shortfall Loan;

Grant, termination payments and other monies paid or disbursed in accordance with the provisions of the Concession Agreement and/or the Substitution Agreement.

crow Agent shall ensure that all interest, if any, on the balances of the Escrow nts and interest on Authorised Investments made from the Escrow Accounts shall be d to or deposited in the Escrow Account.

rvals

draw amounts from the Escrow Accounts and appropriate in ith as more particularly given in the Bank Proforma in levant Sub-Account for payments and if not due in a ately in such month and retain in the Sub-Account and Date(s).

All taxes due and payable by the Company;

All expenses in connection with and relevant to the Construction of Project Highway by way of payment to the EPC Contractor and such other persons as may be specified in the Financing Documents.

O&M Expenses including Fees collection expenses incurred by the Company directly or through O&M Contractor and/or Tolling Contractor, if any, subject to the items and ceiling in respect thereof as set forth in the Financing Documents but not exceeding one twelfth (1/12) of the annual liability on this account;

The whole of the expense on completion of Punch List items incurred by NHAI and 2.0 times of such expenses subject to a minimum of Rs. 1,000,000 (Rs. One million) in case the Punch List items are not completed by the Concessionaire within 120 days from the issue of the provisional completion certificate in accordance with the Specifications and Standards and as detailed in clause 16.5 of the Concession Agreement

The whole or part of the expense on repair work or O&M Expenses including Fees collection expenses incurred by NHAI, and 1.25 times of the O&M expenses incurred by the NHAI, if any, in the event of repair and maintenance work being carried out by NHAI (pursuant to the failure on part of the Company in doing so) to maintain and / or repair the Project Highway or a part thereof up to and in accordance with the Specifications and Standards and / or failure on part of the Company to commence remedial works within 30 (thirty) days of receipt of notice in this regard from NHAI or the Independent Consultant, if any, including those on account of exercise of any of its rights under this Agreement provided NHAI certifies to the Escrow Agent that NHAI had incurred such expenses in accordance with the provisions of this Agreement;

All Concession Fees and Negative Grants payments due to NHAI from the Company under this Agreement.

Monthly proportionate provision of Debt Service Payments due in an Accounting Year and payment of Debt Service Payments in the month when due;

Reimbursements of expenditure incurred by NHAI, if any, for payment of insurance premia, etc., which are otherwise company's responsibility, on account of failure on part of the Company to keep such insurance(s) effective and in force.

ne-half of such remuneration, cost and expenses of the Independent Consultant
case the Concessionaire does not reimburse the remuneration, cost and expenses
the Independent Consultant to NHAI within 15 (fifteen) days of receiving a
tement of expenditure from NHAI.

ny payments and Damages due and payable by the Company to NHAI pursuant
this Agreement including Recovery due to reduction in Scope of Work and
payment of Revenue Shortfall Loans; and

lance in accordance with the instructions of the Company.

nts specified in Clause 3.3.1 (a) to (i) constitute the Permitted Payments.

year, Bank Proforma would be separately provided by the Company to the
ent, with the permission of Lenders Representative, not later than 60 days prior
day of each year.

ding anything to the contrary contained in this Agreement upon the earlier of
Termination Notice (ii) termination of Concession Agreement, or (iii) the
Concession Period, all amounts standing to the credit of the Escrow Account
propriated and dealt with in the following order:-

axes due and payable by **Guruvayoor Infrastructure Private LIMITED;**

Concession Fees (including Negative Grant) due and payable to NHAI under
Agreement;

crued Debt Service Payments;

ayments and Damages due and payable by the Company to NHAI pursuant
s Agreement, including Recovery due to reduction in Scope of Work,
nation claims and repayment of Revenue Shortfall Loans;

rued O&M Expenses;

other payments required to be made under this Agreement; and

e, if any, on the instructions of the Company.

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...nding anything to the contrary contained in this agreement, any termination ...ade by NHAI into the Escrow account shall not be appropriated therefrom for ... whatsoever, until the Vesting Certificate has been issued by NHAI. Provided, ...r this restriction shall not apply to appropriations in favour of the Senior ... ...e extent of debt due.

...e, which is two years prior to the expiry of the Concession period, a sum ...fees realizable during the last two years of the Concession period for a traffic ...lated at the rate of 10,000 (ten thousand) PCUs per day per year, or, a higher ...d by the Independent Consultant for renewal works, shall notwithstanding ...he contrary contained in this agreement, be retained in the Escrow Account ... if a Bank Guarantee of an equivalent sum in the form and content acceptable ... been furnished by the Company to NHAI, no such retention shall be made. If ... second Inspection, it is agreed or determined that no renewal works are ... within 14 days of such agreement, 50 % of the sums thus retained shall be ... the Escrow account to the company. Within 14 days after the issue of ...ificate issued (in accordance with Article XXXIII of the Concession ...e sums thus retained shall be released from the Escrow account to the

...f Insufficient Funds

... Clause 3.3, the application of funds in the Escrow Account shall be in the ... priority set forth therein. If the funds available for payment to the Sub- ...fficient to pay a portion, but not all, of the amount required to be paid to ...nt, the Escrow Agent shall apply such funds in the serial order of priority ...se 3.3, until exhaustion thereof.

...estments

...ent shall invest the amounts standing to the credit of any of the Sub- ...horised Investments on the instructions of the Company as approved by ...resentative, from time to time, in accordance with the provisions of the ... Escrow Agent shall not be bound to and shall not make investments ... Trusts Act, 1882 without prior approval of the Lenders Representative.

...KL-1

Investments

nvestments shall be made and/or realised by the Escrow Agent on the Company as approved by the Lenders Representative from time to time, ce with the provisions of this Agreement.

of title or other documentary evidence of ownership with respect to tments made out of any Escrow Account will be held in the custody of

ion of any investment made under this Clause, the proceeds of realisation y be credited to the relevant Sub-Account by the Escrow Agent or sted in another Authorised Investment in accordance with the Company's as approved by the Lenders Representative.

isations

he Company becomes aware that any Authorised Investment has ceased ed Investment, the Company shall immediately instruct the Escrow forts basis to realise such Authorised Investment on its maturity date or nder intimation to the Lenders Representative or NHAI.

Investments

this Agreement to the balance standing to the credit of the Escrow deemed to include a reference to the amount of the Authorised hich all, or part of, such balance is for the time being invested.

nents

income received on account of Authorised Investments shall be to the Account.

e

orcement Notice from the Lenders Representative, the Escrow Agent horised Investments, whether such investments have matured or not on d apply the proceeds as directed by the Lenders Representative.

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...llowing Event of Default

...epresentative notifies the Escrow Agent that an Event of Default is likely ...s occurred, and is continuing, then, until such time as the Lenders ...as notified the Escrow Agent that the Event of Default has been cured or ...e Financing Documents, the Escrow Agent shall only make withdrawals ...w Accounts which constitute Permitted Payment and shall not make any ...e Escrow Account to the Company Accounts.

...Provisions

...ent and the Lenders

...hereby appoints the Escrow Agent to act as trustee for the Lenders ...n connection herewith and authorises the Escrow Agent to exercise such ...uthorities and discretion as are specifically delegated to the Escrow Agent ...reof together with all such rights, powers, authorities and discretion as are ...ental hereto, and the Escrow Agent accepts such appointment pursuant to

...es of the Escrow Agent

...nt:

... the absence of bad faith or gross negligence on its part, rely as to any ...which might reasonably be expected to be within the knowledge of the ... a certificate signed by or on behalf of the Company;

...the absence of bad faith or gross negligence on its part, rely upon the ...any communication or documents believed by it to be authentic;

...thin five (5) Business Days after receipt, deliver a copy to the Lenders ...f any notice or document received by the Escrow Agent in its capacity as ...nt from the Company or any other person hereunder or in connection

...thin five (5) Business Days after receipt, deliver a copy to the Company ...document received by the Escrow Agent from the Lenders Representative ...ewith.

...Funds

...r property received by the Escrow Agent under this Agreement shall, until ...n accordance with this Agreement, be held by the Escrow Agent in trust ... for which they were received, and shall be segregated from other funds ...he Escrow Agent.

... shall remain in full force and effect so long as amounts remain ...the Company in respect of the Financial Assistance received by it from ...s or its obligations to NHAI, unless terminated earlier by the mutual ...ties or otherwise in accordance with the provisions of this Clause.

...y, by not less than 45 days prior notice to the Escrow Agent, NHAI and ...sentative, terminate this Agreement and appoint a new Escrow Agent, ... new Escrow Agent is acceptable to the Lenders Representative and ...made satisfactory to the Lenders Representative for transfer of amounts ...crow Account to a new Escrow Account established with the successor Agent.

... pay the Escrow Agent fees in an amount and at such times as may be ... Escrow Agent and the Company.

... Defaults

... breach of any of its obligations under this Agreement and, following ... from the Lenders' Representative, fails to remedy the same;

...e to deposit funds received by the Company in the Escrow Account, ...me in the Escrow Account within five Business Days of receipt of

...h consisting of causing the Escrow Agent to transfer funds to any ... breach of the terms of this Agreement, by depositing the relevant ...ccount or any Sub-Account in which such transfer should have been ...ve Business Days of receipt of such notice.

...in the case of a breach of the Company's obligations under Clause 4, by instructing the Escrow Agent to realise any investment made in breach of Clause 4 within five (5) Business Days of receipt of such notice; or

in the case of any other breach, by remedying the same within five (5) Business Days to the satisfaction of the Lenders Representative.

The Company and the Escrow Agent agree and confirm that any default by either the Company or the Escrow Agent in the performance of their respective obligations under this Agreement resulting, in the opinion of the Lenders Representative, in a breach of this Agreement, shall qualify as an Event of Default under the Financing Documents/Security Documents.

Miscellaneous

Closure of Accounts

The Escrow Agent shall, at the request of the Company made on or after the payment by the Company of all outstanding amounts under the Financing Documents / Concession Agreement and upon confirmation of receipt, close the Escrow Accounts and pay any amount standing to the credit thereof to the Company.

Notwithstanding anything to the contrary contained in this Agreement, this Agreement shall remain in full force and effect till the Transfer Date provided however if NHAI shall certify to the Escrow Agent that Concession Agreement and/or the Concession has been terminated on account of default of the Concessionaire under this Agreement, then notwithstanding anything to the contrary contained herein, all the amounts standing to the credit of the Escrow Account shall be dealt with in accordance with provisions of Clause 3.2.

...cessors and Assignors

...is Agreement shall be binding on and shall ensure the benefit of the Parties and their ...spective successors and permitted assigns.

Set Off

...e Escrow Agent agrees not to claim or exercise any right of set off, banker's lien or ...er right or remedy with respect to amounts standing to the credit of the Escrow ...counts. For the avoidance of doubt, it is declared by the Escrow Agent that the monies

properties held by the Escrow Agent shall not be considered as part of the assets of the ow Agent and being trust property, shall in the case of bankruptcy or liquidation of the w Agent be wholly excluded from the assets of the Escrow Agent in such bankruptcy uidation.

ces

tices or other communications to be given or made under this Agreement shall be in g, shall either be delivered personally or sent by courier, registered or certified mail simile. The address for service of each Party and its facsimile number is set out its name on the signing pages hereto. All notices shall be effective upon actual t save that where a notice is received after 5.30 p.m. on a Business Day or on a day not a Business Day, such notice shall be deemed to be received on the first Business following the date of actual receipt. Without prejudice to the foregoing a Party giving king a notice or communication by facsimile shall promptly deliver a copy of such or communication personally, by courier or mail to the addressee of such notice or unication.

rty may by notice change the addresses and/or addresses to which such notices and unications to it are to be delivered or mailed. Such change shall be effective when Parties have notice of it.

r

by any Party at any time to enforce any provision of this Agreement or to require mance by other Parties of any provision of this Agreement shall not be construed as r of such provision and shall not affect the validity of this Agreement or any part of right of the relevant Party to enforce any provision in accordance with its terms.

bility

ondition, Clause or provision of this Agreement not being of a fundamental nature, to be illegal or unenforceable, the validity or enforceability of the remainder of this ent shall not be affected thereby.

ments

ndment to this Agreement shall be binding unless in writing and signed by the duly ed representatives of the Parties.

...erning Law

... Agreement shall be governed by and construed in accordance with Indian law.

...latory Approvals

... Escrow Agent shall use its best efforts to procure and shall thereafter maintain and ...ply with all regulatory approvals required for it to establish and operate the Escrow ...unts. The Escrow Agent represents and warrants that it is not aware of any reason ...uch regulatory approvals will not be ordinarily granted to the Escrow Agent.

...fication of Balances

... Business Days prior to each Payment Date (and for this purpose the Escrow Agent ... be entitled to rely on an affirmation by the Company and/or the Lenders ...sentative as to the relevant Payment Dates), the Escrow Agent shall notify the ...rs Representative of the balance of the Escrow Account as at the close of business the immediately preceding Business Day.

...TNESS whereof the Company has caused its Common Seal to be affixed hereto and ...plicate hereof on the date first above written and the Escrow Agent, NHAI and the ...s Representative have caused the said triplicate to be executed by the hand of an ...ised official.

...D AND DELIVERED BY)
..... within named Escrow Agent)
...and of)
...orised official of the Account)
)

...ber:

...

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..... within named Lenders)
ative by the hand of)
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hin named by the hand of)
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sed official of the NHAI)

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MON SEAL OF .....)
nt to the Resolution)
d of Directors passed in)
on the ..... day of .....200)
en affixed in the presence of)
..... and Shri .....)
ho have signed these)
token thereof and)
Secretary/authorised)
has countersigned the)
en thereof.)

.....

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tion and maintenance of the Project Highway, as defined hereinafter on
ferred to in Recital 'A' and to fulfill other obligations of the
suant to the LOA and has requested NHAI to accept the Concessionaire
shall undertake and fulfill and perform the obligations and exercise the
sortium under the LOA, including the obligation to enter into the
ment for the design, engineering, financing, procurement, Utility
ting, construction, operation and maintenance of the Project Highway

to the said request of the Consortium and has accordingly agreed to
cession Agreement with the Concessionaire pursuant to the LOA for,
n, engineering, financing, procurement, Utility Shifting , Tree cutting,
tion and maintenance of the said Project Highway on BOT basis.

the Concessionaire agree that the implementation of the Concession
nce of its obligations by the Concessionaire under and in accordance
Agreement requires extensive continued support and grant of certain
s as hereinafter set forth by GOK and is an essential pre-condition for
urces therefore by the Concessionaire.

PARTIES HERETO HEREBY AGREE AND THIS AGREEMENT
WS:

D INTERPRETATIONS

this Agreement the following terms shall have the meaning hereinafter
to them.

this Support Agreement and all annexures hereto and amendments if
ccordance with the provisions contained herein in this behalf.

ment" means the Concession Agreement dated _____ entered
and the Concessionaire, and shall include all of its annexures and
mendments made thereto in accordance with the provisions contained

Ministry of Shipping, Road Transport and Highways, earlier Ministry
highways

ment" means the Substitution Agreement dated _____ entered
or Lenders, NHAI and the Concessionaire providing for substitution

cessionaire by the Selectee selected by the Senior Lenders in the manner and and on the terms and conditions set forth therein. A copy of the said Agreement is annexed hereto and marked as "Annexure 'A'."

pport" means the obligations assumed and the facilities agreed to be provided by Concessionaire hereunder or pursuant hereto.

nd expressions beginning with or in capital letters used in this Agreement and herein but defined in the Concession Agreement shall have, unless repugnant ext, the meaning respectively assigned to them in the Concession Agreement. expressions used in this Agreement and neither defined herein nor in the Agreement but defined in the Substitution Agreement shall have the meaning assigned to them in the Substitution Agreement.

ement unless the context otherwise requires-

reference to a statutory provision shall include such provision as is from time ime modified and re-enacted or consolidated so far as such modification or re-ctment or consolidation applies or is capable of applying to any transactions ered into hereunder;

words importing singular shall include plural and vice versa, and words oting natural persons shall include partnerships, firms, companies, orations, joint ventures, trusts, associations, organizations or other entities ether or not having a separate legal entity);

headings are for convenience of reference only and shall not be used in and not affect the construction or interpretation of this Agreement;

s beginning with capital letters and defined in this Agreement shall have the aning ascribed thereto herein;

words "include" and "including" are to be construed without limitation.

reference to a "day" shall mean reference to a calendar day;

reference to "month" shall mean reference to a calendar month;

Annexures and appendices to this Agreement form an integral part of this ement and will be in full force and effect as though they were expressly set in the body of this Agreement;

any reference at any time to any agreement, deed, instrument, license or document of any description shall be construed as reference to that agreement, deed, instrument, license or other document as amended, varied, supplemented, modified or suspended at the time of such reference provided that this clause shall not operate so as to increase liabilities or obligations of GOK hereunder or pursuant hereto in any manner whatsoever.

References to Recitals, Clauses, Sub-clauses, Paragraphs, Annexures or Appendices in this Agreement shall, except where the context otherwise requires, be deemed to be references to Recitals, Clauses, Sub-clauses, Paragraphs, Annexures and Appendices of this Agreement.

Any agreement, consent, approval, authorization, proposal, notice, communication, information or report required under or pursuant to this Agreement from or by any Party or Senior Lender(s) shall be valid and effectual only if it is in writing under the hands of duty authorized representative of such Party or the Senior Lender(s), as the case may be, in this behalf and not otherwise; and

Any reference to any period commencing "from" a specified day or date and "till" or "until" a specified day or date shall include both days or dates.

"Concessionaire" shall include Selectee under the Substitution Agreement.

greement shall come into force the date hereof and shall continue to be in full force fect for the period the Concession Agreement is in force and effect including any on thereof.

ORT OF GOK

nd with effect from the date hereof, GOK agrees:

so long as the Concessionaire is not in breach of its obligations under this Agreement, GOK agrees to enable access to the Site to the Concessionaire for peaceful use of and operations at the Site by the Concessionaire under and in accordance with the provisions of the Concession Agreement without any let or hindrance from GOK or persons claiming through or under it;

subject to the Concessionaire complying with Applicable Laws, provide to the Concessionaire Applicable Permits to the extent GOK or any Governmental Agency of GOK is entitled to issue;

upon written request from the Concessionaire, assist the Concessionaire in obtaining access to all necessary infrastructure facilities and utilities, including water, electricity and telecommunication facilities at rates and on terms no less favorable to the Concessionaire than those generally available to commercial customers receiving substantially equivalent services;

ensure that no barriers are erected or placed by GOK or any Governmental Agency of GOK that interrupts free flow of traffic on the Project Highway except on account of any law and order situation or upon national security considerations;

provide the Concessionaire with assistance through a dedicated team against payment of prescribed fee and charges, if any, for regulation of traffic on the Project Highway;

provide the Concessionaire with police assistance in the form of dedicated highway patrol parties against payment of prescribed costs and charges, if any, for patrolling and provision of security on the Project Highway;

observe and comply with its obligations set forth in this Agreement;

support, cooperate with and facilitate NHAI and the Concessionaire in the implementation of the Project;

subject to and in accordance with the Applicable Laws, assist the Concessionaire in the procurement of all Applicable Permits required from any municipal and other local authorities and bodies including Panchayats in the State of Kerela for the implementation of the Project;

ensure, subject to and in accordance with the Applicable Laws, that all relevant municipal and other local authorities and bodies including Panchayats in the State of Kerela do not put any barriers or other obstructions that interrupt free flow of traffic on the Project Highway; and

not do or omit to do any act, deed or thing which may in any manner be violative of or cause the Concessionaire to violate any of the provisions of the Concession Agreement.

ding anything to the contrary contained in the Agreement, GOK may d operate either itself or have the same, inter alia, built and operated on BOT erwise any Expressway or other toll road, not being a bye-pass, between inter OT/KL-1 (the "Additional Tollway"), provided that such Additional Tollway opened to traffic before expiry of 8 (eight) years from the Appointed Date

s and undertakes that it shall not levy any additional toll, fee, charge or tax on hole or any part of the Project Highway. GOK acknowledges the rights of ders and NHAI under the Substitution Agreement and hereby covenants that itution of the Concessionaire by the Selectee pursuant to the Substitution it shall be deemed for the purposes of this Agreement that as if Selectee is a and the Selectee shall accordingly be deemed to have succeeded to the rights ons of the Concessionaire under this Agreement on and with effect from the itution of the Concessionaire by the Selectee.

ONAIRE'S OBLIGATIONS

ire agrees and undertakes to perform, observe and comply with the following :

All Applicable Laws and Applicable Permits;

The provisions of the Concession Agreement, the Substitution Agreement, and the Project Agreements; and

Observe, comply and perform its obligations under this Agreement.

TATIONS AND WARRANTIES

onaire represents and warrants to GOK that :

It is duly organized, validly existing and in good standing under the laws of India.

It has power and authority to execute, deliver and perform its obligations under this Agreement and to carry out the transactions contemplated hereby;

taken all necessary corporate and other action under Applicable
and its constitutional documents to authorize the execution, delivery
performance of this Agreement;

Agreement constitutes its legal, valid and binding obligation
enforceable against it in accordance with the terms hereof;

subject to civil and commercial laws of India with respect to this
ment and it hereby expressly and irrevocably waives any immunity
jurisdiction in respect thereof;

information furnished to the GOK pertaining to the
sionaire including its constitution and existing and proposed
olding structure is now and shall be true and correct as on the
Date and COD and the Balance Sheet and Profit and Loss
of the Concessionaire for each of its Accounting Year after the
Date furnished to GOK shall give true and fair view of the
the Concessionaire.

ssionaire shall furnish a copy of its audited Balance Sheet
(one hundred twenty) days of the close of its each Accounting
the Appointed Date and any material change subsequent to the
such Balance Sheet shall be notified to GOK by the
sure within 30 (thirty) days of its occurrence and warrants that
Sheet and the information furnished as aforesaid shall be true

tion, delivery and performance of this Agreement will not
result in the breach of, constitute a default under or
erformance required by any of the terms of the
re's Memorandum and Articles of Association or any
Consortium or any Applicable Laws or Applicable Permits
nt, agreement, understanding, decree or order to which it is a
which it or any of its properties or assets is bound or affected;

actions, suits, proceedings or investigations pending or, to
aire's knowledge, threatened against it at law or in equity
nt or before any judicial, quasi judicial or other authority,
which may result in the breach of or constitute a default of
ire under this Agreement or which individually or in the
result in any material adverse effect on its business,

properties or assets or its condition, financial or otherwise, or in any impairment of its ability to perform its obligations and duties under this Agreement;

The Concessionaire has no knowledge of any violation or default with respect to any order, writ, injunction or decree of any court or any legally binding order of any Governmental Agency which may result in any material adverse effect or impairment of the Concessionaire's ability to perform its obligations and duties under this Agreement;

The Concessionaire has complied with all Applicable Laws and Applicable Permits, and has not been subject to any fines, penalties, injunctive relief or any other civil or criminal liabilities which in the aggregate have or may have material adverse effect on its financial condition or its ability to perform its obligations and duties under this Agreement;

Each Consortium Member was and is duly organized and existing under the laws of the jurisdiction of its incorporation and has full power and authority to consent to and has validly consented to the Concessionaire entering into this Agreement with the GOK;

No representation or warranty by the Concessionaire contained herein or in any other document furnished by it to GOK, or to any Governmental Agency in relation to Applicable Permits contains or will contain any untrue statement of material fact or omits or will omit to state a material fact necessary to make such representation or warranty not misleading;

The Concessionaire warrants that no sums have been paid or will be paid, by or on behalf of the Concessionaire, to any Person by way of fees, commission or otherwise for entering into this Agreement or for influencing or attempting to influence any officer or employee of NHAI, GOI or GOK in connection therewith; and

The Concessionaire is subject to civil and commercial laws of India with respect to this Agreement.

epresents and warrants to the Concessionaire that :

It has full power and authority to execute, deliver and perform this Agreement.

It has taken all necessary governmental action to authorize the execution, delivery and performance of this Agreement; and

This Agreement constitutes the legal, valid and binding obligation of GOK enforceable against it in accordance with its terms.

MMUNITY

conditionally and irrevocably:

Agrees that the execution, delivery and performance by it of this Agreement do not constitute sovereign acts;

Agrees that should any proceedings be brought against it or its assets in relation to this Agreement or any transaction contemplated by this Agreement, no sovereign immunity from such proceedings, execution, attachment or other legal process shall be claimed by or on behalf of itself or with respect to any of its assets, to the extent permitted by law; and

to the extent permitted by law, waives any right of sovereign immunity, which it or its assets now has or may acquire in the future.

anything to the contrary herein contained such waiver of right of not apply to

Property and assets of any consular or diplomatic mission or consulate or

Property belonging to the Defense services and such assets of the Union of India.

pensation

in breach of any of its obligations under this Agreement, which breach is 30 days of receipt of a notice in writing from the Concessionaire to GOK which has not occurred as a result of Concessionaire's breach of its this Agreement or the Concession Agreement, GOK shall pay to the all direct additional costs suffered or incurred by the Concessionaire, GoSRTH as arising out of such material default by GOK.

7.2 In case of any dispute by GOK on admissibility of the claim or extent of compensation determined by MOSRTH, the claim shall be settled as per provisions of the Dispute Settlement mechanism provided in Article IX of this Agreement.

7.3 Any such compensation payable shall be paid to the Concessionaire, in one lump sum within 90 (ninety) days of receiving MOSRTH's determination of compensation.

8. INDEMNITY

8.1. The Concessionaire will indemnify, defend and hold GOK harmless against any and all proceedings, actions and claims for any loss, damage, cost and expense of whatever kind and nature arising out of design, engineering, construction, operation and maintenance of the Project Highway or arising out of any breach by the Concessionaire of any of its obligations under this Agreement or on account of failure of the Concessionaire to comply with, and observe Applicable Laws and Applicable Permits;

8.2. GOK will, indemnify, defend and hold harmless the Concessionaire against any and all proceedings, actions and third party claims for any loss, damage, cost and expense arising out of failure of GOK to fulfill any of its obligations under this Agreement adversely affecting the performance of the Concessionaire's obligations under the Concession Agreement other than any loss, damage, cost and expense, arising out of acts done in discharge of their lawful functions by GOK, its officers, servants and agents;

8.3. Without limiting the generality of Clause 8.2, the GOK shall indemnify the Concessionaire and shall save it harmless from and against any payments required to be made by the Concessionaire with respect to levy of any Local Taxes provided nothing contained herein shall be construed or interpreted as restricting in any way or manner the right of GOK or any municipal, panchayat or other local authorities to levy any taxes which they or any of them are lawfully entitled to levy, impose or collect (the "Expected Taxes"). The Concessionaire shall not be entitled to and GOK shall be under no obligation to reimburse Expected Taxes to the Concessionaire or any person claiming through or under the Concessionaire;

8.4. In the event that either party hereto receives a claim from a third party in respect of which it is entitled to the benefit of an indemnity under Clause 8 or in respect of which it is entitled to reimbursement (the "Indemnified Party") within 14 (fourteen) days of receipt of the claim or payment, as the case may be, shall not settle or pay the claim without the prior approval of the Indemnifying Party. In the event that the Indemnifying Party wishes to contest or dispute the claim, it may conduct the proceedings in the name of the Indemnified Party and shall bear all costs involved in contesting the same. The

Indemnified Party shall provide all cooperation and assistance in contesting any claim and shall sign all such writings and documents as the Indemnified Party may reasonably require.

9. GOVERNING LAW AND DISPUTE SETTLEMENT

9.1. This Agreement shall be governed by and construed and interpreted in accordance with the laws of India. The provisions contained in Clause 8 shall survive the termination of this Agreement.

9.2. Any dispute, difference or claim arising out of or in connection with or in relation to this Agreement which is not resolved amicably shall be decided finally by reference to arbitration to a Board or Arbitrators comprising of one nominee of each party to the dispute. Such arbitration shall be held in accordance with the Rules of Arbitration of the Indian Counsel of Arbitration and shall be subject to the provisions of the Arbitration and Conciliation Act, 1996. The Arbitrators shall issue a reasoned award. The venue of such arbitration shall be New Delhi, India. The Award shall be final and binding on the Parties.

10. MISCELLANEOUS

10.1. Alteration of Terms

All additions, amendments, modifications and variations to this agreement shall be effectual and binding only if in writing and signed by the duly authorized representatives of GOK and the Concessionaire.

10.2. Time or Indulgence Allowed

An indulgence by one Party to the other in respect of any obligation or matter hereunder including time for performance to the other party hereunder or to remedy any breach hereof shall not be construed as a waiver of any of its rights hereunder, Party may be on such terms and subject to such conditions as the Party giving it may specify and shall be without prejudice to that Party's then accrued rights under this Agreement except to the extent expressly varied in writing when giving such time or other indulgence.

10.3. Severance of Terms

If any provisions of this Agreement are declared to be invalid, unenforceable or illegal by any competent arbitration tribunal or court, such invalidity, unenforceability or illegality shall not prejudice or affect the remaining provisions of this Agreement, which shall continue in full force and effect.

10.4. Language

All notices, certificates, correspondence or other communications under or in connection with the Agreement shall be in English

10.5. Notices

Any notice or communication hereunder shall be in writing and shall either be delivered personally or sent by registered post, with copy by facsimile transmission or other means of telecommunication in permanent written form. A copy of all the notices and communications will also be forwarded to the Lenders Representative. The service of notice shall unless otherwise notified by a notice hereunder to the parties at their following address:

IF to GOK :
Attn :
Fax no :
Tel no.

IF to the NHAI
Attn:
Fax no.
Tel no.

IF to the Concessionaire :
Attn :
Fax no.
Tel no.

The notice pursuant hereto will be deemed to have been received on the date when such notice is in fact received by the addressee.

10.6. Authorised Representatives

Each of the parties shall by notice in writing designate their respective authorised representatives with whom only all communications shall be made. A Party hereto shall be entitled to remove and/or substitute or make fresh appointment of its such authorised representatives by similar notice.

10.7 Optional

Schedule

This Agreement is made in two counterparts, each of which shall be deemed to be an original.

IN WITNESS WHEREOF THE PARTIES HERETO HAVE PUT THEIR HANDS HEREUNTO ON THE DAY, MONTH AND YEAR FIRST ABOVE WRITTEN.

FOR CONCESSIONAIRE

BY :_____
Name :_____
Title:_____

FOR GOVERNMENT OF KERELA

BY :_____
Name:_____
Title:_____

FOR NHAI

BY :_____
Name :_____
Title:_____

In the presence of :

1. 2.

SCHEDULE-S
(SAFETY REQUIREMENTS)

SAFETY REQUIREMENTS

1. OBJECTIVE

1.1 Safety of road users and Project workers is a vital requirement which the Concessionaire has to attend during the Concession Period under the Concession Agreement.

2. SAFETY STANDARDS

2.1 Objective

2.1.1 The objective of Safety Standards is to provide safe travel to the drivers of vehicles plying on the Project Highway at all times of the day, throughout the year and provide protection to the Project workers when they are on the work. This Schedule delineates the Safety Standards in terms of construction zones, signs and safety measures in work zones and during normal operations.

2.1.2 The guiding principles for safety measures shall include

(i) warning to the drivers unambiguously and sufficiently in advance of the situation on the highway;

(ii) providing clear demarcation for movement of vehicles;

(iii) providing devices to guide the drivers and their movements through construction zones/lane closures/traffic diversions etc.

(iv) protection to Project workers on work site.

2.2 Construction zone

In order to plan and provide appropriate traffic management and safety measures, it is necessary to appreciate the concept of a construction zone. A construction zone can be defined as an area of the Project Highway which involves the conflict of the right of use between the road users and authority responsible for the maintenance /improvement of the Project Highway. From traffic safety point of view, a construction zone comprises four sub-zones as described hereinunder:

2.2.1 Advance Warning Sub-Zone

The advance warning sub-zone is meant to prepare the driver for an alert behavior and is an essential part of any traffic control system. The warning system shall prepare the driver well in advance by providing information regarding distance, extent and type of hazard ahead so that the can gradually reduce the speed of his vehicle. For the operating speeds on the Project

Highway, length of this sub-zone shall be 100m and 500m, in plain and hilly terrain respectively. Information in this sub-zone will be conveyed through a series of traffic signs, which will include "Men at Work" and the speed reduction signs at the start and middle of this sub-zone.

2.2.2 Transition Sub-Zone

The transition sub-zone is the area in which the traffic is steered and guided into and out of the diverted path around the work sub-zone. This is the most crucial sub-zone from safety point of view since most of the movements are turning movements. The traffic in this sub-zone is mostly taken across with the help of barricades and channelizers.

The elements for designing this sub-zone are speed of the vehicles, extent of lateral shift and elevation difference between the normal and the diverted paths. The essential safety measures shall include delineation of the travel path and prevention of wayward movements of vehicles by means of barricades, channelizers, red cones, and red lamps during hours of darkness etc., as appropriate.

In the design of this sub-zone adequate attention shall be paid for providing necessary turning radius of the curves, grade to permit for safe passage of animal driven vehicles, drainage and dust-proofing. Where necessary traffic control shall be affected through manual flagging and by (electrically / Battery operated) traffic lights during hours of darkness. Where vehicles have to wait, the waiting area shall be demarcated by stop lines. Length of the sub-zone will generally be between 50 and 100m.

2.2.3 Work Sub-Zone

This is the actual area where construction or maintenance activity is taking place and the main concern, therefore, is the safety of the workers at the site from the plying traffic. The path of the traffic must, therefore, be very clearly delineated to avoid intrusion of vehicles moving into the work area. The work sub-zones shall not be close to each other and the distance between the two work sub-zones shall be such that the flow of traffic can return to normal stream by permitting fast moving traffic to overtake slow moving vehicles. These distances shall preferably be 2 km on urban sections and 5 to 10 km on rural sections of the highway. The length of work sub-zones will vary. The length of warning and transition sub-zones shall be basically governed by the speed of approaching vehicles and shall be regulated as shown in table S-1 below.

Table S-1: Recommended Length of Construction Zones

Average Speed (Kmph)	Length of Advance Warning Sub-Zone (m)	Length of Transition Sub-Zone (m)	Length of Work Sub-zone (m)
50	100	50	Varies
51-80	100-300	50-100	
81-100	300-500	100-200	
Over 100	1000	200-300	

The traffic across these sub-zones is guided and taken with the help of various traffic control devices erected at the site.

2.2.4 Termination Sub-Zone

The sub-zone is intended to inform the road users of the end of the construction zone. An information signboard shall be erected to inform road users of the end of construction Zone.

2.3 Traffic Control Devices

Traffic control devices in the construction zones perform the crucial task of warning, informing and alerting the driver apart from guiding the vehicle movements so that the driver of the vehicle as well as the workers on site are protected and safe passage to the traffic is possible.

The primary traffic control devices used in work sub-zones are signs, delineators, barricades, cones, pylons, pavement markings, flashing lights etc. They shall be such that they are easily understood without any confusion, are clearly visible during day and night, conform to the prevailing speeds in immediate vicinity, stable against sudden adverse weather conditions and are easy in installation, removal and maintenance.

2.3.1 Signs

The construction and maintenance signs fall into the same three major categories viz. regulatory signs, warning signs and guide signs as other traffic signs do. The IRC: 67-2001 (Code of Practice for Road Signs) gives a comprehensive list of traffic signs to which the size, colour and placement of signs shall conform. IRC: SP: 55-2001 gives details of special signs and other safety devices to be used in construction. These signs shall be placed on the left hand side of the road. Some of the common types of signs, which shall be provided in construction zones, are discussed in the following paragraph.

2.3.1.1 Regulatory signs

Regulatory signs mean legal restrictions on the traffic. They shall be used only in consultation with the local police and /or authorities. The most common types for use in construction zones are "Do not Enter", "Road Closed", Give Way to Pedestrians", "Speed limit" etc.

2.3.1.2 Warning Signs

The most common type of warning signs to alert the drivers of the possible dangers ahead in construction zones are "Lane Closed", "Diversion to other Carriageway", "Divided Carriageway Starts", "Divided Carriageway Ends" and "Two Way Traffic" etc. Sometimes it might be advisable to explain these signs with the help of a rectangular definition plate of size appropriate to the size of warning triangle and placed 0.15 m below, from the bottom of the triangle.

2.3.1.3 Guide Signs

Guide signs in construction zones shall have different background colour than the normal informatory signs of IRC: 67-2001. These signs shall have black messages and arrows on yellow (Traffic Yellow of IS: 5-1978) background. The commonly used guide signs are: "Diversion", "Road Ahead Closed" and "Sharp Deviation of route" etc. (As per IRC: SP: 55-2001).

2.3.2 Delineators

These channelising devices such as cones, traffic cylinders, tapes are placed in or adjacent to the roadway to guide the drivers along a safe path and to control the flow of traffic. These shall normally be retro-reflectorised for night visibility. IRC: 79-1981 (Recommended Practice for Road Delineators) gives details of some of the delineators. The other delineators are discussed below.

2.3.2.1 Traffic Cones and Cylinders

normally be 0.5m to 0.75m high and 0.3m to 0.4m in diameter or in square
are mostly made of plastic or rubber with retro reflectorised red and
ible anchoring so that they are not easily blown over or displaced, it
double cones, one over the other. The cones shall be placed close
impression of the continuity. The spacing shall be 3m (close) to

9m (normal). Larger size cones can be used for high speeds or where more conspicuous guidance is required.

New Jersey type plastic barrier of height 0.6m to 0.75m and 0.3m x 0.9m rectangular base could also be used with retro-reflectorised red and white band. Water or sand can be filled to stay in position without displacement. The spacing shall be 3m to 4m.

Barricades

Whenever the traffic has to be restricted from entering the work areas, such as excavations or material storage sites so that protection to workers is provided or there is a need for separating the two way traffic, barricades can be used. The barricades can be portable or permanent type and can be made of iron Jolly, metal or other suitable material. Size of the frame shall be 1.2m x 1m. Suitable support or ballasting shall be provided so that they do not over turn or are not blown away in strong winds. In case of a permanent type barricade, a gate or movable section shall be separately provided to allow the movement of construction/supervision vehicles. Red retro reflective stickers shall be affixed to barricade boards.

Flagmen

In large construction sites, flagmen with flags and sign paddles shall be effectively used to guide the safe movements. The flags for signalling shall be 0.60 m x 0.60 m size, made of a good red cloth and securely fastened to a staff of approximately 1m in length. The sign paddles shall conform to IRC: SP: 55-2001 and provided with a rigid handle.

For one-way traffic operation at a time during hours of darkness, battery operated red/green lights shall be used at either end of the affected section.

Road studs and Blinkers (L.E.D.)

Road studs with red flashers shall be provided across the road on either side of the construction zone and Blinkers (L.E.D) shall also be proved at appropriate locations as per the direction of IC and/or NHAI.

Safety & Management Practices

Measures for providing safe movement of traffic in some of the most commonly occurring work zones on highways shall be as follows:

Detour or Temporary Diversion

In the cases of major repairs or reconstruction of cross drainage structures on a highway section damaged due to flood etc., the traffic may have to pass on a diversion, moving parallel to the highway.

Temporary diversion road shall basically satisfy the following requirements:

i) It shall have smooth horizontal and vertical profile with smooth vertical and horizontal curves;
ii) It shall not get overtopped by flood or drainage discharge under any conditions;
iii) It shall have adequate capacity to cater for the diverted traffic;
iv) It shall be dust free and shall ensure clear visibility at all times of day and night;
v) It shall be provided with the required safety standards; and
vi) It shall be provided with suitable barricades to prevent intrusion affecting the movement of the traffic.

Adequate warning for the construction ahead shall be provided by the sign "Men at Work" about 1 km earlier to the work zone. In addition, a supplementary plate indicating "Diversion 1 km Ahead" and a sign "Road Closed Ahead" shall be placed. "Compulsory Turn Right/Left Sign" shall follow it. The "Detour" and "Sharp Deviation" sign shall be used to guide the traffic through the diversion. Hazard markers shall be placed just where the railings for the cross drainage structures on the diversion starts.

Partial Closure of existing two lane Carriageway

Such an eventuality will arise only in a special situation where the existing two lanes in use by the main traffic need emergency repairs and the new lanes under construction are not available for diversion of the traffic. It will become necessary to carryout special repairs through partial closure of the existing two lane facility.

In the said situation care shall be taken that the traffic is guided from the closed lane onto the existing lane without conflicting with the traffic from opposite direction.

The warning sign for "Men at Work" shall be the first sign to be seen by the drivers of the approaching vehicles. This sign shall have supplementary plate also showing the distance of the zone. The next warning sign shall be for the "Road Narrowing" (depending upon the type of closure), Compulsory "Keep Right" or "Keep Left" sign depending upon the situation, shall be provided at the beginning of the transition zone and taper. The point from where the traffic is to deviate from its normal path, the channel for traffic shall be clearly marked with rows of painted drums or traffic cones. The spacing of these cones and/or drums shall be 3 m or closer as per site requirement.

"The traffic lane or carriageway closed" sign shall also be provided at barricades along with "Keep Right/Left" sign.

2.4.3 Closure for Work on one side Carriageway of a 4/6 lane divided carriageway

The first sign shall be for the "Men at Work" alongwith distance plate for construction zone. Thereafter the sign for "Road Narrowing" shall be provided, followed by the signs for lane closure one after another. This shall be followed by sign for compulsory "Keep right/Left (depending upon site situation). The sign for the "Closure of carriageway" along with that for "keep Left/Right" shall be provided at the point from where the vehicle is expected to change the lane for the diversion. The sign for the "Diversion to the other carriageway" shall be provided between the "Carriageway Closure" sign and the median gap. The sign for "Sharp. Diversion of Route" along with compulsory "Turn right/Left" shall be provided at the location where the gap in median opening starts and traffic is expected to get diverted to the other carriageway. The warning signs for "Two way traffic" alongwith the plate indicating the distance, up to which the two way traffic is allowed, shall be placed at the median, which shall be to the left of the moving traffic. Cones or painted drums shall be placed for delineation, starting from the sign location for "Carriageway Closed".

2.4.4 Carriageway Repairs

When the work is of small magnitude, to be done in the middle of the carriageway, such as minor repairs of potholes, cracks and patches, then the traffic control measures shall mainly consist of providing cautionary signs of "Men at Work", about 500m before the work zone for the approaching vehicle and other cautionary sign of "Road Narrows", shall be placed at 100m ahead of work area. Regulatory sign of "Keep Left/Right" shall be placed at the commencement point of the work zone and next to the barriers for the approaching vehicles. Movable type of barriers shall also be placed on both sides of the work area. Cones or drums shall be placed at suitable interval to demarcate the work area. The "Work Zone Ends" sign shall be installed 120m beyond the work area. If the operation is to continue during night time, necessary lighting arrangements with flashing lights shall be provided.

2.4.5 Construction of New Carriageway

2.4.5.1 Urban Section of the Project Highway

(a) The service roads on either side together with side drains shall be constructed initially. During this period the main traffic shall use the existing two lane carriageway. The construction traffic in the work zone shall be safely brought out from the mainstream traffic by erecting appropriate signs at the beginning of the work site. Also on return it will be amalgamated with the mainstream traffic by erecting appropriate signs at the end of the work site. It shall be ensured that there shall be identified entry and exist points duly designed so

that haphazard entry or exit of construction traffic is avoided. Conflicting turning movements shall be avoided.

(b) On completion of the Stage-I, the main traffic shall be diverted on their respective directions on to the newly constructed service roads and the additional 4/6 lanes shall be constructed (2/3 lanes on each side) of the existing carriageway duly including the 1.5m wide central median.

(c) On completion of the divided 4/6 lane carriageway of the Project Highway, the main traffic from the service roads shall be restored on them and informatory signs shall be installed.

2.4.5.2 Rural Section of the Project Highway

In rural section the new 2/3 lane carriageway and the central median shall be constructed eccentric to the Centre line of the existing carriageway. During this construction phase, the existing two lane carriageway shall be used for the main traffic. The construction traffic using the existing highway shall be guided on to the work zone and allowed to return to the main traffic stream safely. For this purpose identified exist and entry points duly designed shall be provided. It shall ensure against haphazard entry or exist of the Construction Traffic to/from the existing highway. Conflicting turning movements of the Construction traffic shall be avoided. During this phase, sign/barricading shall be on the construction side of the road.

On completion of the new 2/3 lane carriageway and the median throughout, the traffic on the existing highway shall be diverted on it and the strengthening and widening of the existing carriageway shall be taken up.

At the construction stages described above, situations may arise requiring diversion of traffic for cross over from the new carriageway to the existing carriageway when construction of new lanes is done in stretches, during which suitable traffic safety measures shall adopted.

2.5 Safety Measures During Normal Operation

2.5.1 Introduction

It is observed that the drivers park their vehicles on the carriageways leading to accidents. Many a times, the accidental vehicles and/or debris on the carriageway are the cause of further accidents besides obstructing the smooth flow of the traffic. For smooth and normal flow of the traffic on the Project Highway, the actions stated hereinunder in 2.5.2 would be taken for the normal operation of the Project Highway.

2.5.2 Highway Patrol

Highway Patrolling shall be done to ensure safe, uninterrupted and smooth traffic flow so that:

(i) No parking of a vehicle on any of the divided carriageway takes place at anytime;

(ii) Immediate assistance is provided to accident victims and their rescue as per clause 18.8.2 of the Concession Agreement.

(iii) Minor debris and stalled vehicles are removed from carriageway within an hour's time;

(iv) In the event of traffic congestion, adequate measures shall be taken to mitigate the same in maximum one-hour's time and the approaching traffic is duly cautioned about it.

2.5.3 Safety, Vehicle Breakdown and Accident

2.5.3.1 In case of unsafe condition, vehicle breakdowns and accidents, the Concessionaire shall follow the relevant operating procedures, which shall include the setting up of temporary traffic cones and lights as well as the removal of obstruction and debris expeditiously as per clause 18.8.1 of the Concession Agreement.

2.5.3.2 The Concessionaire shall ensure that any diversion or interruption of traffic is remedied without delay as per clause 18.8.1 of the Concession Agreement.

2.5.6 Safety Measures During Concession Period

2.6.1 During the Concession Period or extension thereof as per the Concession Agreement many activities are involved at different stages and at various periods in respect of construction, operation and maintenance of the Project Highway. Safety of the road users and the Project workmen at site is of paramount importance and obligatory for the Concessionaire throughout the said period.

2.6.2 In Emergency arising on account of Force Majeure due to nature or administrative reasons special safety measures may be called for the traffic and/or the workmen at site to be taken by the Concessionaire.

2.6.3 The following principles shall be kept in view in Emergency situations from safety considerations:

2.6.3.1 Where [illegible] width of the existing 2/3 lane carriageway is envisaged to be used for passage of [illegible] paved shoulders shall be used on the side on which work is not proposed. A [illegible] of one lane (3.5 m wide) closure shall be allowed for a short duration depending on [illegible] in Emergency.

2.6.3.2 At the points where traffic is to deviate from its normal path, the channel for traffic shall be clearly marked with the aid of pavement markings or other similar device as directed by the Independent Consultant. At night the passage shall be delineated with lamps or lanterns or any suitable light source.

2.6.3.3 On the approach of any type of closure suitable regulatory/warning signs as approved by the Independent Consultant shall be installed for guidance of road users. At least two signs shall be put up one lose to the carriageway where transition of carriageway begins and the other 120 m ahead. The signs shall be of approved design and of reflectory type as directed by Independent Consultant.

2.6.4 The Concessionaire shall ensure that safety standards specified in this Schedule are strictly complied with in the event of any lane closure or diversion of traffic.

2.7 Safety of Project workmen at Site

2.7.1 Safety of the Project Workers at site during duty hours is the responsibility of the Concessionaire. It shall be ensured by him that safety measures appropriate for the job a workman performs shall be provided.

2.7.2 Also, safety measures against accidents of the Workers by the traffic using the highway and/or diversions shall be taken. The Concessionaire shall provide helmets and protective chest vests to its workmen at site and make it compulsory for them to wear the same.

2.7.3 The Concessionaire shall insure all the Project Workers against accident.

2.7.4 Labour Laws in force shall be followed.

2.8 Safety Requirements

2.8.1 Safety of Road users and workers on the Project Highway during its Construction, Operation and Maintenance is obligatory and the Concessionaire shall be fully responsible to discharge it in terms of the Concession Agreement including its Schedules.

2.8.2 In case of emergency situations the Concessionaire shall take action(s) for the safety of the road users and the workers as required by the site conditions immediately without waiting for approvals from the Independent Consultant and/or NHAI because any delay in it will not relieve the Concessionaire of its responsibilities under the Concession Agreement including

2.8.3 A breach by the Concessionaire of its obligations in respect of the safety standards shall be dealt with in terms of clause 18.8.3 of the Concession Agreement

2.9 Safety of workers

In respect of all labour directly or indirectly employed in the work for the performance of the Concessionaire's part of this agreement, the Concessionaire shall at his expense arrange for the safety provisions as per Indian Standard Safety codes shown below and shall at his own expense provide for all facilities in connection there with. In case the Concessionaire fails to make arrangement and provide necessary facilities as aforesaid, he shall be liable to pay penalty prescribed under relevant clauses of this concession agreement for each default and in addition the IC shall be at liberty to make arrangement and provide facilities as aforesaid and recover the cost incurred on that behalf from the Concessionaire, and no claims whatsoever shall be entertained.

1. IS: 3696 (part I) - 1966 Safety code for scaffolds and ladders.
2. IS: 3696(part II) - 1966 Safety code for scaffolds and ladders
3. IS: 3764-1966 Safety code for excavation work.
4. IS: 4081-1967 Safety code for blasting and drilling operations.
5. IS: 4138 -1977 Safety code. for working in compressed air
6. IS: 5121 Safety code for piling and other deep foundations.
7. IS: 5916 - 1970 Safety codes for construction involving use of hot bituminous materials.
8. IS: 7293-1974 Safety code for working with construction machinery.
9. IS: 7969 -1975 Safety code for storage and handling of building materials.
10. Any other code and/or as per directions of IC.

10.0 Safety Precautions

Since heavy loads have to be handled over moving traffic during erection of superstructure, safety is of utmost importance. The Concessionaire shall enforce a strict Safety System with all necessary precautions and instructions (safety tools, nets, railings, personal protection equipment, proper training of workers, first aid, etc.). No unskilled / untrained personnel shall be engaged at site to perform the critical activities above the flowing traffic at GL. The Concessionaire shall be solely responsible for ensuring safety at site during entire

SCHEDULE-T

(CRITERIA FOR LIST OF CHARTERED ACCOUNTANTS)

SCHEDULE T

CRITERIA FOR LIST OF CHARTERED ACCOUNTANTS

Selection of the Chartered Accountants for a mutually agreed list shall consist of the following steps:

1. Shortlisting of Chartered Accountants by the NHAI
2. Issue of Letter of Invitation (LoI) along with Terms of Reference to shorlisted Chartered Accountants.
3. Evaluation of Technical Proposal and selection of maximum of 15 (fifteen) Chartered Accountants.
4. Forwarding list of maximum 15 (fifteen) selected Chartered Accountants to Concessionaire to further select a maximum of 10 (ten), from which a Statutory Auditor shall be appointed.

SELECTION COMMITTEE FOR SHORTLISTING

A Selection Committee shall do the selection; the members of this committee shall be nominated by the NHAI.

1. Shortlisting by NHAI

For shortlisting, NHAI shall advertise for Expression of Interest (EoI) to serve as Statutory Auditors/ Chartered Accountants for the ongoing National Highway NH7 improvement project. The EoI will ask for summary information on

- Number of Partners and Professional Staff
- Experience of the firm on roads project
- Presence in India and in the region
- Experience of the firm on other similar work in other sectors.

2. Request for Technical Proposal

The request for technical proposals shall be sent to the shortlisted firms. This shall include a ToR besides information (Data Sheet) to the firms. It shall contain the guidelines for the preparation of technical proposals by the firms and submission.

The ToR shall include the following details:

1. Project background
2. Objectives
3. Scope of services
4. Interaction with NHAI
5. Reporting requirement
6. Performance clause
7. Consultant's Proposal
8. Period of Services

Evaluation of Technical Proposal

The technical proposals received from shortlisted firms shall be evaluated based on the following:

- Specific experience of the firm related to the assignment
- Adequacy of the proposed work plan and methodology in response to the ToR
- Qualifications and competence of the key staff for the assignment.

SCHEDULE-U
(SUBSITITUTION AGREEMENT)

SCHEDULE U

SUBSTITUTION AGREEMENT

AGREEMENT is made at New Delhi on this the _____ day of _____

...ghways **Authority of India** (hereinafter referred to as "NHAI" which ...ess repugnant to the context or meaning thereof include its successors

...structure Private Limited, a company incorporated under the provisions ... Act, 1956 and having its registered office at MCH No.555, Arora ...No.3, Banjara Hills, Hyderabad-500034 (hereinafter referred to as the ..., which expression shall unless repugnant to the context or meaning ... successors and assigns).

_____ and having its registered office at ... acting for itself and for and on behalf of the Senior Lenders listed in ... (hereinafter referred to as the "Senior Lenders").

...ssionaire and the Senior Lenders are hereinafter collectively referred to ... individually are hereinafter referred to as "Party").

...ion Agreement dated ..... entered into between the NHAI and ...ire, NHAI has granted to the Concessionaire the Concession for **Design, Development, Finance, Operation and Maintenance of Km 270.00 ...316.70 (Angamali), and Improvement, Operations and Maintenance of ...ngamali) to Km 342.00 (Edapalli) of section of NH47 in the State of ...** a concession on Build, Operate and Transfer (BOT) basis" subject to and conditions and covenants set forth in the said Concession Agreement or ...roof.

...o help facilitate obtaining of financing for the said Project by the ...so as to enable the Concessionaire to build, operate and maintain the same ... in accordance with the Concession Agreement, the Parties have agreed ... terms and conditions of the Concession Agreement and the Financing ...t the Senior Lenders shall have the right to substitute the Concessionaire by ...he residual period of the Concession on the terms, conditions and covenants ...nbelow.

C. As a condition to making any disbursement pursuant to the Financing Documents, the Senior Lenders have required and it is deemed necessary and expedient to record the terms, conditions and covenants of the above agreement between the Parties.

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NOW THEREFORE THE PARTIES HITHERTO HEREBY AGREE AND THIS AGREEMENT WITNESSES AS FOLLOWS:

ARTICLE I

DEFINITIONS

1.1 For the purpose of this Agreement, the following terms shall have the meaning hereinafter respectively assigned to them :

1.1.1 "Concession" means the bundle of rights, obligations and covenants of the Concessionaire under and as setforth in the Concession Agreement.

1.1.2 "Concession Agreement" means the Concession Agreement dated ..... entered into between NHAI and the Concessionaire granting the Concession to the Concessionaire in respect of the Project Highway and includes without limitation any amendments thereto made in accordance with the provisions contained in this behalf therein.

1.1.3 "Event of Default" means occurrence of any of the following events:

(i) A Material Breach by the Concessionaire of the Concession Agreement, or the occurrence of a Concessionaire Event of Default as defined in the Concession Agreement.

(ii) A material default in payment by the Concessionaire to all or any of the Senior Lenders under the Financing Documents of any two installments, either of principal or interest or both, due and payable by it on account of Lenders Dues.

(iii) Any event of default under or breach of any of the terms of any of the Financing Documents or Project Agreements concerning the Project which in the sole opinion of the Lenders Agent is material or major and which may seriously affect the ability of the Concessionaire to meet its payment obligations to the Senior Lenders under the Financing Documents or to design engineer, construct, complete, operate and maintain the Project Highway pursuant to and in accordance with the Concession Agreement.

1.1.4 "Financial Assistance" means the loans, advances and other funding assistance including any syndicated/ participation facility provided by the Senior Lenders as setforth in Schedule II hereto for financing the whole or any part of the Project Cost.

1.1.5 "Financing Documents" means the documents executed/ to be executed by the Concessionaire or entered/to be entered into by the Concessionaire with the Senior Lenders and/or the Lenders Agent in respect of the Financial Assistance and include loan agreements, guarantees, notes, debenture, bonds and other security agreements and other

documents relating to the Financial Assistance and brief particulars whereof are setforth in Schedule II hereto in relation to each Senior Lender.

1.1.6 "Lenders Agent" means ..... a company established under the provisions of the ..... and having its principal office ..... and any replacement thereof appointed by all the Senior Lenders, inter alia, on the condition that as security for the Financial Assistance they shall have the right to seek transfer and assignment of the Concession Agreement including the Concession in accordance with the provisions of this Agreement.

1.1.7 "Lenders Certificate" shall have the meaning ascribed thereto in Clause 2.2(b).

1.1.8 "Lenders Dues" means the aggregate of all monies owned by the Concessionaire to the Senior Lenders under the Financing Documents on account of principal thereunder for funding the Project Cost, and all accrued interest, additional interest, liquidated damages, commitment fees, commission, prepayment premium, costs, charges and other monies including financing charges and fees owed by the Concessionaire to the Senior Lenders under the Financing Documents for the Project upto the Transfer Date payable under the Financing Documents.

1.1.9 "Notice of Default" shall have the meaning ascribed thereto in Clause 2.2(a).

1.1.10 "Proposal" shall have the meaning ascribed thereto in Clause 3.1(iii).

1.1.11 "Project Agreements" means this Agreement, the Concession Agreement and certain other agreements and contracts entered into by the Concessionaire with NHAI and others relating to the Project and brief particulars whereof are setforth in Schedule III hereto.

1.1.12 "Project Cost" means the total capital cost of the Project upto the COD as approved by the Senior Lenders.

1.1.13 "Senior Lenders" means the financial institutions, trusts, funds, banks and such other persons who have provided or agreed to provide the finance to the Concessionaire under any of the Financing Documents for meeting all or any part of the Total Project Cost and who hold pari passu charge on the Project Assets.

1.1.14 "Selectee" means a new Concessionaire proposed by the Senior Lenders pursuant to this Agreement and approved by NHAI for substituting the Concessionaire for the residual period of the original Concession by amendment of the Concession Agreement or by execution of a fresh Concession Agreement.

1.1.15 "Termination Notice" means the notice given by the Lenders Agent pursuant to Clause 2.2

1.2 Words beginning with or in capital letters used in this Agreement not ... shall have, unless repugnant to the context, the meaning respectively ... Concession Agreement.

1.3 ... context otherwise requires :

a) any reference to a statutory provision shall include such provision as is from time to time modified or re-enacted or consolidated so far as such modification or re-enactment or consolidation applies or is capable of applying to any transactions entered into hereunder;

b) the words importing singular shall include plural and vice versa, and words denoting natural persons shall include partnerships, firms, companies, corporations, joint ventures, trusts, associations, organisations or other entities (whether or not having a separate legal entity);

c) the headings are for convenience of reference only and shall not be used in and shall not affect the construction or interpretation of this Agreement;

d) terms beginning with capital letters and defined in this Agreement shall have the meaning ascribed thereto herein;

e) the words "include" and "including" are to be construed without limitation;

f) any reference to a "day" shall mean reference to a calendar day;

g) any reference to "month" shall mean reference to a calendar month;

h) the Schedules to this Agreement form an integral part of this Agreement and will be in full force and effect as though they were expressly set out in the body of this Agreement;

i) any reference at any time to any agreement, deed, instrument, license or document of any description shall be construed as reference to that agreement, deed, instrument, license or other document as amended, varied, supplemented, modified or suspended at the time of such reference provided that this clause shall not operate so as to increase liabilities or obligations of NHAI hereunder or pursuant hereto in any manner whatsoever;

j) references to Recitals, clauses, sub-clauses, paragraphs, or schedules in this Agreement shall, except where the context otherwise requires, be deemed to be references to Recitals, Articles, clauses, sub-clauses, paragraphs, Annexures, appendices of this Agreement.

k) any agreement, consent, approval, authorisation, proposal, notice, communication, information or report required under or pursuant to this Agreement from or by any Party or Senior Lender(s) shall be valid and effectual only if it is in writing under the hands of duly authorised representative of such Party or the Senior Lender(s), as the case may be, in this behalf and not otherwise; and

l) [illegible] to any period commencing "from" a specified day or date and "till" or "until" a specified day or date shall include both days or dates.

ARTICLE 2

SUBSTITUTION OF THE CONCESSIONAIRE BY A SELECTEE

2.1 NHAI hereby irrevocably agrees to substitute the Concessionaire by a Selectee (selected by the Senior Lenders in accordance with the provisions of this Agreement and approved by NHAI) by amendment of the Concession Agreement or by execution of a fresh Concession Agreement in favour of the Selectee for the purpose of securing the payments of the Lenders Dues, provided that nothing contained herein shall entitle the Senior Lenders to operate the Concession themselves as a Concessionaire under and in accordance with Concessionaire Agreement either individually or collectively. However, Senior Lenders may exercise the right of step-in to cure any breach or default subsisting on the day of such step-in or substitution. Provided further that if the Senior Lenders step in to operate and manage the Concession for a period not exceeding 90 (ninety) days, their liabilities shall be restricted to the obligations relating to and arising during such 90 (ninety) days period.

2.2 (a) The Lenders Agent shall notify by a notice in writing to the Concessionaire, with a copy thereof simultaneously to NHAI, about the occurrence of an Event of Default and requiring the Concessionaire to remedy and cure such default within 30 (thirty) days from the date of delivery of such notice of the Concessionaire (the "Notice of Default"). The Notice of Default shall be accompanied by the Lenders Certificate.

(b) A certificate under the hands of an authorised officer of the Lenders Agent annexed to the Notice of Default certifying --

(i) the occurrence of an Event of Default, and

(ii) the Lenders Dues.

(the "Lenders Certificate") shall be conclusive evidence of occurrence of such Event of Default and of such Lenders Dues. Such Lenders Certificate shall be final, conclusive and binding upon the Concessionaire for the purposes of this Agreement and the Financing Documents.

(c) NHAI and the Concessionaire hereby irrevocably agree that the Lenders Agent may within 30 (thirty) days of the date of delivery of the Notice of Default of the Concessionaire and without prejudice to any other right or remedy available to the Senior Lenders under the Financing Document, notify NHAI and the Concessionaire on behalf of all the Senior Lenders about the Senior Lenders decision to invite, negotiate and procure offers, either through private negotiations or public auction or process of tendering for the residual period of the Concession and the rights and obligations of the Concessionaire under the Concession Agreement, to a Selectee, subject to the approval of such Selectee by NHAI (the "Substitution Notice").

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(d) Upon assumption by the Selectee of the liability and obligations of the Concessionaire under the Financing Documents and the Concession Agreement including obligation to pay any sums then due and payable to NHAI under the Concession Agreement, NHAI shall grant the Concession to the Selectee on the same terms and conditions for the residual period of the original Concession, by amendment of Concession Agreement or, if required by the Lenders Agent by a separate agreement with the Selectee.

2.3 The Lenders Agent shall apply in the selection of the following criteria:

(i) the Selectee shall be capable of properly discharging the duties, obligations and liabilities of the Concessionaire under the Concession Agreement;

(ii) the Selectee shall provide security to the satisfaction of Senior Lenders for repayment of the Lenders Dues;

(iii) the Selectee shall have the capability and shall unconditionally consent to assume the liability for the payment and discharge of dues of the Concessionaire to NHAI under and in accordance with the Concession Agreement and of Lender's Dues upon terms and conditions as agreed to with the Senior Lenders ;

(iv) the Selectee shall have the networth, experience and technical equity parameters as setforth in the Concession Agreement or prescribed by NHAI thereunder in respect of the Concessionaire or as relaxed subsequently by NHAI;

(v) the Selectee shall have not been in breach of any agreement between the Selectee and NHAI ; and

(vi) any other appropriate circumstance, whereby continuity in the performance of the Concessionaire's obligations under the Concession Agreement is maintained and the security in favour of Senior Lenders under the Financing Documents is preserved.

2.4 At any time prior to the acceptance of the Selectee by NHAI pursuant to this Agreement, the NHAI may require the Lenders Agent to satisfy NHAI as to the eligibility of the Selectee and the decision of the NHAI in this behalf (which shall be reasonable), shall be final, conclusive and binding on the Senior Lenders and the Selectee.

ARTICLE 3

MODALITY FOR SUBSTITUTION

3.1 The following modalities shall be applicable to any substitution of the Concessionaire by the Selectee pursuant to this Agreement:

(i) The Lenders Agent may invite, negotiate or procure offers either through private negotiations or public auction or process of tender or otherwise for the substitution of the Concessionaire by the Selectee;

(ii) The Lenders Agent shall on behalf of the Senior Lenders propose to NHAI pursuant to sub-clause (iii) below, the name of the Selectee for acceptance and shall apply as necessary to NHAI for :

a) grant to the Selectee (as substitute for the Concessionaire) the right to build, construct, complete, maintain, and operate the Project Highway under and in accordance with and subject to and on the terms and conditions setforth in the Concession Agreement,

b) amendment of the Concession Agreement so as to grant to the Selectee on the same terms and conditions, the residual period of the Concession under original Concession Agreement,

c) the execution of a new Substitution Agreement with the proposed Selectee for the residual period of Concession on the same terms and conditions, and

(iii) The Lenders Agent on behalf of the Senior Lenders shall be entitled, within a period of 120 (one hundred twenty) days from the date of delivery to NHAI of the Substitution Notice pursuant to Clause 2(c) above, to select and propose to NHAI for its approval a Selectee (the "Proposal"). The Proposal of the Lenders Agent pursuant to this sub-clause (iii) shall contain the particulars and information in respect of the Selectee, the Lenders Dues and other data and information, all as prescribed in Schedule IV hereto. Without prejudice to the foregoing the Lenders Agent agrees and undertakes to provide to NHAI such further and other information and such clarifications in respect of any data, particulars or information furnished pursuant hereto by the Lenders Agent as NHAI may reasonably require. NHAI shall convey its approval or otherwise of such Proposal, including of Selectee, in its sole discretion within 60 (sixty) days of (a) the date of receipt of the Proposal by NHAI, or (b) the date when last of further and other information and such clarifications in respect of any data, particulars or information comprised in the Proposal, as have been provided in the Lenders to NHAI, whichever is later. It is expressly agreed that the Proposal shall be accompanied by an unconditional undertaking of the Selectee that it shall upon by NHAI of the Proposal including the Selectee, observe, comply, and fulfill the terms, conditions and covenants of the Concession which according to its terms are required to be observed, complied and fulfilled by Concessionaire thereunder on the footing as if the concessionaire under the Concession Agreement and shall shall assume, discharge and pay the Lenders Dues to the Senior in accordance with the Financing Documents. Upon approval of the Selectee by NHAI, such Selectee shall become the

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(iv) NHAI shall, upon its satisfaction of the eligibility of the Selectee and in accordance with the provisions of this Agreement and subject to the provisions of Sub-clause (v) below proceed to substitute the Concessionaire or the Selectee by amendment of the Concession Agreement or by execution of fresh agreement or such other writing as NHAI may reasonably require on the same terms and conditions for the residual period of the Concession in favour of the Selectee.

(v) The substitution as aforesaid shall be subject to the Selectee, obtaining requisite Indian Government approvals, clearances and permission necessary for operating the Concession under and in accordance with the Concession Agreement.

(vi) The objection if any of NHAI to the substitution as aforesaid shall be reasoned and be made after hearing the Lenders Agent, provided however, that in the event of a refusal as stated above, the Lenders Agent may propose another Selectee. In the event that no objection is raised with respect to the Selectee by NHAI within the period setforth in sub-clause (iii) above, the Selectee shall be deemed to have been accepted by NHAI. NHAI shall, subject to the provisions of Sub-clause (v) above, grant the Concession for the residual period within 15 days of its acceptance/deemed acceptance of the Selectee.

(vii) The substitution as aforesaid, pursuant to the security interest hereby created in favour of the Senior Lenders, shall be deemed to be complete only upon the Selectee as Concessionaire accepting and complying with the terms and conditions stipulated in the Concession Agreement.

(viii) The decision of the Senior Lenders and NHAI in the selection of the Selectee shall be final and binding on the Concessionaire and shall be deemed to have been made with the concurrence of the Concessionaire and the Concessionaire hereby expressly waives all rights to objects to or challenges such selection of the Selectee on any ground whatsoever. No third party shall have the right to question the decision of the Senior Lenders/Lenders Agent and NHAI.

(ix) All actions of the Lenders Agent hereunder shall be deemed to be on behalf of the Senior Lenders, and be binding upon them. The Lenders Agent is authorised to receive payment of compensation, payment to cure default and any other payments, consideration for transfer in accordance with the Substitution Notice and the Financing Documents and give valid discharge on behalf of all Senior Lenders.

(x) A request for substitution of the Concessionaire by the Selectee shall be made by the Lenders through the Lenders Agent to the NHAI, on the occurrence of a Default and continuance thereof for six months but atleast 2 months prior to the date of substitution as aforesaid for the residual period of

3.3 The Concessionaire hereby irrevocably agrees and waives any right to challenge the Senior Lender's decision to apply to NHAI for substitution as aforesaid and neither the Concessionaire nor NHAI shall be entitled to prevent the Lenders Agent from proceeding to seek such a substitution of the Concessionaire by Selectee as hereinbefore provided. Notwithstanding NHAI's permission for substitution pursuant to Lenders Agent's request, the Concessionaire agrees and confirms that the Concessionaire shall not have any right to seek re-valuation of the Concessionaire's assets including the Concession under the Concession Agreement, otherwise than as contracted in the Financing Documents. The Parties acknowledge that the rights of the Senior Lenders hereunder are irrevocable and shall not be contested in any proceedings before any court of authority and the Concessionaire shall have no right or remedy to prevent, obstruct, injunct or restrain NHAI and/or the Senior Lenders from effecting or causing the substitution as aforesaid.

3.4 Where no suitable Selectee can be found by the Lenders Agent, or NHAI shall decide to take over the concession then NHAI shall advise the Lenders Agent of all steps it proposes to take under the Concession Agreement for determination of Termination Payments thereof.

3.5 (i) If NHAI decides to substitute the Concessionaire by any other person (NHAI Nominee), it

shall take into account the Senior Lender's Dues while considering offers from such persons and shall include a suitable condition as agreed to by the Lenders Agent on behalf of the Senior Lenders for payment or take over of such dues by such NHAI nominee to the extent agreed by the Lenders Agent while substituting the Concessionaire by the NHAI nominee. The NHAI nominee shall similarly be bound to execute a supplementary/fresh substitution agreement on the same terms and conditions as provided herein.

(ii) Notwithstanding anything contained in Clause 3.4 and this Clause 3.5, NHAI shall not be required to take over, upon Termination of the Concession Agreement including the Concession, the liabilities representing the Lender's Dues save and except to the extent of Termination Payments due and payable upon such Termination under the Concession Agreement. In such an event NHAI's obligation shall be limited to assumption of such liabilities and payments of dues as NHAI has agreed to bear under the Concession Agreement.

3.5.1 Nothing contained in these presents shall mean or be interpreted as provision of any guarantee

or surety by NHAI and it is expressly agreed that NHAI has not provided any surety, guarantee or counter guarantee whether directly or indirectly for the recovery of amount of Financial Assistance advanced by the Senior Lenders to the Concessionaire.

ARTICLE 4

INTERIM PROTECTION OF SERVICE AND PRESERVATION OF SECURITY

4.1 In the event of the Senior Lenders notify NHAI and the Concessionaire of the Event of Default (and the Concessionaire has not cured the default for a period of 30 days) or in special circumstances affecting the security of the Senior Lenders, the Senior Lenders shall be entitled to institute protective legal proceedings for a receivership (the "Receiver") to maintain, preserve and protect the assets (other than the Concession Agreement including the Concession) held as security by the Senior Lenders provided always that such receiver shall be NHAI if such assets are in the opinion of NHAI necessary and required for the operation and maintenance of the Project Highway and the Parties hereby consent and agree to the same. The Lenders Agent shall in such an event notify NHAI to assume receivership of the assets held as security and NHAI shall operate and maintain the same pending the substitution of the Concessionaire by the Selectee. In the event NHAI does not assume receivership and declines the request of the Lenders Agent, the Lenders Agent shall for itself and each of the Senior Lenders, be entitled to seek the appointment of a Court Receiver for the Concessionaire's assets held as security and NHAI shall operate and maintain the same pending substitution as aforesaid and/or the takeover of the Concession Agreement including the Concession and the Project Highway in accordance with the Concession Agreement or this Agreement by the NHAI. All the receivables shall be deposited by the Receiver in the Escrow Account and shall be dealt with in accordance with the Concession Agreement. The Receiver shall be responsible for protecting the assets in receivership and shall render a true and proper account of the receivership to the Senior Lenders in accordance with the terms of its appointment. The Receiver shall make best efforts to operate and maintain the Project Highway, in accordance with the obligations of the Concessionaire under the Concession Agreement. Any person other than NHAI may be appointed as Receiver only with the prior consent of NHAI. In a declaratory suit for appointment of a Receiver, notwithstanding that no recovery or mortgage suit or any suit or proceeding for enforcement of the Senior Lenders' security under the Financing Documents is instituted by the Lenders Agent for itself or the Senior Lenders, any action for appointment of NHAI as Receiver or appointment of an Independent Court Receiver shall be without prejudice for the other rights and remedies of NHAI, and of the Senior Lenders under the Financing Documents.

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ARTICLE 5

TERMINATION OF THE CONCESSION BY THE NHAI

5.1 If under the Concession Agreement an event occurs which shall entitle NHAI to Terminate the Concession Agreement, NHAI shall intimate the Senior Lenders prior to exercising of its decision to Terminate the Concession and advise the Senior Lenders to ensure the cure of the event which otherwise can result in termination of the Concession and the Concession Agreement. Such a notice shall entitle the Senior Lenders to cure any financial or other default of the Concessionaire within a period of two months from the date of the

notice received from the NHAI failing which NHAI without any further notice to either the Concessionaire or the Lenders Agent/Senior Lenders, shall be entitled to terminate the Concession Agreement.

5.2 Upon receipt of the Notice as referred to in Clause 5.1, intimating occurrence of an event which can entail Termination of the Concession Agreement including the Concession, the Senior Lenders shall be entitled to consider such notice as an Event of Default and may initiate steps to invite, negotiate and procure offers for the substitution of the Concessionaire by a Selectee in accordance with the procedure set forth in this Agreement.

ARTICLE 6

SENIOR LENDERS RIGHT TO RECEIVE TERMINATION PAYMENTS

6.1 NHAI and Concessionaire hereby agree, and confirm that without prejudice to any other right or remedy, NHAI shall be entitled to deposit the Termination Payments into the Escrow Account and the Senior Lenders shall be entitled to receive the same without any further reference to or consent of the Concessionaire under and in accordance with the Concession Agreement towards the satisfaction of the Senior Lenders Dues out of and limited to the sum of Termination Payments worked out under and in accordance with the Concession Agreement. The Senior Lenders shall be entitled to appropriate any consideration received for the substitution as hereinabove provided from the Selectee towards the payment of their and NHAI's respective dues to the exclusion of the Concessionaire.

6.2 The Concessionaire hereby nominates, constitutes and appoints the Lenders Agent as its constituted attorney for doing all acts, deeds and things as may be required to be done for the substitution of the Concessionaire by the Selectee pursuant hereto and for receiving consideration for discharge of the Lenders' Dues pursuant to Clause 6.1.

6.3 The Concessionaire hereby expressly authorises payment of sums by NHAI on account of Termination Payments into Escrow Account and the Lenders Agent to draw the same therefrom for and on behalf of the account of the Senior Lenders notwithstanding the pendency of any dispute or objection or claim that the Concessionaire may have against the Senior Lenders and/or NHAI. The deposit by NHAI into the Escrow Account and payment to the Senior Lenders directly or through the Lenders Agent in accordance with this Agreement, made or caused to be made by NHAI shall constitute a valid discharge of its obligation of the payment thereof to the Concessionaire. All such payments shall stand [illegible] Lenders under the Financing Documents and shall be receivable by [illegible] from the Escrow Account on behalf of the Senior Lenders to the [illegible] receiver or liquidator appointed.

ARTICLE 7

GENERAL

The Parties hereto expressly represent and warrant that they are duly empowered to sign and execute this Agreement and the Lenders Agent is duly and fully authorised by each of the Senior Lenders to enter into this Agreement on their behalf.

Notices under this Agreement shall be sent to the Addresses first hereinabove mentioned. Any change in the address of any Party shall be duly notified by a Registered post acknowledgement due and delivered to the other Parties.

The expressions "NHAI", the "Concessionaire", the "Senior Lenders" and the "Lenders Agent" herein used shall unless there be anything repugnant to the subject or context include their respective successors, legal representatives, administrators and permitted assigns.

This Agreement shall not be affected by reorganisation of any Senior Lender, Lenders Agent or NHAI and the successor – in interest of such Senior Lender, Lenders Agent or NHAI shall have the benefit of this Agreement.

No amendment, variation or modification to this Agreement shall be valid and effectual unless made in writing and executed by the duly authorised representatives of all the Parties hereto.

All stamp duties or other imposts and charges as are applicable on this Agreement or on amendment of the Concession Agreement or execution of fresh Concession Agreement for the purpose of substitution as aforesaid shall be borne by and be to the account of the Concessionaire. In the event of the Senior Lenders making such payment for the time being, it shall be deemed to be a part of the Lenders Dues.

The Parties hereby expressly agree that for the purpose of giving full and proper effect to this Agreement, the Concession Agreement and this Agreement shall be read together and construed harmoniously. The terms of this Agreement shall prevail in the event of any inconsistency with the Concession Agreement.

...ultation, recommendation or approval of the Lenders Agent under this Agreement ... be taken as consultation, recommendation or approval of every concerned ... and each such Senior Lender shall be bound by the same and hereby waives ... or dispute the same.

... be in addition to and shall not be in derogation of the terms of the ...

... the Senior Lenders or the Lenders Agent to enforce or exhaust ... them before invoking the provisions of this Agreement.

... arising out of or in connection with or in relation to this ... amicably shall be decided finally by reference to ...

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arbitration to a Board of Arbitrators comprising of one nominee of each party to the dispute. Such arbitration shall be held in accordance with the Rules of Arbitration of the Indian Council of Arbitration and shall be subject to the provisions of the Arbitration and Conciliation Act, 1996. The arbitrators shall issue a reasoned award. The venue of such arbitration shall be New Delhi, India. The Award shall be final and binding on the Parties. The Parties agree and undertake to carry out the award of the arbitrators (the "Award") without delay.

This Agreement and rights and obligations of the Parties shall remain in full force and effect pending the Award in any arbitration proceeding hereunder. The Courts in New Delhi alone shall have jurisdiction over all matters arising out of or relating to the arbitration agreement contained herein or proceedings arising out of or relating to the arbitration proceedings thereunder.

IN WITNESS WHEREOF THE PARTIES HITHERTO HAVE SET THEIR HANDS HEREUNTO ON THE DAY, MONTH AND YEAR HEREIN ABOVE MENTIONED.

SIGNED AND DELIVERED ON BEHALF OF

_____ LIMITED

BY: _____

Name :

Title :

SIGNED AND DELIVERED ON BEHALF OF

THE NATIONAL HIGHWAYS AUTHORITY OF INDIA

BY: _____

Name :

Title :

SIGNED AND DELIVERED ON BEHALF OF

SENIOR LENDERS

BY: _____

Name :

Title :

SCHEDULE-V

TESTING CERTIFICATE

Schedule V

VESTING CERTIFICATE

tional Highway Authority of India ("NHAI") hereby acknowledges:

- Compliance and fulfillment by the Concessionaire of the Divestment Requirements set forth in Clause 33.4 of the Concession Agreement in respect of the Project Highway;
- Receipt of actual possession of the Project Highway from the Concessionaire; and
- Receipt from the Concessionaire of a certificate confirming that there are no liens or Encumbrances whatsoever on the Project Highway including Project Assets;

the basis that upon the issue of this Vesting Certificate, NHAI shall be deemed to have quired, and all title and interest of the Concessionaire in or about the Project Highway shall be med to have vested, unto NHAI free from all Encumbrances, charges and liens whatsoever.

withstanding anything to the contrary contained hereinabove it shall be a condition of this ting Certificate that in the event of any defect or efficiency in any of the Divestment uirements set forth in Clause 33.4 of the Concession Agreement being found or discovered at time hereafter, nothing contained in this Vesting Certificate shall be construed or interpreted aving the obligation of the Concessionaire to rectify and remedy the same and/or relieving Concessionaire in any manner of the same.

ed and accepted
the Concessionaire

For National Highway Authority of India
By:.....

Name:
Title:
Dated:

SCHEDULE W

PASSENGER CAR UNIT FACTORS

equivalency factor for the conversion of different types of vehicles into equivalent nger Car Units (PCUs) based on their relative interference value shall be as per the wing table:

No.	Vehicle Type	Equivalency factor**
Vehicles		
	Motor Cycle or Scooter	0.50
	Passenger Car, Pick-up Van or Auto-rickshaw	1.00
	Agricultural Tractor, Light Motor Vehicle	1.50
	Truck or Bus	3.00
	Truck-trailer, Agricultural Tractor-trailer	4.50
ehicles ***		
	Cycle	0.50
	Cycle-rickshaw	2.00
	Cart	3.00
	vehicle	4.00
		8.00

cents, a value of 6 shall be appropriate.

factors for various types of vehicles in accordance with IRC: 64-
city of Road in Rural Areas"

Design service volumes and the capacity of highway, slow vehicles
sidered for the sections where Service Roads are provided.

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SCHEDULE-X

REPORTING AND RECORD
REQUIREMENTS

SCHEDULE X

REPORTING AND RECORD REQUIREMENTS

1.0 INTROUDUCTION

The reporting and records requirements spelt out hereinunder have been provided in terms of the indicative type of information required. The Independent Consultant shall determine the following:

- Format of such reports and record requirements
- Software standards
- Number of Copies required
- The Language of the reports and records shall be English

2.0 Part I
Reporting Requirements

From the date of the Concession Agreement until the end of the Concession Period, the Concessionaire shall prepare and submit to the NHAI and Independent Consultant 1 copy each of the following reports/ Documents/ Drawings else otherwise stated in the Concession Agreement.

A. Design & Construction Stage

1. A detailed work plan supported with CPM/PERT charts for completion of all project activities related to the Project Highway, at the beginning of the Design Works.
2. Monthly Progress Report: Within 5 Days of end of each month or a part thereof, which falls in the Construction Period, the Concessionaire shall provide to the NHAI and Independent Consultant the monthly report, which shall at least identify the
   - [illegible] submitted/ resubmitted to NHAI/ Independent Consultant during the [illegible]
   - [illegible] Consultant's comments there on, if any.
   - [illegible] compliance with NHAI/ Independent Consultant's comments on the [illegible] to NHAI/ Independent Consultant, during the month ended.
   - [illegible] submitted to NHAI/ Independent Consultant during the month
   - [illegible] activities such as utility relocation and other obstructions.

- Concessionaire's compliance with the Inspection Report during the month ended, if any.
- Construction Constraints.
- Progress data with 'S' curves, if applicable; Project Data with contract detail and sectional completion details.
- Tests carried out during the month ended, if any; results of these Tests furnished to the NHAI/ Independent Consultant during the month ended, if any.
- Remedial measures taken by the Concessionaire on the basis of these Tests, if any.
- Traffic management steps undertaken by the Concessionaire during the month (particularly on the existing two lanes of the Project highway).
- Achievement of a Project milestone (Schedule H) during the month, if any. The Concessionaire shall also provide information on delay in achievement of such milestone, if any.
- Any suspension of the Construction Works by NHAI as per provisions of the Concession Agreement, if any. The Concessionaire shall also provide information on reason of such suspension, duration of such suspension and the steps undertaken by it to revoke such suspension.
- Any Change of Scope Notice issued by NHAI and status thereof.
- All actual or potential departures from the Project Completion Schedule (Schedule H).
- All grounds for a substantial Dispute which have occurred or which may reasonably be foreseen as likely to occur.
- All substantial disagreements among the Concessionaire, and the NHAI and/or Independent Consultant to the design/ construction of the Project Highway.
- The proposed measures to be taken by the Concessionaire to overcome such departures or to resolve such grounds for a Dispute.
- The date on which the Concessionaire expects the Project Highway to be completed.
- The Concessionaire is required to maintain the existing two lanes during the [illegible] Period. This monthly construction report shall also contain information in [illegible] maintenance activity, if any, carried out by the Concessionaire during the [illegible] in respect of these existing two lanes. The Concessionaire and the [illegible] Consultants shall agree on the information requirements in respect of these [illegible] lanes during the Construction Period.
- [illegible] Report giving daily temperature maximum and minimum value, rain [illegible] ificant event.
- [illegible] Design Report including working drawings, and Environmental [illegible]
- [illegible] Clause 44.1 of the Concession Agreement.

5 Monthly Escrow Account Report: With in 5 Days of end of each month which falls within the Operations Period, the Concessionaire shall provide to the NHAI and the Independent Consultant a copy of the report containing the summary of the receipts in and payments from the Escrow Account for the month ended.

6 The Concessionaire shall supply to the NHAI free of charge the following documents prior to requesting the issue of the Completion Certificate:

6.1 Detailed, accurately scaled, and sequentially numbered plans of the Project Highway "As Built" covering all relevant engineering features, which in relation to structures shall also include cross sections in each plane; and

6.2 Copies of all geo-technical and borehole reports obtained by the Concessionaire in preparation for and during the construction of the Project Highway.

7 All other reports in accordance with the provisions of the Concession Agreement.

8 Such other reports as may be reasonably required by NHAI/ Independent Consultant.

9 Additional Reports: The Concessionaire shall supply to the NHAI free of charge copies of all information, records and test results (including any interpretation of such test results) resulting from any ground, physical or geophysical investigation or archaeological or ecological survey of the Site or Adjacent Areas.

B **Operation Phase**

1 Monthly Traffic Report: With in 5 Days of end of each month which falls within the Operations Period, the Concessionaire shall provide to the NHAI and the Independent Consultant a copy of the report containing the following information:

traffic count by mode for each day of the month; and

traffic count by mode for each day of the month.

Account Report: With in 5 Days of end of each month which falls Operations Period, the Concessionaire shall provide to the NHAI and the Consultant a copy of the report containing the summary of the receipts in Escrow Account for the month ended.

With in 5 Days of end of each month or a part thereof, Operations Period, the Concessionaire shall provide to the NHAI Consultant a copy of the report, which shall identify the following,

by the Concessionaire during the month ended, if any.

mitted to the Independent Consultant during the month

- O&M Inspection Compliance Report submitted to NHAI/Independent Consultant during the month ended, if any.
- Preventive/ Periodic maintenance undertaken during the month ended, if any.
- Any material modifications made to the Project Highway during the month ended, if any.
- All the accidents or incidents on the Project Road during the month under report (including all accidents on which a report has previously been made to the Concession Agreement).
- Tests performed during operation and maintenance stage along with the defects identified on the Project Highway, if any.
- Number and type of the complaints received from Users and others in respect of the Project Highway and the conduct of Operations.
- Incidents of emergency de-commissioning of the Project Highway during the month ended, if any.
- Incidents of lane-closure on the Project Highway during the month ended, if any. The Concessionaire shall provide information on reason, time of such lane-closures.
- all actual or potential departures from the O&M Requirements as specified in 'Schedule L'.
- all grounds for substantial Dispute which have occurred or may reasonably be foreseen as likely to occur.
- the proposed measures to be taken by the Concessionaire to overcome such departures or to resolve such grounds for a Dispute.

An annual report on the working of the toll collection system. This report will provide information on method of toll collection (semi-automatic, automatic, etc.), usage of pass system (manual, electronic, etc.), average time taken in toll-collection, Concessionaire's suggestions on improvements in the toll-collection system, which would be considered by NHAI appropriately.

Accident Reports: As soon as practicable and in any event no later than 7 days following the occurrence of any accident on the Project Highway involving a fatality or serious injury or substantial property damage, the Concessionaire shall investigate the circumstances of such accident and submit to the NHAI and Independent Consultant a report containing details of such accident and, to the extent they are known, the causes thereof, and the Concessionaire shall thereafter promptly report to the NHAI and Independent Consultant any additional details of such accident or its causes as it may discover.

6. Concessionaire shall submit a copy of the audited accounts within 120 days of the close of each Accounting Year after the Appointed Date.

7. All other reports in accordance with the provisions of the Concession Agreement.

8. Such other reports as may be reasonably required by NHAI/ Independent Consultant.

9. Additional Reports: The Concessionaire shall supply to the NHAI/Independent Consultant free of charge copies of all information, records and test results (including any interpretation of such test results) resulting from any ground, physical or geophysical investigation or archaeological or ecological survey of the Site or Adjacent Areas.

...e appropriate proprietary rights, licenses, agreements and ...missions for materials, methods, processes and systems ...d or incorporated into the Project Highway.	Till handover to NHAI at Termination of the Concession
...onthly Progress Reports	Till handover to NHAI at Termination of the Concession.
...perations and Maintenance	
...l records of all incidents which affect the operation ...or maintenance of the Project Highway including traffic ...dents.	Till handover to NHAI at Termination of the Concession
...l records of inspections and surveys and results of such ...spections and surveys (including photographs where	Till handover to NHAI at Termination of the Concession

...Part II ...

...Requirements

...sionaire shall take the following action(s) in respect of preparation of the record, its ... to NHAI and retention by the Concessionaire itself.

	Retention Period of the Concessionaire
... standards containing all relevant design ...ons, codes of practice, design loadings, design ...rs and product data sheets for all components of ...ighway.	Till handover to NHAI at Termination of the Concession
...of final design calculations for all parts of the ...ighway including details of the influence on ...actual construction methods, and any changes or ...inal works during construction.	Till handover to NHAI at Termination of the Concession
...working drawings	Until 2 years after issue of the Completion Certificate
...fication for construction and all revisions made	Until 2 years after issue of the Completion Certificate
... Scope Order(s)	Till handover to NHAI at Termination of the Concession
...on	
...ding submitted to NHAI	Until 2 years after the issue of Completion Certificate
... construction site records relating to progress, ... materials, monitoring of standards of ... meteorological conditions, instructions ... site correspondence.	Till handover to NHAI at Termination of the Concession
...Built' drawings and schedules incorporating ... design and all remedial measures applied ...Highway during construction, and all final ... dimensions of the Project Highway. ...shall include permanent modifications ...uction method.	Till handover to NHAI at Termination of the Concession
...	Till handover to NHAI at Termination of the Concession

X-6

5. Additional Requirements

5.1 When there is a conflict between the Reporting and Record Requirement of Schedule 'X' and a requirement in respect of these stated elsewhere in this Agreement, the latter shall take precedence.

5.2 The requirements set out in Reporting and Record Requirements of this Schedule 'X' indicate the minimum requirements to be complied with but are not limited to else only.

5.3 Availability of Records shall be as follows:

5.3.1 All records of operational aspects of the record keeping system shall be retained.

5.3.2 Operations' Records shall be systematically and periodically up-dated and filed so as to be readily retrievable.

5.3.3 All records which have been superseded but are still of hist...

...appropriate proprietary rights, licenses, agreements and ...missions for materials, methods, processes and systems ...or incorporated into the Project Highway.	Till handover to NHAI at Termination of the Concession
...onthly Progress Reports	Till handover to NHAI at Termination of the Concession.
...perations and Maintenance	
... records of all incidents which affect the operation ...or maintenance of the Project Highway including traffic ...dents.	Till handover to NHAI at Termination of the Concession
... records of inspections and surveys and results of such ...pections and surveys (including photographs where ...licable).	Till handover to NHAI at Termination of the Concession
...ils of all repairs to the Project Highway and/or ...ement, including photographs. As-built drawings and ...documentary records.	Till handover to NHAI at Termination of the Concession
...s of all Monthly Reports	Till handover to NHAI at Termination of the Concession
...e records of adverse meteorological conditions.	Till handover to NHAI at Termination of the Concession
...of landscape planting.	Till handover to NHAI at Termination of the Concession
...and strip plan of grassed areas with details of the ...aintenance required in the normal course.	Till handover to NHAI at Termination of the Concession
...of all permanent traffic signs on the Project	Till handover to NHAI at Termination of the Concession
...(both total and tollable) count for each day of the ...Period	Till handover to NHAI at Termination of the Concession
...toll collection at each toll plaza	Till handover to NHAI at Termination of the Concession
...accounting records to be maintained as per	Till handover to NHAI at Termination of the Concession
...s and details	Till handover to NHAI at Termination of the Concession

...dance with the provisions of the Concession Agreement.

5. Additional Requirements

5.1 When there is a conflict between the Reporting and Record Requirement of Schedule 'X' and a requirement in respect of these stated elsewhere in this Agreement, the latter shall take precedence.

5.2 The requirements set out in Reporting and Record Requirements of this Schedule 'X' indicate the minimum requirements to be complied with but are not limited to else only.

5.3 Availability of Records shall be as follows:

5.3.1 All records of operational aspects of the record keeping system shall be retained.

5.3.2 Operations' Records shall be systematically and periodically up-dated and filed so as to be readily retrievable.

5.3.3 All records which have been superseded but are still of historical, contractual or legal importance shall be retained and filed systematically so as to be available anytime.

5.3.4 Texts of all documents shall be prepared and recorded using agreed software systems and retained in hard form and on diskette, with full back-up diskettes available in case of diskette corruption.

ER OF AWARD BY

भारतीय राष्ट्रीय राजमार्ग प्राधिकरण
(पोत परिवहन, सड़क परिवहन और राजमार्ग मंत्रालय)
National Highways Authority of India
(Ministry of Shipping, Road Transport and Highways)
जी-5 एवं 6, सेक्टर-10, द्वारका, नई दिल्ली-110 075
G-5 & 6, Sector-10, Dwarka, New Delhi-110075

दूरभाष / Phone : 91-11-25074100/25074200
फैक्स / Fax : 91-11-25093507 / 25093514
एक्स. / Extn : 2223 / 2318 / 2468 / 2553

NHAI/Tech/NSEW/NS-2/BOT/KL-1/2005

30th September, 2005

KMC-SREI Consortium
MCH No: 555, Arora Colony, Road No. 3,
Banjara Hills, Hyderabad, 500034
Fax: 040-23543538
[Kind Attention: Sh. B. Chandra Sekhar Reddy, Senior Engineer-Civil]

Award of Concession for (i) Design, Construction, Development, Finance, Operation of Km 270.00 (Thrissur) to Km 316.70 (Angamali) and (ii) Improvement, Operation and Maintenance of Km 316.70 (Angamali) to Km 342.00 (Edapalli) on NH-47 together called the "Project" in the State of Kerala on Build Operate & Transfer (BOT) basis: **Project Reference No. NS2/BOT/KL-1**
-Letter of Acceptance

This is to notify that based on your original price proposal submitted on 17.08.2005 ding (i) Design, Construction, Development, Finance, Operation of Km 270.00 (Thrissur) to 316.70 (Angamali) and (ii) Improvement, Operation and Maintenance of Km 316.70 mali) to Km 342.00 (Edapalli) on NH-47 together called the "Project" in the State of Kerala T Basis for a Negative Grant of Rs.84.40 Crores at NPV @ 10% as per details given below is accepted by NHAI declaring you as the "Successful Bidder".

4	5	6	7	8	9	10	11	12	13
0	0	0	0	0	40.0	40.0	40.0	40.0	40.0

Contract clause 1.36.1 (Refer Part-1), you are hereby requested to this LOA within 15 days of its issue. Thereafter, you are required ment within 30 days of your acceptance of LOA.

nish the Performance Security within the period expiring on the LOA but prior to the execution of the Concession Agreement a Sheet).

ction as stated in clause 1.14.5 and 1.37 (Part-1) of RFP

Yours faithfully

(Pranavant)
General Manager (NS-2)

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REGARDING CONFIRMATION

KMC - SREI (Consortium)

MCH NO. 555, ARORA COLONY, ROAD NO. 3, BANJARA HILLS, HYDERABAD - 34
TEL (040) 23543541, 23543545
FAX (040) 23543538

Letter No. 1621/KMC/NHAI/KL-1(BOT)/2005 Date: 12.10.2005

To
Mr. Pranavant
General Manager (NS-2)
National Highways Authority of India
G-5 & G-6, Sector-10, Dwaraka
NEW DELHI - 110 075
Fax No. 011-25074100, Extn. 2423
Tel No. 011-25074100/25074200

Sir,

Sub: Award of Concession for (i) Design, Construction, Development, Finance, Operation of Km 270.00 (Thrissur) to Km 316.70 (Angamalli) and (ii) Improvement, Operation and Maintenance of Km 316.70 (Angamali) to Km 342.00 (Edapalli) on NH-47 together called the "Project" in the State of Kerala on Build Operate & Transfer (BOT) basis: Project Reference No. NS2/BOT/KL-1 – Letter of Acceptance – Reg.

Ref: Your Letter No. NHAI/Tech/NSEW/NS-2/BOT/KL-1/2005 dated 30.09.2005.

We hereby confirm our acceptance for the letter of acceptance (LOA) communicated with your letter No: NHAI/Tech/NSEW/NS-2/BOT/KL-1/2005 dated 30.09.2005.

As per Contract Clause 1.36.1 of Part-I, copy of the letter of acceptance received from NHAI duly signed, is herewith enclosed.

Thanking you,

Yours faithfully,
For KMC - SREI (Consortium)

B. Chandra Sekhar Reddy
Authorised Signatory

REGARDING FORMATION
HOLDINGS
BOARD RESOLUTION

KMC - SREI (Consortium)

CH NO. 555. ARORA COLONY, ROAD NO. 3, BANJARA HILLS, HYDERABAD - 34
TEL (040) 23543541, 23543545
FAX (040) 23543538

Letter No.1621/KMC/NHAI/KL-1/2005

Date: 28.11.2005

for comments pl urgently.
M/s Alliant Secretaries 30/11

To,
Pranavant
General Manager (NS-II)
National Highways Authority of India
G-5, Sector - 10, Dwaraka
Delhi - 110 075
Tel: 011 – 25074100 Extn: 1312
Fax: 011 – 25074100 Extn: 2423

Sub: (i) Design, Construction, Finance, Operation and Maintenance of Km 270.00 (Thrissur) to Km 316.70 (Angamali) and (ii) Improvement, operation and maintenance of Km 316.70(Angamali) to Km 342.00 (Edapalli) on NH-47 together called the "Project" in the State of Kerala on Build Operate & Transfer (BOT) basis. Project Reference No. NS2/BOT/KL-1- Reg.

Ref: 1. Our letter No.1621/KMC/NHAI/KL-1(BOT)/2005 dated 19.10.2005
2. Our letter No.1621/KMC/NHAI/KL-1(BOT)/2005 dated 28.10.2005
3. Our letter No.1621/KMC/NHAI/KL-1(BOT)/2005 dated 14.11.2005
4. Our letter No.1621/KMC/NHAI/KL-1(BOT)/2005 dated 25.11.2005

In continuation of our letter 4th cited we enclose here with the following documents.

1. Memorandum and Articles of Association for SPV
2. Legal opinion from Company Secretary stated that the certificate of commencement of business is not required as it is a Private Limited Company.
3. Legal opinion stated that the company is authorized to enter into agreement
4. Certificate of incorporation (already submitted with our letter 4th cited)

We request you to kindly fixup date for signing the concession agreement.

Thanking you,

Yours faithfully,
For KMC - SREI (Consortium)

(B. Chandra Sekhar Reddy)
Power of Attorney Holder

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L V V ASSOCIATES

Company Secretaries

(Formerly L.D. Reddy & Co.)

ice : Plot No. 6-2-1/2, Flat No. 504, Afzal Commercial Complex, Lakdi-ka-pool, Hyd - 4.
E-mail : Ld.reddy@sify.com Ph : (O) 23315262, Cell : 98492 69757

Dt 26.11.2005

naging Director,
ONSTRUCTIONS LIMITED,
bad

OPENION LETTER

ith Reference to your request regarding the requirement of obtaining Certificate Commencement of Business, M/s GURUVAYOOR INFRASTRUCTURE IVATE LIMITED was incorporated on 24th November 2005 as a Private Limited mpany . A private limited company can commence its business immediately on ncorporation ,and no need of obtaining any certificate to commence business Registrar of companies.

blic limited company cannot commence business after its incorporation until it btained the certificate to commence business from Registrar of companies in s of section 149 of Companies Act 1956.

efore I hereby give my professional opinion that M/s GURUVAYOOR ASTRUCTURE PRIVATE LIMITED can start its business activities on or 24th November 2005 without any further certificate to commence from the trar of Companies , Hyderabad.

ing you .

For L.V.V.ASSOCIATES
Company secretaries

(L.DHANAMJAY REDDY)

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L V V ASSOCIATES

Company Secretaries

(Formerly L.D. Reddy & Co.)

: Plot No. 6-2-1/2, Flat No. 504, Afzal Commercial Complex, Lakdi-ka-pool, Hyd - 4.
E-mail : l.d.reddy@sify.com Ph : (O) 23315262, Cell : 98492 69757

Dt 26.11.2005

ging Director,
NSTRUCTIONS LIMITED,
d.

OPENION LETTER

Reference to your request regarding the eligibility of M/s GURUVAYOOR RASTRUCTURE PRIVATE LIMITED to enter into agreement with National ways Authority of India, I have gone through the Memorandum of association ther with Certificate of Incorporation and Minutes of the meeting of the Board irectors held on 24.11.2005.

company was incorporated on 24th November 2005 as a Private Limited pany with the following main objects:

design, construct, operate and maintain the Road ts in National Highways and also to widen, upgrade, on 'Build, Operate and Transfer [BOT] part of the World either alone or commission toll gates, toll collection maintain, lease out or transfer the

carry out, improve, develop all kinds of civil construction works for roads, road projects – Highways, Express Ways, Bridges, Airports, Docks, Harbours, Piers, Canals, Reservoirs, sewerage, drainage, water, gas, telephonic, telegraphic

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and power supply works, hotels, warehouses, markets and works of all descriptions and to negotiate for and obtain from the Government, conventions, franchises, subsidies, grants, concessions, toll collection rights, aids and other assistance in furtherance of all or any of the above objects.

3. To enter into joint ventures, collaborations, technology agreements, technical agreements and to carry on the business of consulting engineers, contract engineers, architects, structural engineers as also contractors for civil, electrical, mechanical works, designers, fabricators, buyers, sellers and dealers in all kinds of construction materials, plant, machinery and equipment and other materials.

4. To secure or novate, transfer or assign or undertake, implement and carry out the concession granted by the National Highways Authority of India for designing, developing, constructing, building, operating and maintaining the State / National Highways and also to participate and bid in contracts offered by Central or State Governments or their Agencies.

The company was promoted jointly by M/s KMC Constructions Limited ,Hyderabad(subsriber) and SREI Infrastructure Finance Limited, Kolcutta (subscriber)as a special purpose vehicle . As the Company was incorporated it has become a separate entity capable of entering in to all agreements, contracts ,MOU's etc for which the main objects of the company permits

I hereby give my professional opinion that M/s GURUVAYOOR [illegible] STRUCTURE PRIVATE LIMITED is a separate entity and its main objects [illegible] Memorandum of Association permits the company to take up Road projects

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the Board of Directors of the Company at their meeting held on 24.11.2005
ded to execute Road projects and for this purpose the Board also decided to enter
greement with National Highways Authority of India Hence the company is
to enter into agreement with National Highways Authority of India .

you .

For L.V.V.ASSOCIATES
Company secretaries
(L.DHANAMJAY REDDY)

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India Law Services

ADVOCATES & LEGAL CONSULTANTS

MUMBAI • NEW DELHI • BANGALORE

...NG/ILS/GIPL/2005-78

28th November, 2005

...Pranavant,
...ral Manager (NS-2),
...nal Highways Authority of India,
...try of Shipping, Road Transport
...Highways),
... 6, Sector - 10, Dwarka,
... DELHI - 110 075.

M/s Allianz Securities

...Sir,

Re.: Guruvayoor Infrastructure Private Limited (GIPL) - Authority to execute Concession Agreement - Legal opinion.

* * *

As desired by GIPL, we are forwarding herewith legal opinion regarding ...hority vested in the Memorandum & Articles of Association of GIPL to execute ...ncession Agreement in favour of NHAI together with a brief profile of the ...y, for your information and further action.

Yours faithfully,

...s stated.

[C.V. Kamalaker]

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...Gandhi Road, Bangalore -560001
...kamalakercv@indialawservices.net

Re.: Due diligence – Legal Opinion.

COMPANY PROFILE

The Company, a special purpose vehicle, incorporated on the 24th November, as GURUVAYOOR INFRASTRUCTURE PRIVATE LIMITED ['GIPL'] is mandated gst others to design, develop, construct, improve, finance, operate and ain the following stretches of Road in the National Highway No.47 in the State ala :

from Km 270 (Trissur) to Km 316.7 (Angamali); and
from Km 316.70 (Angamali) to Km 342 (Edapalli).

EHOLDERS

ompany is promoted jointly by **SREI INFRASTRUCTURE FINANCE LIMITED**), a company incorporated under the Companies Act, 1956 and having its ered Office at "VISHWAKARMA", 86-C, Topsia Road (South), Kolkata - 700 the State of West Bengal; and **KMC CONSTRUCTIONS LIMITED (KMCCL)**, pany incorporated under the Companies Act, 1956 and having its Registered at MCH #555, Arora Colony, Road #3, Banjara Hills, **HYDERABAD – 500** in the State of Andhra Pradesh, with the Authorised Capital of Rs.10 lakhs d into 1,00,000 Equity Shares of Rs.10/= each. Both SREI & KMCCL have subscribed to the Equity Capital and propose to subscribe to the further capital to be raised by GIPL for meeting the cost of the Highway Project SREI & KMCCL have the corporate power and authority under to promote the Company for the purpose of

(NHAI) have awarded the concession to the letter No.NHAI/Tech/NSEW/NS-S/BOT/KL- whereby they have been granted concession ntain and operate stretches of road as

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...d above in the State of Kerala for a period approximately of 20 years. For ...pose, GIPL has already been incorporated as mentioned above.

...RPORATE STRUCTURE AND AUTHORIZATIONS

...titution of the Company

...mpany has been incorporated in the State of Andhra Pradesh under ...on No. 48180 of 2005-2006 on the 24th November, 2005.

...istered Office of the Company is located at MCH #555, Arora Colony, ... Banjara Hills, **HYDERABAD – 500 034**, in the State of Andhra

...ndum of Association

...ess of the Company, as set out in the Main Objects Clause of its ... Association ("MOA") is, inter alia, to design, engineer, finance, ... operate and maintain the Road Projects in National Highways and ... 'Build, Operate and Transfer [BOT] Basis, annuity basis or ...ect purpose enter into joint ventures, collaborations, technology ... secure, accept the novation, transfer of assignments of, and to ... and carry out the concession granted by National Highways ... designing, constructing, developing, financing, improving, ... the Road from Km 270 (Trissur) to Km 316.7 (Angamali); ...mali) to Km 342 (Edapalli) on NH 47 in the State of

...pital of the Company is Rs.10 lakhs divided into ...each.

... MOA are SREI, KMCCL holding 5,000 shares each

DIRECTORS

Board of Directors comprises the following Directors.

outham Reddy;
Kumar Mohanty;
ram Reddy; and
naratan.

s may exercise all such powers and do all such acts and things
A, especially –

and enter into Agreements and Contracts;
nd hold shares in any other Company;
incorporation or other recognition of the Company in any
e or place;
cure or raise payment of money subject to Sections 58A and
(iii)(d), 292, 295 and 370 of the Companies Act, 1956;
uarantee in relation to the payment of any debentures,
k or loans;
es of the Company not immediately required in such a
y be determined.

x is also empowered to execute documents and affix its
s required to be executed under the common seal as

, it has the necessary power to enter into and
with NHAI for the implementation of the Highway
of Concession by NHAI.

[C.V. Kamalaker]
28/11/05

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KMC Constructions Limited

EXTRACT OF THE RESOLUTION PASSED BY THE BOARD OF DIRECTORS OF THE COMPANY KMC CONSTRUCTIONS LIMITED AT THE MEETING HELD ON 21.11.2005, AT 11.00 A.M., AT THE REGISTERED OFFICE OF THE COMPANY.

INCORPORATION OF A NEW COMPANY AND INVESTMENT IN SHARES:

"RESOLVED THAT, the consent of the Board of Directors of the Company, be and is hereby accorded to form a new company in the name and style of "GURUVAYOOR INFRASTRUCTURE PRIVATE LIMITED" to be formed by KMC Constructions Limited & SREI Infrastructure Finance Limited as special purpose vehicle for (i) Design, Construction, Development, Finance, Operation and Maintenance of Km 270.00 to Km 316.70 and (ii) Improvement ,Operation and Maintenance of Km 316.70 to Km 342.00 on NH-47 in the State of Kerala for a specified concession period on Build, Operate and Transfer (BOT)Basis

...ved that KMC Constructions Limited for this purpose agrees to subscribe to ... Rs 10/-each in the Memorandum of Association.

...ER THAT, Shri. M.Goutham Reddy, Managing Director of KMC ...ed and is hereby authorised to make, sign, execute, present all the ... communications, etc with the Registrar of Companies Andhra Pradesh, ... which are ancillary or incidental thereto."

Certified True Copy

M. R. R

Road No.3, Banjara Hills, Hyderabad - 500 034.
Tel: 2354 3611, 2354 3645, Fax: (040) 2354 3699

SREI

EXTRACT OF THE RESOLUTION PASSED BY THE BOARD OF DIRECTORS OF THE COMPANY SREI INFRASTRUCTURE FINANCE LIMITED AT THEIR MEETING HELD ON 21.11.2005, AT 11.00 A.M., AT THE REGISTERED OFFICE OF THE COMPANY.

INCORPORATION OF A NEW COMPANY AND INVESTMENT IN SHARES:

"RESOLVED THAT, the consent of the Board of Directors of SREI Infrastructure Finance Limited, be and is hereby accorded to form a new company in the name and style of "GURUVAYOOR INFRASTRUCTURE PRIVATE LIMITED" to be formed by SREI Infrastructure Finance Limited & KMC Constructions Limited as special purpose vehicle for (i) Design, Construction, Development, Finance, Operation and Maintenance of Km 270.00 to Km 316.70 and (ii) Improvement ,Operation and Maintenance of Km 316.70 to Km 342.00 on NH-47 in the State of Kerala for a specified concession period on Build, Operate and Transfer (BOT)Basis.

It is further resolved that SREI Infrastructure Finance Limited for this purpose agrees to subscribe to 5000 equity share of Rs 10/-each in the Memorandum of Association.

RESOLVED FURTHER THAT, Shri. Kishore Kumar Mohanty, Executive Director of SREI Infrastructure Finance Limited, be and is hereby authorised to make, sign, execute, present all the applications, communications, etc with the Registrar of Companies Andhra Pradesh, documents, which are ancillary or incidental thereto."

Certified True Copy

For SREI Infrastructure Finance Ltd.

203 & 204, Begumpet, Hyderabad - 500 016
Phone 040-55317320 Fax 040 27761353

राष्ट्रीय राजमार्ग प्राधिकरण
(परिवहन और राजमार्ग मंत्रालय)
Highways Authority of India
(Ministry of Road Transport and Highways)
द्वारका, नई दिल्ली-110 075
Dwarka, New Delhi-110075
फैक्स/Fax 91-11-25074100/25074700
फोन/Tel. 91-11-25093507 / 25093514
ईपीबीएक्स/EPBX 2221 / 2318 / 2468 / 2551

.../2005/346

01.02.2006

...nm,
...olony,
...lls,

...n, Development, Finance, Operation of km 270/00 (Thrissur) ...li) and (ii) Improvement, Operating and Maintenance of km ...m 342.00 (Edapalli) on NH-47 together called the "Project" ... on Build Operation and Transfer (BOT) basis: Project ...KL-1 – Reg.

...ated 28.11.2005 submitting therewith some document inter- ... Association of SPV in reference to aforesaid subject. In this ...n the main objects of the Special Purpose Vehicle i.e. ... are not project specific and are general in nature, meaning ...y its Memorandum of Association for carrying on business ... of the subject project, which is not the intention of the ...

... the Memorandum and Article of Association of the ... this project.

Yours faithfully,

(Pranavant)
General Manager (NS-2)

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1284/DGM(NS-2)SK
16/2/06

Infrastructure Private Limited

...ony, Road No.3, Banjara Hills, Hyderabad - 500 034. A.P.
...23543541/23543545, Fax No. 040-23543538

...AI/KL-1 (BOT)/2005 Date: 02.02.2006

Pl. forward a reply M/s Allianz for comments.
DGM(NS-2)SK
03/02/2006

...y of India
...ka

...1312
...2423

...tion, Development, Finance, Operation of Km 270.00 ...6.70 (Angamali) and (ii) Improvement, Operation and ...16.70 (Angamali) to Km 342.00 (Edapalli) on NH-47 ...oject" in the State of Kerala on Build Operate & Transfer ... Reference No. NS2/BOT/KL-1 – Amendment to ...les of Association – Reg.

...Tech/NS-2/KL-1/Conc/2005/246 dated 01.02.2006.

...that the Memorandum and Articles of Association of SPV ...s main objective for execution of the above project only.

... Registrar of Companies also acknowledges change of ... Memorandum and Articles of Association.

...20.01.2006 addressed to the Registrar of Companies and ...0/2004 dated 30.01.2006 received from the Registrar of ...g with Memorandum and Articles of Association duly ...cts are enclosed.

... Limited

...ce intimation

Shekhar, KMC

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GOVERNMENT OF INDIA
MINISTRY OF COMPANY AFFAIRS

OFFICE OF THE REGISTRAR OF COMPANIES, ANDHRA PRADESH
[illegible], KENDRIYA SADAN, SULTAN BAZAR, H[illegible] 500 195

Regd.17760180/ / /2004 Date: 30/01/2006

FORM NO.II
(UNDER REGULATION 20)

MEMORANDUM ACKNOWLEDGING RECEIPT OF DOCUMENT

The Registrar of Companies acknowledges the receipt [illegible] No.23 dated 20/01/2006 filed on 25/01/2006 under [illegible] 192 of the Companies Act, 1956 relating to the change [illegible]jects U/s.17 for Alteration of Memorandum of Association [illegible]. GURUVAYOOR INFRASTRUCTURE PRIVATE LIMITED

It is to notify to you that the above said document [illegible]uly registered by the undersigned on 30/01/2006.

Registrar of Companies
Andhra pradesh:Hyderabad

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OOR INFRASTRUCTURE PRIVATE LIMITED

ies,

REF:- Registration No. 01-48180

SUB:- Change of objects of the company

ith the following for your record: -

nutes of Extra Ordinary General Meeting
ticles of Association

t of the above & oblige.

Thanking You,

Sincerely yours,

AYOOR INFRASTRUCTURE PRIVATE LIMITED

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FORM 23

ATION OF RESOLUTION(S) AND AGREEMENT(S)
ant to Section 192 of THE COMPANIES ACT, 1956]

8130 Nominal Capital:Rs.10,00,000

M/s. GURUVAYOOR INFRASTRUCTURE PRIVATE LIMITED

Date of dispatch of notice 26.12.2005
Date of passing 20.01.2006
Place of meeting REGISTERED OFFICE

n(s) Board
to by the Shareholders Shareholders

Class of shareholders Equity

are given below is/are filed along with the certified true copy of
t under section 173, where applicable, for record.

of	Reference to requirement under the Companies	Whether Ordinary or Special resolution	Authority passing/ agreeing to the resolution
	3	4	5
	Section 17 and other applicable provisions of the Act	Special resolution	Equity Shareholders

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...VAYOOR INFRASTRUCTURE PRIVATE LIMITED

NOTICE

...ven that the Extra-ordinary General Meeting of the members of M/s ...RASTRUCTURE PRIVATE LIMITED, will be held on the 20TH January ... at the Registered office of the Company to transact the following

...thought fit, to pass with or without modifications (s) the following ...l resolution.

... pursuant to section 17 of Companies Act 1956 and subject to the ...istrar of companies, the Main Objects Clause of Memorandum of ...mpany be altered by replacing clause no.1,2,3 and 4 with the following ...ain Objects of the Memorandum of Association :

...siness of (i) Design, Construction, Development, Finance, Operation ...ce of Km 270.00 (Thrissur) to Km 316.70 (Angamali) and (ii) Operation and Maintenance of Km 316.70 (Angamali) to Km 342.00 NH-47 in the State of Kerala for a specified concession period on ... and Transfer (BOT)Basis. Project Reference No.NS2/BOT/KL-1 ...t, erect, commission toll gates, toll collection points.

... attend and vote is entitled to appoint a proxy to attend and vote ...he proxy need not be a member of the Company.

...inting a proxy must be deposited with the Company at its ...s than 48 hours before the commencement of the meeting.

...ment pursuant to Section 173(2) of the Companies Act, 1956 in ...siness is annexed hereto.

By Order of the Board

FOR M/s GURUVAYOOR INFRASTRUCTURE PRIVATE LIMITED

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OOR INFRASTRUCTURE PRIVATE LIMITED

ORY STATEMENT PURSUANT TO SECTION 173(2) OF
S ACT 1956:

was incorporated on 24.11.2005 with the main objects of erection and
of roads and National Highways etc on BOT basis. The company was
pecial Purpose Vehicle to undertake the project - (i) Design, Construction,
Finance, Operation and Maintenance of Km 270.00 to Km 316.70 and (ii)
Operation and Maintenance of Km 316.70 to Km 342.00 on NH-47 in the
la for a specified concession period on Build, Operate and Transfer
It is one of the requirements of National Highways Authority of India that
should not indulge in any other activity other than the aforesaid mentioned
fore it is proposed to replace the existing Clause 1,2,3 and 4 with the
clause 1 of the main objects clause . As the alteration of main objects by
morandum of Association needs the approval of shareholders by means of
ion, your approval has been sought for the resolution No.1 in the Notice.

are not interested in the said resolution, except to the extent of their

By Order of the Board

nd FOR M/s. GURUVAYOOR INFRASTRUCTURE PRIVATE LIMITED

05

OR INFRASTRUCTURE PRIVATE LIMITED

INUTES OF EXTRA-ORDINARY GENERAL MEETING OF
DERS OF THE COMPNAY HELD ON 20TH JANUARY, 2006
THE REGISTERED OFFICE OF THE COMPANY.

pursuant to section 17 of Companies Act 1956 and subject to the
nar of companies, the Main Objects Clause of Memorandum of
pany be altered by replacing clause no.1,2,3 and 4 with the following
n Objects of the Memorandum of Association :

iness of (i) Design, Construction, Development, Finance, Operation
e of Km 270.00 (Thrissur) to Km 316.70 (Angamali) and (ii)
peration and Maintenance of Km 316.70 (Angamali) to Km 342.00
H-47 in the State of Kerala for a specified concession period on
nd Transfer (BOT)Basis. Project Reference No.NS2/BOT/KL-1
erect, commission toll gates, toll collection points.

// CERTIFIED TRUE COPY //

Y /R M/s GURUVAYOOR INFRASTRUCTURE PRIVATE LIMITED

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CERTIFICATE OF INCORPORATION

प्रारुप आई आर

Form I

[See Regulation 16(1)]

निगमन का प्रमाण - पत्र

FICATE OF INCORPORATION

..... का सं .....

43180 05 - 2006

..... of 20 .....

मित करता हूं कि आज .....

.....

.....

आधीन निगमित की गई है यह कम्पनी परिसीमित है।

GURUVAYOOR INFRASTRUCTURE PRIVATE

that .....

.....

.....

der the Companies Act, 1956 * (and that the Company is limited.)

ज का ..... को दिया गया।

HYDERABAD TWENTY FOURTH

y hand at ..... this .....

BER FIVE

Two thousand and .....

AYANA, 1927 SAKA)

UP2005PTC43180

(P.ATCHUTA RAMAIAH)

कम्पनियों का रजिस्ट्रार

Asst. Registrar of Companies

Andhra Pradesh

Hyderabad.

LIMITED COMPANY

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MEMORANDUM AND ARTICLES OF
ASSOCIATION OF THE COMPANY

UNDER THE COMPANIES ACT, 1956
(COMPANY LIMITED BY SHARES)

MEMORANDUM OF ASSOCIATION
OF
GURUVAYOOR INFRASTRUCTURE PRIVATE LIMITED

I. The name of the Company is **GURUVAYOOR INFRASTRUCTURE *PRIVATE LIMITED.***

II. The Registered Office of the Company will be situated in the State of Andhra Pradesh, India.

III. THE OBJECTS FOR WHICH THE COMPANY IS ESTABLISHED ARE:

(A) THE MAIN OBJECTS TO BE PURSUED BY THE COMPANY ON ITS INCORPORATION :-

1. To carry on business of (i) Design, Construction, Development, Finance, Operation and Maintenance of Km 270.00 (Thrissur) to Km 316.70 (Angamali) and (ii) Improvement ,Operation and Maintenance of Km 316.70 (Angamali) to Km 342.00 (Edapalli) on NH-47 in the State of Kerala for a specified concession period on Build, Operate and Transfer (BOT)Basis. Project Reference No.NS2/BOT/KL-1 and to construct, erect, commission toll gates, toll collection points.

MEMORANDUM

AND

ARTICLES OF ASSOCIATION

OF

GURUVAYOOR INFRASTRUCTURE

PRIVATE LIMITED

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(B) THE OBJECTS INCIDENTAL OR ANCILLARY TO THE ATTAINMENT OF THE MAIN OBJECTS :-

1. To do all things which are incidental or ancillary to the attainment of the main business of the Company.

2. To enter into partnership or any arrangement for sharing profits, union of interest, co-operation, joint venture, reciprocal concession or with any person, firm or company carrying on or engaged in or about to carry on or engage in any business or transaction which this Company is authorised to carry on or engage in and to lend money or guarantee the contracts of or otherwise assist any such person, firm or company and to take or otherwise acquire and hold shares or securities of any such person, firm or company and to sell, hold, reissue with or without guarantee or otherwise deal with the same.

3. To engage, hire, retain or employ or cause to be engaged, hired, retained or employed such individuals, professionals and organization in order to carry out the objects of the company.

4. To negotiate and enter into agreements and contracts with foreign individuals, companies, corporations and other organisations for technical, financial or any other assistance in order to carry out all or any of the objects of the Company or for the purpose of activating research and development of manufacturing projects related to the objects of the Company on the basis of know-how, financial participation or technical collaboration and to acquire necessary formulae and/or patent rights, for furthering the objects of the Company.

5. To purchase or otherwise acquire the whole or any part of the business, property, goodwill, trademark, rights and liabilities of any person, firm or company carrying on any business which the Company is authorised to carry on or possessed of the property or rights suitable for any of the purposes of the Company and to purchase, acquire, apply for, hold, sell and deal in shares, stock, debentures or debenture stock of any such person, firm, or company. To conduct, make or carry into effect any arrangements in relation to the winding up of the business of any such person, firm or company.

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6. To purchase or lease or exchange, hire, renew, or otherwise acquire and hold any estate or interest and let or sublet in whole or in part, develop, manage and exploit the land, buildings, machinery, easements, sites, privileges, plants, stock-in-trade, business concerns, options, contracts, claims, choses-in-action and any real or personal property of any kind necessary or convenient for any business of the Company.

7. To acquire and hold shares in any other company and to pay for any property, rights or privileges acquired by the company either by way of shares or debentures of this company or partly in shares or debentures and partly in cash or otherwise and to give shares or stock of any other company provided that the investments are made out of surplus funds or for the advancement of the main objects of the Company.

8. To procure the incorporation or other recognition of the Company in any country, State or place and to establish and regulate agencies for the purpose of the Company's business and to apply to any Parliament, Government, Local, Municipal or other authority whether in India or Foreign for any acts of Parliament, laws, decrees, concessions, orders, rights, or privileges that may seem conducive to the Company's objects or any of them and to oppose any proceedings or applications which may seem calculated or indirectly prejudice the Company's interest.

9. Subject to Sections 391 to 394 and 394A of the Companies Act 1956, to amalgamate with any other company having all or any of its objects similar to the objects of the Company in any manner whatsoever, whether with or without liquidation of the Company.

10. To invest the moneys of the Company not immediately required in or upon such investments (other than shares in the Company) and in such manner as may from time to time be determined.

11. To make advances upon or for the purchase of materials, goods, machinery, stores and other articles required for the purpose of the Company.

12. Subject to sections 58A and sections 3(1) (iii)(d), 292, 295 and 370 of the Companies Act, 1956, the regulations made there-under and the directions issued by the Reserve Bank of India to borrow, raise or secure the payment of money or deposit at interest, for any of the purposes of the Company and at such time or times as may be thought fit, by promissory notes, by taking credit in or opening a current account with any person, firm, bank, company or financial institution and whether with or without any security or by such other means as the Directors may in their absolute discretion deem expedient and in particular by the issue of debentures or debenture stock perpetual or otherwise as security for any such money so borrowed, raised, received and if any such debentures or debenture stock are so issued, to mortgage, pledge or charge the whole or any part of the property and assets of the Company both present and future, including its uncalled capital by special assignment

or otherwise or to transfer or convey the same absolutely or in trust and to give the powers of sale and other powers as may seem expedient and to purchase redeem or payoff, any such securities provided that the Company shall not carry on banking business as defined in Banking Regulation Act, 1949.

13. To give any guarantee in relation to the payment of any debentures, debenture stock, bonds, obligations or securities and to guarantee the payment of interest thereon or of dividends on any stock or shares in any company and generally to guarantee or become sureties for the performance of any contracts, debts, or obligations of any person, firm, authority or company connected with the Company's business.

14. To draw, make, accept, endorse, discount, execute and issue bills of exchange, promissory notes, bills of lading, warrants, debentures and other negotiable or transferable instruments and securities and to open bank accounts, current overdraft or savings and to operate the same in connection with the business of the Company.

15. To send its Directors, employees or any other person or persons to countries outside India to investigate the potential for any business or trade or to procure and purchase any machinery or establish trade connections or promote the interests of the Company and to pay all expenses incurred in connection with such travel.

16. Subject to Section 314 of the Companies Act, 1956 to remunerate any person or company for services rendered or to be rendered in or about the formation or promotion of the Company or the conduct of its business.

17. To pay out of the funds of the Company all costs, charges and expenses of and incidental to the formation and registration of the Company and any company promoted by the Company and also all costs, charges, duties, imposition and expenses of and incidental to the acquisition by the Company of the property or assets incidental to the accomplishment of all or any formalities which the Company may think necessary or proper in connection with any of the matters aforesaid.

18. To give financial or any other type of assistance to any association, body or movement having for an object the solution, settlement or surmounting of industry or trade.

19. Subject to the provisions of the Companies Act, 1956 or any other law for the time being in force, to exchange, lease, sell or dispose of the undertakings or property of the Company or any part thereof for such consideration as the Company may think fit.

20. To distribute among the members in specie or in kind, any property of the Company or any proceeds of sale or disposal of any property of the Company in the event of winding up so that no distribution amounting to a reduction of capital may be made except with the sanction, if any, for the time being required by law.

21. To provide for the welfare of the Directors or employees or ex-Directors or ex-employees of the Company and the wives, widows and families or dependants of such persons by building and contributing to the building of houses, dwellings or by the grant of monies, pensions, allowances, bonuses or other payment or by creating and from time to time subscribing or contributing to the provident fund and other associations or institutions funds *or* trusts as the Company *may* think fit and to subscribe to or contribute to or otherwise contribute for national *or* other institutions or objects, which shall have any moral or other claim to support or aid by the Company either by reason of locality or operation or of public and general utility or otherwise subject to the provisions of the Companies Act, 1956.

22. To apply for, promote and obtain under any Act or Parliament, charter, privilege, concession, licence or an authorization of any Government, State or Municipality, provisional order or licence of any other authority, or acquire the same for enabling the Company to carry on any of its objects or for extending any modification of the constitution of the Company or for extending any other purpose which may seem expedient and to oppose any proceedings or applications which may seem calculated directly or indirectly to prejudice the interest of the Company.

23. To compensate any Managing Director, Directors or other Officers of the Company for loss of office, within the limitation prescribed under the Companies Act, 1956 or other statute or rule having the force of law and to make payments to any person whose office of employment or duties may be determined by virtue of any transaction in which the Company is engaged.

24. Subject to Section 293 (1) (e), 293 A and 293 B of the Companies Act, 1956 to give donations or subscriptions to any religious, charitable or social welfare institutions and to subscribe, contribute or otherwise assist or grant money to charitable, scientific, religious, benevolent, national, public or other institutions and objects or for any exhibition or for any public, general or other objects and to establish and support or aid in the establishment and support of associations, institutions, funds, trusts and conveniences for the benefit of the employees or of persons having dealing with the Company or to dependents, relative or connections of such persons and in particular friendly or other benefit societies and to grant pensions, allowances, gratuities and bonuses by way of either annual payments or a lump sum and to make payments towards insurance and to form and contribute to provident and benefit funds of or for such persons.

25. To refer any present or future dispute between the Company and any other Company, firm or individual to arbitration and to submit the same to arbitration in India or abroad either in accordance with Indian or any foreign system of law.

26. To appoint agents, sub-agents, dealers, managers, canvassers, sales representatives or salesmen to transact all or any kind of business which the Company is authorised to carry on and to constitute agencies of the Company in India or in any other country and to establish depots and agencies in India or in any other country.

27. To create a Depreciation Fund, Reserve Fund, Sinking Fund, Insurance Fund or any other special fund whether for depreciation or repairing, improving, extending, maintaining or replacing any of the property of this Company or for any other purposes conducive to the interest of the Company.

28. Subject to the provisions contained in Section 205 of the Companies Act, 1956 to distribute as dividend or bonus among the members or to place, reserve or otherwise apply, as the Company may from time to time think fit, any money received by way of premium on shares or debentures, issued at a premium.

29. To open accounts with any banks and to pay into and withdraw moneys from such accounts.

30. To take part in the formation, supervision or control of any business or operation of any Company or undertaking relating to the business of the Company and for that purpose to act as or appoint as its own, nominees, officers, Directors, trustees, administrators, managers and accountants, or other employees, experts or agents.

31. To establish and maintain or procure the establishment and maintenance of any contributory or non-contributory pension or superannuation funds, provident funds or other funds for the benefit of and give or procure the giving of stock option plans, gifts, donations, gratuities, pension, allowances or emoluments to any person who is or was at any time in the employment or service of the Company or any company which is subsidiary of the Company or is allied to or associated with the Company or with any such subsidiary company or who are or were at any time Directors or officers of the Company or of such other company as aforesaid, and the wives, widows, families and dependents of any such persons and also establish and subsidise and subscribe to any institutions, associations, clubs or funds calculated to be for the benefit of or to advance the interest and well-being of the Company or of such other company as aforesaid, and make payments to or towards the insurance of any such person as aforesaid, either alone or in conjunction with any other company as aforesaid.

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32. To do all or any of the above things in any part of the world as principals, agents, trustees or otherwise and either in conjunction with others or by or through agents, sub contractors, trustees or otherwise.

IV. The liabjlity of the members is limited.

V. The Authorized Share Capital of the Company is Rs.10,00,000/- (Rupees Ten Lakh only) divided into 1,00,000 (One Lakh) Equity Shares of Rs.10/- (Rupees ten) each.

VI. We, the several persons whose names addresses and occupations are subscribed hereunder, are desirous of being formed into a company in pursuance of this Memorandum of Association and we respectively agree to take the number of equity shares in the capital of the Company set opposite to our respective names.

S.No.	Name, address, description and occupation of the Subscribers with their Signatures	No. of Equity Shares taken by each Subscriber	Signature of witness with address and occupation.
1.	Sd/- SREI Infrastructure Finance Ltd Vishwakarma,86-C Topsia Road (South) Kolkata – 700 046 Represented by Kishore Kumar Mohanty, Executive Director	5,000 (Five Thousand only)	Sd/- L.D.Reddy, Company Secretary 304,Afzal Commercial Complex Lakadikapool,Hyderabad-04
2.	Sd/- KMC Constructions Ltd MCH No.555, Arora Colony Road No.3, Banjara Hills Hyderabad – 500 034 Represented by M.Vikram Reddy Director	5,000 (Five Thousand only)	
3.	Sd/- M.Goutham Reddy S/o M.Raja Mohan Reddy Plot No.188,Road No.13 Jubilee Hills Hyderabad Occupation: Business Date of Birth: 02.11.1971	100 (One Hundred only)	

Place : Hyderabad

Date : 21.11.2005

UNDER THE COMPANIES ACT, 1956

COMPANY LIMITED BY SHARES

ARTICLES OF ASSOCIATION OF
GURUVAYOOR INFRASTRUCTURE PRIVATE LIMITED

1. The Regulations contained in Table A in the First Schedule to the Companies Act, 1956 shall not apply to the Company, but the regulations for the management of the company and for observance by the members thereof and their representatives shall, subject to any exercise of the statutory powers of the Company with reference to the repeal and alteration of or addition to its regulations by special resolution or as prescribed by the Companies Act, 1956 be such as are contained in these Articles of Association.

INTERPRETATION

2(i) In these Articles, unless there be something in the subject or context inconsistent therewith –

(a) "the Act" means "the Companies Act, 1956" and includes any statutory modification or re-enactment thereof for the time being in force;

(b) "Annual General Meeting" means a general meeting of the members held in accordance with the provisions of section 166 of the Act.

(c) "Articles" means Articles of Association as originally framed or as altered from time to time;

(d) "Auditor/s" mean and include the person appointed as such for the time being of the Company;

(e) "Board", "Board of Directors" or "Directors" means the Board of Directors of the Company or the Directors of the Company collectively;

(f) "Capital" means the share capital for the time being released for the purpose of the Company;

(g) "Company" means Guruvayoor Infrastructure Private Limited;

(h) "Chairman" means the chairman of the Board of Directors for the time being of the Company;

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(i) "Debenture" includes debenture stock, bonds and any other securities of the Company, whether constituting a charge on the assets of the Company or not;

(j) "Extraordinary General Meeting" means general meeting other than Annual General Meeting;

(k) "India" means Republic of India;

(l) "Members" means the duly registered holders, from time to time, of the shares of the Company and includes the subscribers to the Memorandum of Association;

(m) "Memorandum" means the Memorandum of Association of the Company;

(n) "Month" means calendar month;

(o) "Ordinary Resolution" and "Special Resolution" shall have the meanings assigned thereto respectively by section 189 of the Act;

(p) "Person" means any natural person, individual, corporation, limited partnership, general partnership, Hindu undivided family, joint stock company, joint venture, association, company, trust, bank, trust company, land trust, business trust or other organization, whether or not a legal entity, and government agency and political subdivision thereof or therein;

(q) "Proxy" means an instrument whereby any person is authorised to vote for a member at a general meeting on a poll;

(r) "Rupee" means the lawful currency of India;

(s) "Seal" means the Common Seal of the Company;

(t) "Secretary" means and includes any person appointed in accordance with the provisions of the Companies (Appointment and Qualification of Secretary) Rules, 1989 and other rules for the time being in force;

(u) "writing" shall include printing and lithography and any other mode or modes for representing words in a visible form;

(v) (a) Words imparting the singular number only shall include the plural number and vice versa;

(b) Words imparting the masculine gender only shall include the feminine gender and vice versa; and

National Highways Authority of India

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Gujarat Infrastructure Pvt. Ltd.

(c) Words imparting persons shall include corporations, companies and individuals.

(ii) Subject as aforesaid any words or expressions defined in the Act shall, except where the subject or context forbids, bear the same meaning as in these Articles.

(iii) The headings and sub-headings hereto shall not affect the constitution hereof.

(iv) Copies of the Memorandum and Articles of Association of the Company and every agreement and every resolution referred to in section 192 of the Act shall be furnished by the Company to every member at his request and within seven days thereof on payment of such sum as may be prescribed by the Act for each copy.

PRIVATE LIMITED COMPANY

3. The Company is a private limited company as defined under Section 3(1) (iii) of the Act and having a minimum paid up capital of one lakh rupees or such higher paid up capital as may be prescribed:

(a) the number of members (exclusive of persons who are in the employment of the Company and of persons who having been formerly in the employment of the Company were members of the Company while in that employment and have continued to be members after the employment ceased) is not to exceed fifty, but where two or more members hold one or more shares in the Company jointly, they shall, for the purpose of this paragraph, be treated as a single member;

(b) any invitation to the public to subscribe for any shares or debentures of the Company is hereby expressly prohibited;

(c) the right to transfer of its shares is restricted as hereinafter provided; and

(d) prohibits any invitation or acceptance of deposits from persons other than its members, Directors or their relatives.

POWERS OF THE COMPANY

4. Wherever in the Act it has been provided that the Company shall have any right, privilege or authority or the Company could carry out the transaction only if the Company is so authorized by its Articles, then and in that case, these Articles hereby authorize and empower the Company to have such right, privilege, authority to carry out such transaction as has been permitted by the Act without there being any specific regulation in that behalf herein provided.

National Highways Authority of India New Delhi

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Surveyor Infrastructure Pvt. Ltd.

SHARE CAPITAL

5. AUTHORISED SHARE CAPITAL: The authorized share capital of the Company is same as mentioned in clause V of the Memorandum of Association.

6. INCREASE OF CAPITAL: The Company may from time to time by ordinary resolution increase the authorised share capital by creation of new shares and of such sum to be divided into such amount as may be specified in the resolution. The new shares may be issued upon such terms and conditions and with such rights and privileges (including in particular, with preferential or qualified rights to dividend and in the distribution of assets of the Company and with a right of voting at the general meeting of the Company) as the Company at the general meeting may decide.

7. NEW CAPITAL SAME AS EXISTING CAPITAL: Except in so far as otherwise provided by the conditions of issue or by these Articles, any capital raised by creation of new shares, shall be considered as part of the existing capital and shall be subject to the provisions herein contained with reference to the payment of calls and installments, forfeiture, lien, surrender, transfer and transmission, voting and otherwise.

8. REDUCTION OF CAPITAL: Subject to the provisions of sections 100 through 105 of the Act, the Company may from time to time by special resolution reduce its capital.

9. CONSOLIDATION, DIVISION, SUB-DIVISION AND CANCELLATION OF SHARES: Subject to the provisions of sections 94 and 95 of the Act, the Company in general meeting may from time to time by an ordinary resolution alter the conditions of its Memorandum as follows:

(i) consolidate and divide all or any of its capital into shares of larger amount than its existing shares;

(ii) sub-divide its shares, or any of them into shares of smaller amount than is fixed by the Memorandum, so however, that in the sub-division the proportion between the amount paid and the amount, if any, unpaid on each reduced share shall be the same as it was in the case of the share from which the reduced share is derived;

(iii) cancel any shares which, at the date of the passing of the resolution have not been taken or agreed to be taken by any person and diminish the amount of its share capital by the amount of the shares so cancelled. A cancellation of shares in pursuance of this sub-clause shall not be deemed to be a reduction of share capital within the meaning of the Act;

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(iv) convert all or any of its fully paid up shares into stock and reconvert that stock into fully paid up shares of any denomination; or

(v) redeem any redeemable preference shares.

10. REDEEMABLE PREFERENCE SHARES:

(i) Subject to the provisions of these Articles, the Company shall have the power to issue preference shares carrying a right to redemption out of profits which would otherwise be available for dividend or out of the proceeds of a fresh issue of shares made for the purpose of such redemption or liable to be redeemed at the option of the Company and the Board may subject to the provisions of section 80 of the Act, exercise such power in such manner as may be provided in these Articles.

(ii) Subject to the provisions of section 80 of the Act, redemption of preference shares hereunder may be effected in accordance with the terms and conditions of their issue and in the absence of such specific terms and conditions in that behalf, in such manner as the Directors may think fit.

11. MODIFICATION OF RIGHTS: Whenever the capital by reason of the issue of preference shares or otherwise is divided into different classes of shares, all or any of the rights and privileges attached to each class may, subject to the provisions of sections 106 and 107 of the Act and with the sanction of special resolution passed at a separate general meeting of the holders of shares of that class be varied, modified, commuted, affected or abrogated, or dealt with and all the provisions hereunder shall apply to every such meeting.

12. SHARES TO BE NUMBERED PROGRESSIVELY: The shares in the capital shall be numbered progressively according to their several denominations and, except in the manner herein before provided, no share shall be sub-divided.

13. SHARES AT THE DISPOSAL OF DIRECTORS: Subject to the provisions of the Act and these Articles, the shares in the capital of the Company for the time being (including any shares forming part of any increase in the capital of the Company) shall be under the control of the Directors who may allot or otherwise dispose of the same or any of them to such persons in such proportion and on such terms and conditions and either at a premium or at par or at a discount and at such times as they may, from time to time, think fit and proper.

14. TERMS OF NEW ISSUE OF CAPITAL: Except as otherwise provided by the conditions of issue or by these Articles, any capital raised by the creation of new shares shall be considered as part of the existing capital, and shall be subject to the provisions herein contained in these Articles, with reference to

the payment of calls and instalments, forfeiture, lien, surrender, transfer and transmission, voting and otherwise.

15. DIRECTORS MAY ALLOT SHARES AS FULLY PAID-UP OR PARTLY PAID-UP: The Directors may allot and issue shares in the capital of the Company as payment or part payment for any property sold or goods transferred or machinery supplied or for services rendered to the Company and any shares which may be so allotted may be issued as fully paid up or partly paid up and if so issued shall be deemed to be fully paid up shares or partly paid up shares in the capital of the Company.

16. ACCEPTANCE OF SHARES: Any application signed by or on behalf of an applicant for shares in the Company, followed by an allotment of any shares therein, shall be an acceptance of shares within the meaning of these Articles and any person who thus accepts any shares and whose name is on the register shall for the purpose of these Articles be a member.

17. DEPOSIT AND CALLS ETC. TO BE A DEBT PAYABLE IMMEDIATELY: The money (if any) which the Directors shall, on the allotment of any shares being made by them, require or direct to be paid by way of deposit, call or otherwise, in respect of any shares allotted by them, shall, immediately on the insertion of the name of the allottee in the register of members as the name of the holder of such shares, become a debt due to and recoverable by the Company from the allottee thereof, and shall be paid by him accordingly.

18. INSTALMENTS ON SHARES: If, by the conditions of allotment of any shares, the whole or part of the amount or issue price thereof shall be payable by installments, every such installment shall, when due, be paid to the Company by the person who, for the time being and from time to time, shall be the registered holder of the share or his legal representative.

19. CONVERSION OF SHARES INTO STOCK:

(i) The Company may, by ordinary resolution-
   (a) convert any paid-up shares into stock, and
   (b) re-convert any stock into paid-up shares of any denomination.

   Provided, that the Board may, from time to time, fix the minimum amount of stock transferable; provided, further, that such minimum shall not exceed the nominal amount on the shares from which the stock arose.

(ii) The holders of stock shall, according to the amount of stock held by them, have the same rights, privileges and advantages as regards dividends, voting at meeting of the Company, and other matters, as if they held the shares from which the stock arose, but no such privilege or advantage (except participation in the dividends and profits of the Company and in the assets on winding up) shall be

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conferred by an amount of stock which would not, if existing in shares, have conferred that privilege or advantage.

(iii) Such of these Articles of Association of the Company as are applicable to paid-up shares shall apply to stock and the words "share" and "shareholder" in those Articles shall include "stock" and "stockholder" respectively.

20. SHARES AT DISCOUNT: The Company may issue at a discount shares in the Company of a class already issued if the following conditions are fulfilled, namely:

(i) the issue of the shares at a discount is authorised by a resolution passed by the Company in general meeting and sanctioned by the Company Law Board or such other authority as may be specified by the Act;

(ii) the resolution specifies the maximum rate of discount at which the shares are to be issued;

(iii) the shares to be issued at a discount are issued within two months after the date on which the issue is sanctioned by the Company Law Board or such other authority as may be specified by the Act within such extended time as the Company Law Board or such other authority as may be specified by the Act may allow.

21. LIABILITY OF MEMBERS: Every member or his or her heirs, executors or administrators to the extent of his assets which come to their hands shall be liable to pay to the Company the portion of the capital represented by his share or shares which may, for the time being, remain unpaid thereon in such amounts, at such time or times, and in such manner as the Board of Directors shall from time to time, in accordance with these Articles require or fix for the payment thereof.

22. COMPANY NOT BOUND TO RECOGNIZE ANY INTEREST IN SHARES OTHER THAN THAT OF THE REGISTERED HOLDERS: Save as herein otherwise provided, the Company shall be entitled to treat the person whose name appears on the register of members as the holder of any shares as the absolute owner thereof and accordingly shall not (except as ordered by a court of competent jurisdiction or as by law required) be bound to recognise any benami trust or equity or equitable, contingent or other claim to or interest in such share on the part of any other person whether or not it shall have express or implied notice thereof.

23. POWER OF THE COMPANY TO PURCHASE ITS OWN SHARES: To the extent permitted by section 77A of the Act, the Company shall have the power to purchase its own shares.

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SHARE CERTIFICATES

24. CERTIFICATES HOW TO BE ISSUED:

The certificate of title to shares shall be issued under the seal of the Company and shall bear the signatures of two Directors or persons acting on behalf of the Directors under a duly constituted power of attorney and the Secretary or some other person appointed by the Board for the purpose. The certificate of such shares shall subject to the provisions of section 113 of the Act, be delivered in accordance with the procedure laid down in section 53 of the Act, within three months after the allotment and within two months after the application for the registration of the transfer of such shares as the case may be.

Provided always that notwithstanding anything contained in these Articles, the certificate of title to shares may be executed or issued in accordance with such other provisions of the Act or Rules made there-under, as may be in force, for the time being, and from time to time.

25. MEMBER'S RIGHT TO CERTIFICATES: Every member shall be entitled without payment to one certificate for all the shares of each class or denomination registered in his name or, if the Directors so approve to several certificates each for one or more shares of each class. Every certificate of shares shall contain such particulars and, shall be in such form as prescribed by the Companies (Issue of Shares Certificates) Rules, 1960 or any modification thereof. Where a member has transferred a part of the shares comprised in the holding he shall be entitled to a certificate for the balance without any charge.

26. ISSUE OF NEW CERTIFICATE IN PLACE OF ONE DEFACED, LOST OR DESTROYED:

(i) A certificate may be renewed or a duplicate of a certificate may be issued if such certificate (a) is proved to have been lost or destroyed, or (b) having been defaced or mutilated or torn, is surrendered to the Company or (c) has no further space on the back thereof for endorsement of transfer.

(ii) The manner of issue or renewal of a certificate or issue of a duplicate thereof, for a certificate (original or renewed) or of a duplicate thereof, the particulars to be entered in the register of members or in the register of renewed or duplicate certificate, the form of such registers, the fee on payment of which and the terms and conditions on which a certificate may be renewed or a duplicate thereof may be issued, shall be such as prescribed by the Companies (Issue of Share Certificates) Rules, 1960, or any modification thereof.

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LIEN

27. LIEN ON SHARES:

(i) The Company shall have a first and paramount lien -

(a) on every share (not being a fully-paid share) for all moneys (whether presently payable or not) called, or payable at a fixed time, in respect of that share, and

(b) on all shares (not being fully-paid shares) standing registered in the name of a single person , for all moneys presently payable by him or his estate to the Company:

Provided that the Board of Directors may at any time declare any share to be wholly or in part exempt from the provisions of this clause.

(ii) The Company's lien, if any, on a share shall extend to all dividends payable thereon.

28. BOARD'S RIGHT TO SALE:

The Company may sell, in such manner as the Board thinks fit, any shares on which the company has a lien:

Provided that no sale shall be made –

(i) unless a sum in respect of which the lien exists is presently payable,

or

(ii) until the expiration of fourteen days after a notice in writing stating and demanding payment of such part of the amount in respect of which the lien exists as is presently payable, has been given to the registered holder for the time being of the share or the person entitled thereto by reason of his death or insolvency.

29. DELEGATION OF AUTHORITY AND THE EFFECT ON THE TITLE OF THE PURCHASER:

(i) To give effect to any such sale, the Board may authorize any person to transfer the shares sold to the purchaser thereof.

(ii) The purchaser shall be registered as the holder of the shares comprised in any such transfer.

(iii) The purchaser shall not be bound to see to the application of the purchase money, nor shall his title to the shares be affected by any irregularity or invalidity in the proceedings in reference to the sale.

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30. APPLICATION OF THE SALE PROCEEDS:

(i) The proceeds of the sale shall be received by the Company and applied in payment of such part of the amount in respect of which the lien exists as is presently payable.

(ii) The residue, if any, shall subject to a like lien for sums not presently payable as existed upon the shares before the sale, be paid to the person entitled to the shares at the date of the sale.

CALLS

31. AUTHORITY TO MAKE CALLS:

(i) The Board may, from time to time, make calls upon the members in respect of any moneys unpaid on their shares (whether on account of the nominal value of the shares or by way of premium) and not by the conditions of allotment thereof made payable at fixed times.

(ii) Each member shall, subject to receiving at least fourteen days' notice specifying the time or times and place of payment, pay to the Company, at the time and place so specified, the amount called on his shares.

(iii) A call may be revoked or postponed at the discretion of the Board.

32. CALL TO DATE FROM RESOLUTION: A call shall be deemed to have been made at the time when the resolution of the Board authorising the call was passed and may be required to be paid by installments.

33. LIABILITY OF JOINT HOLDERS: The joint holders of a share shall be jointly and severally liable to pay all calls in respect thereof.

34. INTEREST ON CALLS NOT PAID:

(i) If a sum called in respect of a share is not paid before or on the day appointed for payment thereof, the person from whom the sum is due shall pay interest thereof from the day appointed for payment thereof to the time of actual payment at such rate as the Board shall fix from time to time, but the Directors may waive payment of such interest wholly or in part.

(ii) The Board shall be at liberty to waive payment of any such interest wholly or in part.

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35. DEEMED CALLS:

(i) Any sum which by the terms of issue of a share becomes payable on allotment or at any fixed date, whether on account of the nominal value of the share or by way of premium, shall, for the purpose of these Articles, be deemed to be a call duly made and payable on the date on which by the terms of issue such sum becomes payable.

(ii) In case of non-payment of such sum, all the relevant provisions of these Articles as to payment of interest and expenses, forfeiture or otherwise shall apply as if such sum had become payable by virtue of a call duly made and notified.

36. PAYMENT IN ANTICIPATION OF CALLS MAY CARRY INTEREST: The Board may, if it thinks fit, receive from any member willing to advance the same, all or any part of the moneys uncalled and unpaid upon any shares held by him; and upon all or any of the moneys so advanced, may (until the same would, but for such advance, become presently payable) pay interest at such rate not exceeding, unless the Company in general meeting shall otherwise direct, such rate of interest per annum, as may be agreed upon between the Board and the member paying the sum in advance.

37. MEMBERS NOT ENTITLED TO PRIVILEGES OF MEMBERSHIP UNTIL ALL CALLS ARE PAID: No member shall be entitled to receive any dividend or to exercise any privilege as a member until he shall have paid all calls for the time being due and payable on every share held by him, whether alone or jointly with any person, together with interest and expenses, if any.

FORFEITURE OF SHARES

38. IF CALLS OR INSTALMENTS NOT PAID NOTICE MAY BE GIVEN: If a member fails to pay any call, or installment of a call, on the day appointed for payment thereof, the Board may, at any time thereafter during such time as any part of the call or installment remains unpaid, serve a notice on him requiring payment of so much of the call or installment as is unpaid, together with any interest which may have accrued.

39. FORM OF NOTICE: The notice aforesaid shall -

(i) name a further day (not being earlier than the expiry of fourteen days from the date of service of the notice) on or before which the payment required by the notice is to be made; and

(ii) state that, in the event of non-payment on or before the day so named, the shares in respect of which the call was made will be liable to be forfeited.

40. IN DEFAULT OF PAYMENT SHARES TO BE FORFEITED: If the requirements of any such notice as aforesaid are not complied with, any share in respect of which the notice has been given may, at any time thereafter, before the payment required by the notice has been made, be forfeited by a resolution of the Board to that effect.

41. FORFEITED SHARES MAY BE SOLD: Any share so forfeited shall be deemed to be the property of the Company and may be sold, re-allotted or otherwise disposed of either to the original holder thereof or to any other person upon such terms and in such manner as the Board shall think fit.

42. POWER TO ANNUL FORFEITURE: The Board may at any time before any share so forfeited shall have been sold, re-allotted or otherwise disposed of, annul the forfeiture thereof upon such conditions as it thinks fit.

43. SHAREHOLDER STILL LIABLE TO PAY MONEYS OWING AT TIME OF FORFEITURE AND INTEREST:

(i) A person whose shares have been forfeited shall cease to be a member in respect of the forfeited shares, but shall, notwithstanding the forfeiture, remain liable to pay to the Company all moneys which, at the date of forfeiture, were presently payable by him to the Company in respect of the shares.

(ii) The liability of such person shall cease if and when the Company shall have received payment in full of all such moneys in respect of the shares.

44. DECLARATION OF FORFEITURE AND TITLE OF THE PURCHASER OF THE FORFEITED SHARES:

(i) A duly verified declaration in writing that the declarent is a Director or a Secretary or a manager of the Company, and that a share in the Company has been duly forfeited on a date stated in the declaration, shall be conclusive evidence of the facts therein stated as against all persons claiming to be entitled to the share.

(ii) The Company may receive the consideration, if any, given for the share on any sale or disposal thereof and may execute a transfer of the share in favour of the person to whom the share is sold or disposed of.

(iii) The transferee shall thereupon be registered as the holder of the share.

(iv) The transferee shall not be bound to see to the application of the purchase money, if any, nor shall his title to the share be affected by any irregularity or invalidity in the proceedings in reference to the forfeiture, sale or disposal of the share.

45. APPLICATION OF FORFEITURE PROVISIONS: The provisions of these Articles as to forfeiture shall apply in the case of non-payment of any sum which, by the terms of issue of a share, becomes payable at a fixed time, whether on account of the nominal value of the share or by way of premium, as if the same had been payable by virtue of a call duly made and notified.

TRANSFER AND TRANSMISSION OF SHARES

46. TRANSFER OF SHARES: The instrument of transfer duly stamped and executed by the transferor and the transferee shall be delivered to the Company in accordance with the provisions of the Act. The instrument of transfer shall be accompanied by such evidence as the Board of Directors may require to prove the title of transferor and his right to transfer the shares and every registered instrument of transfer shall remain in the custody of the Company until destroyed by order of the Board. The transferor shall be deemed to be the holder of such shares until the name of the transferee shall have been entered in the register of members in respect thereof. Before the registration of an instrument of transfer, the certificate or certificates of the Share must be delivered to the Company.

47. CERTAIN TRANSFERS NOT TO BE RECOGNISED:

(i) No transfer of shares of the Company shall be recognized by the Company unless recorded in the register of members of the Company. The Board of the Company must immediately register any transfer of shares which complies with the terms of these Articles and the Act.

(ii) If at any time it is proposed that a transfer of shares in the Company takes place in accordance with these Articles, the Company and the proposed transferee shall ensure that any Governmental Authorizations, including, where necessary, the approval of the Reserve Bank of India, are obtained prior to the registration of any Transfer. Any time periods in these Articles relating to the transfer of shares will be extended until such Governmental authorizations and approvals have been obtained or officially and finally denied, provided that the person seeking to extend such acceptable period shall have used reasonable efforts in obtaining such Governmental authorizations and approvals.

48. INSTRUMENT OF TRANSFER:

(i) The instrument of transfer of any share in the Company shall be executed by or on behalf of both the transferor and transferee.

(ii) The transferor shall be deemed to remain a holder of the share until the name of the transferee is entered in the register of members in respect thereof.

49. MEMBER MAY TRANSFER OR BEQUEATH SHARES TO SPECIFIED RELATIVES: Any share may be transferred by a member to any child or other issue, father, mother, brother, wife or husband of such member and any share of a deceased member may be transferred by his executors or administrators or other legal representatives subject to the approval of the Directors to any child or other issue, father, mother, brother, widow or widower of such deceased member to whom such deceased member may have specifically bequeathed the same and where there has been no bequeathal of his share by a deceased member, such shares may be transferred to the legal representatives of such member.

50. SHARES NOT TO BE TRANSFERRED TO MINOR OR PERSON OF UNSOUND MIND: No shares shall be transferred to a person of unsound mind or otherwise incompetent to contract.

51. SHARES NOT TO BE TRANSFERRED TO BANKRUPT OR INSOLVENT: No shares shall be transferred to any person who is an undischarged bankrupt or insolvent.

52. LEGAL REPRESENTATIVES: The executors or administrators of a deceased member shall be the only persons recognised by the Company as his legal representative and as having any title to his shares or other interest in the Company, except in the case of joint holders of shares, in which case the surviving holder or holders or the executors or administrators of the last surviving holder shall be the only person so recognised, but nothing herein contained shall release the estate of the deceased joint holder from liability in respect of shares jointly held by him. The Company shall not be bound to recognise any such executor or administrator unless he shall have obtained probate of the will or letters of administration to the property and credits, or other legal representation as the case may be to the estate of the deceased member from a competent court in India; Provided nevertheless that in special cases and in such only, it shall be lawful for the Directors to dispense with probate of the will or letters of administration or other legal representation upon such terms as to identity and otherwise as the Directors think fit.

53. PERSON ENTITLED TO SHARES:

(i) Any person becoming entitled to the shares of a member in consequence of the death or bankruptcy of such member, may subject to these Articles, upon producing such evidence that he sustains the character in which he proposes to act under this clause or of his title to the shares, as the Directors think sufficient, be registered as a member in respect of such shares if the Directors think fit to do so.

or may subject to these Articles, transfer such shares in the manner and subject to restrictions specified for transfer of shares.

(ii) If the person so becoming entitled shall elect to be registered as holder of the shares himself, he shall deliver or send to the Company a notice in writing signed by him stating that he so elects. If the person aforesaid shall elect to transfer the share, he shall testify his election by executing a transfer of the share. All the limitations, restrictions and provisions of these Articles relating to the right to transfer and the registration of transfers of share shall be applicable to any such notice or transfer as aforesaid as if the death or insolvency of the member had not occurred and the notice or transfer were a transfer signed by that member.

54. DIRECTORS' POWER TO REFUSE TO REGISTER TRANSFER: The Directors, may, without assigning any reason refuse to register any transfer of shares or other interest of a member in the shares and shall refuse to register any transfer of shares on which the Company has a lien, or shares which have become liable to be forfeited.

55. DIRECTORS' POWER TO REFUSE TO REGISTER TRANSMISSION: The Directors may without assigning any reason, refuse to register the transmission by operation of law or the right to any member or other interest of a member in the shares of the Company and shall refuse to register any transmission by operation of law of the right of any member to any shares on which the Company has a lien or which have become liable to be forfeited.

56. NOTICE OF REFUSAL TO REGISTER: When in exercise of their power to refuse to register, if the Directors refuse to register any such transfer or transmission of the shares, the Directors shall, within two months from the date on which the instrument of transfer or the intimation of such transmission, as the case may be, is delivered to the Company send notice of the refusal to the transferor and the transferee or to the person giving intimation of such transmission as the case may be, and the relevant provisions of section 111 of the Act shall apply.

57. TRANSFER OF DEBENTURES: The provisions of these presents governing transfer of shares shall mutatis mutandis apply to the transfer of or the transmission by operation of law of the right to debentures of the Company.

TRANSFEROR LIABLE UNTIL THE TRANSFEREE ENTERED ON: The transferor shall be deemed to remain the holder of such share until the name of the transferee is entered into the register of members in respect thereof.

COMPANY NOT LIABLE FOR DISREGARD OF A NOTICE: The Company shall incur no liability or responsibility whatever in consequence of their registering or giving effect to any transfer of shares made or proposed to be made by the apparent legal owner thereof (as shown or

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appearing in the register of members) to the prejudice of persons having or claiming any equitable right, title or interest or notice prohibiting registration of such transfer, and may have entered such notice or referred thereto in any book of the Company and the Company shall not be bound or required to regard or attend or give effect to any notice which may be given to them of any equitable title or interest or be under any liability whatsoever for refusing or neglecting so to do though it may have been entered or referred in some book of the Company but the Company shall nevertheless be at liberty to regard and attend to any such notice and to give effect thereto, if the Directors shall so think fit.

MEETINGS

60. GENERAL MEETINGS:

(i) All general meetings other than Annual General Meetings shall be called extraordinary general meetings.

(ii) The Board may whenever it thinks fit, call an Extraordinary General Meeting.

(iii) If at any time there are not within India, Directors capable of acting who are sufficient in number to form a quorum, any Director or any two members of the Company may call an Extraordinary General Meeting in the same manner, as nearly as possible, as that in which such a meeting may be called by the Board.

61. ANNUAL GENERAL MEETING:

(i) The Company shall, in addition to any other meetings, hold a general meeting annually which shall be styled as its Annual General Meeting at the intervals and in accordance with the provisions specified below:

(ii) The Annual General Meeting of the Company, subsequent to the first annual general meeting shall be held by the Company within six months after the expiry of the financial year in which the first Annual General Meeting was held and thereafter an annual general meeting shall be held in each year by the Company within six months after the expiry of each financial year;

(iii) Not more than fifteen months shall elapse between the date of one Annual General Meeting and that of the next.

(iv) Every Annual General Meeting shall be called for a time during business hours on a day that is not a public holiday, and shall be held either at the Registered Office of the Company or at some other place within the city where the Registered Office of the Company is

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situated and the notices calling the meeting shall specify it as the Annual General Meeting.

62. EXTRAORDINARY GENERAL MEETING:

(i) The Board may, whenever they think fit, and shall, on the requisition of such number of members of the Company as is hereinafter specified, forthwith proceed to call an Extraordinary General Meeting of the Company and in case of such requisition the following provisions shall apply;

(ii) The requisition shall set out the matters for the consideration of which the meeting is to be called, shall be signed by the requisitionist and shall be deposited at the registered office of the Company;

(iii) The requisition may consist of several documents in like form, each signed by one or more requisitionists.

(iv) The number of members entitled to requisition a meeting in regard to any matter shall be such number of them who hold, at the date of the deposit of the requisition, not less than one-tenth of such of the paid-up capital of the Company as at the date carries the right of voting in regard to that matter.

(v) Where two or more distinct matters are specified in the requisition, the provisions of clause (iv) shall apply separately in regard to each such matter, and the requisition shall accordingly be valid only in respect of those matters in regard to which the condition specified in that clause is fulfilled;

(vi) If the Board does not within twenty-one days from the date of the deposit of a valid requisition in regard to any matters, proceed duly to call a meeting for the consideration of those matters on a day not later than forty-five days from the date of deposit of the requisition, the meeting may be called by such of the requisitionists as represent either a majority in value of the paid up share capital held by all of them or not less than one-tenth of such of the paid up share capital of the Company as is referred to in clause (iv) whichever is less. However, for the purpose of this clause the Directors shall, in the case of a meeting at which a resolution is to be proposed as a special resolution, give such notice thereof as required by the Act.

(vii) A meeting called under clause (vi) by the requisitionists or any of them-

(a) shall be called in the same manner, as nearly as possible, as that in which meetings are to be called by the Board, but

(b) shall not be held after the expiration of three months from the date of the deposit of the requisition; Provided nothing contained in this sub-clause shall be deemed to prevent a meeting duly commenced before the expiry of the period of three months aforesaid, from adjourning to some day after the expiry of that period;

(viii) Where two or more persons hold any shares or interest in the Company jointly, a requisition, or a notice calling a meeting, signed by one or some only of them shall, for the purposes of this Article have same force and effect as if it had been signed by all of them;

(ix) Any reasonable expenses incurred by the requisitionists by reason of the failure of the Board to call a meeting shall be reimbursed to the requisitionists by the Company and any sum so reimbursed shall be retained by the Company out of any sums due or to become due from the Company by way of fees or other remuneration for their services to such of the Directors as were in default.

63. CIRCULATION OF MEMBERS' RESOLUTION:

(i) Subject to the provisions of section 188 of the Act, the Directors shall on the requisition in writing of such number of members as is hereinafter specified and (unless the Company otherwise resolves) at the expense of the requisitionists:

(a) give to the members of the Company entitled to receive notice of the next Annual General Meeting, notice of any resolution which may properly be moved and is intended to be moved at their meetings;

(b) circulate to members entitled to have notice of any general meeting sent to them, any statement of not more than one thousand words with respect to the matter referred to in any proposed resolution or any business to be dealt with at that meeting.

(ii) The number of members necessary for a requisition under clause (i) hereof shall be;

(a) such number of members as represent not less than one twentieth of the total voting power of all the members having at the date of the requisition a right to vote on the resolution or business to which the requisition relates; or

(b) not less than such number of members as having the right aforesaid and holding shares in the Company on which there has been paid up an aggregate sum of not less than Rupees one lakh in all.

(iii) Notice of any such resolution shall be given and any such statement shall be circulated to members of the Company entitled to have notice of the meeting sent to them, by serving a copy of the resolution or statement on each member in any manner permitted by the Act for service of notice of the meeting, and notice of such resolution shall be given to any other member of the Company by giving notice of the general effect of the resolution in any manner permitted for service of notice of the meeting of the Company.

Provided that the copy of the resolution shall be served or notice of the effect of the resolution shall be given, as the case may be in the same manner and so far as practicable, at the same time as the notice of the meeting and where it is not practicable for it to be served or given at that time, it shall be served or given as soon as practicable thereafter.

(iv) The Company shall not be bound under this Article to give notice of any resolution or to circulate any statement unless a copy of the requisition signed by the requisitionists (or two or more copies of which between them contain the signatures of all the requisitionists) is deposited at the registered office of the Company,

(a) in the case of a requisition requiring notice of resolution, not less than six weeks before the meeting; and

(b) in the case of any other requisition, not less than two weeks before the meeting and there is deposited or tendered with the requisition a sum reasonably sufficient to meet the Company's expenses in giving effect thereto; provided that if after a copy of the requisition requiring notice of a resolution has been deposited at the registered office of the Company, an annual general meeting is called for a date six weeks or less after such copy has been deposited, the copy although not deposited within the time required by this Article shall be deemed to have been properly deposited for the purpose thereof.

(v) The Company shall also not be bound by this Article to circulate any statement, if on the application either of the Company or of any other person who claims to be aggrieved, the Company Law Board or such other authority as may be specified by the Act is satisfied that the rights conferred by this Article are being abused to secure needless publicity for defamatory matter.

(vi) Notwithstanding anything in these Articles contained, the business which may be dealt with an Annual General Meeting shall include any resolution of which notice is given in accordance with this Article and for the purpose of this sub-clause notice shall be deemed

to have been so given notwithstanding accidental omission in giving it, to one or more members.

64. NOTICE OF MEETING:

(i) A general meeting of the Company may be called by giving not less than fourteen days notice in writing.

(ii) A general meeting may be called after giving shorter notice than that specified in clause (i) if consent is accorded thereto:

(a) in the case of an Annual General Meeting by all the members entitled to vote thereat, and

(b) in the case of any other meeting by members of the Company holding not less than 95% of such part of the paid-up capital of the Company as gives them a right to vote at the meeting. Provided that where any members of the Company are entitled to vote only on some resolution or resolutions to be moved at a meeting and not on the others, those members shall be taken into account for the purpose of this sub-clause in respect of the former resolution or resolutions and not in respect of the latter.

65. CONTENTS AND MANNER OF SERVICE OF NOTICE:

(i) Every notice of a meeting of the Company shall specify the place and the day and hour of the meeting and shall contain a statement of the business to be transacted thereat;

(ii) Notice of every meeting of the Company shall be given:

(a) to every member of the Company in any manner authorised by section 53 of the Act;

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(b) to the persons entitled to a share in consequence of the death or insolvency of a member by sending it through the post in a prepaid letter addressed to them by name or by the title of representatives of the deceased, or assignees of the insolvent or by any like description, at the address, if any, in India supplied for the purpose by the person claiming to be so entitled, or until such an address has been supplied, by giving the notice in any manner in which it might have been given if the death or insolvency had not occurred; and

(c) to the Auditor or Auditors for the time being of the Company in any manner authorised by section 53 of the Act in the case of any member or members of the Company.

(iii) The accidental omission to give notice to, or the non -receipt of notice by, any member or other person to whom it should be given shall not invalidate the proceedings at the meeting.

66. SPECIAL BUSINESS: All business to be transacted at an Annual General Meeting with the exception of business relating to (i) the consideration of the accounts, balance sheet and the reports of the Auditors and Directors (ii) the declaration of a dividend (iii) the appointment of and the fixing of the remuneration of the Auditors and all business to be transacted at any other meeting of the Company shall be deemed special. Provisions of section 173 of the Act shall not apply to the Company.

67. NOTICE REQUIRED FOR SPECIAL BUSINESS: No meeting, Annual or Extraordinary shall be competent to enter upon, discuss or transact any item of business deemed to be special unless notice thereof is given in the notice convening the meeting.

68. QUORUM: The quorum for any meeting of the Shareholders shall be the minimum quorum requirement stipulated by the Act. If within half an hour of the time appointed for the meeting no quorum is present, the meeting shall be adjourned to the same day one (1) week later at the same time and place. If at the adjourned meeting no quorum is present within half an hour from the time appointed for the meeting, any two Shareholders present or represented at such meeting shall constitute a quorum; provided, that no action or decision shall be taken on any matter not specified in the agenda of the meeting when it was first called.

69. CHAIRMAN OF GENERAL MEETING: The Chairman of the Board shall be entitled to take the chair at every general meeting. If there is no Chairman or if at any meeting the Chairman shall not be present within fifteen minutes after the time appointed for holding such meeting, or is unwilling to act, the Directors present may choose one of their members to act as Chairman of the meeting and in default of their doing so, the members present shall choose one of the Directors to take the chair and if no Directors are present or be willing to take the chair, the members present shall choose one of themselves to be the Chairman of the meeting.

70. BUSINESS CONFINED TO ELECTION OF CHAIRMAN WHILE CHAIR VACANT: No business shall be discussed at any general meeting except the election of a Chairman while the chair is vacant.

71. RESOLUTION MUST BE PROPOSED AND SECONDED: No resolution shall be submitted to a meeting, unless proposed by a member present and entitled to vote at such meeting and seconded by another member present and entitled to vote at such meeting.

72. HOW QUESTION TO BE DECIDED AT MEETING: At any general meeting a resolution put to vote at the meeting shall be decided by show of hands unless a poll is demanded by a member. A single member present in person or by proxy can demand poll whether before or on the declaration of the result of the voting on any resolution on show of hands.

73. CHAIRMAN'S DECLARATION OF RESULT OF VOTING: A declaration by the Chairman that on a show of hands a resolution has or has not been carried or has not been carried either unanimously or by a particular majority and an entry to that effect in the books containing the minutes of the meeting of the Company, shall be conclusive evidence of the fact without proof of the number or proportion of the votes cast in favour of or against such resolution.

74. RIGHT OF MEMBERS TO USE THEIR VOTES DIFFERENTLY: On a poll taken at a meeting of the Company, a member entitled to more than one vote, or his proxy or other person entitled to vote for him as the case may be, need not, if he votes, use all his votes or cast in the same way all the votes he uses.

75. SCRUTINEERS AT POLL:

(i) Where a poll is to be taken, the Chairman of the meeting shall appoint two scrutineers to scrutinise the votes given on the poll and to report thereon;

(ii) The Chairman shall have power, at any time before the result of the poll is declared, to remove a scrutineer from office and to fill vacancies in the office of the scrutineer arising from such removal or from any other cause;

(iii) Of the two scrutineers appointed under this Article, one shall always be a member (not being an officer or employee of the Company) present at the meeting, provided that such a member is available and willing to be appointed.

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76. MANNER OF TAKING POLL AND RESULT THEREOF:

(i) Subject to the provisions of the Act, the Chairman of the meeting shall have power to regulate the manner in which a poll shall be taken.

(ii) The result of the poll shall be deemed to be the decision of the meeting on the resolution on which the poll was taken.

77. MOTION HOW DECIDED IN CASE OF EQUALITY OF VOTES: In the case of an equality of votes, whether on show of hands or on a poll, the Chairman of the meeting at which the show of hands takes place or at which the poll is demanded, shall be entitled to a casting vote in addition to his own vote or votes to which he may be entitled as a member.

VOTES OF MEMBERS

78. VOTING BY CORPORATION: Any member who is a corporation present by a representative duly authorised by a resolution of the Directors or other governing body of such corporation in accordance with the provisions of section 187 of the Act may vote on a show of hands as if he was a member of the Company. A copy of such resolution duly signed by one Director of such corporation or by a member of its governing body and certified by him as being a true copy of the resolution, shall, on production at the meeting be accepted by the Company as sufficient evidence of the validity of his appointment.

79. VOTES OF JOINT HOLDERS: In the case of joint holders, the vote of the senior who tenders a vote, whether in person or by proxy, shall be accepted to the exclusion of the votes of the other joint holders. For this purpose, seniority shall be determined by the order in which the names stand in the register of members.

80. VOTING BY MEMBER OF UNSOUND MIND: A member of unsound mind, or in respect of whom an order has been made by any court having jurisdiction in lunacy, may vote, whether on a show of hands or on a poll, by his committee or other legal guardian, and any such committee or guardian may, on a poll, vote by proxy.

81. NO MEMBER TO VOTE UNLESS CALLS ARE PAID UP: No member shall be entitled to vote at any general meeting either personally or by proxy unless all calls or other sums presently payable by him in respect of shares in the Company have been paid.

82. OBJECTION AS TO QUALIFICATION OF VOTER: No objection shall be raised to the qualification of any voter except at the meeting or adjourned meeting at which the vote objected to is given or tendered and every vote not disallowed at such meeting shall be valid for all purposes. Any such

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objection made in due time shall be referred to the Chairman of the meeting, whose decision shall be final and conclusive.

83. PROXIES: Any member of the Company entitled to attend and vote at a meeting of the Company or his constituted attorney appointed for the purpose shall be entitled to appoint another person (whether a member or not) as his proxy to attend and vote instead of himself, but a proxy so appointed shall not have any right to speak at the meeting. The proxy shall not be entitled to vote except on a poll.

84. VOTES MAY BE GIVEN BY PROXY OR ATTORNEY: Votes may be given either personally or by attorney or by proxy or in case of a corporation, also by a representative duly authorised as aforesaid.

85. EXECUTION OF INSTRUMENT OF PROXY: The instrument appointing a proxy shall be in writing under the hand of the appointer or his attorney or if such appointer is a company or corporation, under its common seal or under the hand of a person duly authorised by such company or corporation in that behalf, or under the hand of its attorney who may be the appointer.

86. DEPOSIT OF INSTRUMENT OF PROXY: The instrument appointing a proxy and the power of attorney or other authority, if any, under which it is signed or a notarially certified copy of that power or authority, shall be deposited at the registered office of the Company not less than 48 hours before the time for holding the meeting or adjourned meeting at which the person named in the instrument proposed to vote, or, in the case of a poll, not less than 24 hours before the time appointed for the taking of the poll; and in default the instrument of proxy shall not be treated as valid.

87. FORM OF INSTRUMENT OF PROXY: An instrument appointing a proxy shall be in either of the forms in Schedule IX to the Act or a form as near thereto as circumstances admit.

88. VALIDITY OF VOTES GIVEN BY PROXY: A vote given in accordance with the terms of an instrument of proxy shall be valid, notwithstanding the previous death or insanity of the principal or the revocation of the proxy or of the authority under which the proxy was executed, or the transfer of the shares in respect of which the proxy is given. Provided that no intimation in writing of such death, insanity, revocation or transfer shall have been received by the Company at its registered office before the commencement of the meeting or adjourned meeting at which the proxy is used.

89. MINUTES OF GENERAL MEETINGS: The Company shall cause minutes of all proceedings of general meetings to be entered in books kept for that purpose. The minutes of each meeting shall contain a fair and correct summary of the proceedings thereat. All appointments of officers made at any of the meetings shall be included in the minutes of the meetings. Any such minute, if purporting to be signed by the Chairman of the meeting at

which the proceedings took place or in the event of the death or inability of the Chairman, by a Director duly authorised by the Board for the purpose, shall be evidence of the proceedings.

DIRECTORS

90. NUMBER OF DIRECTORS: The number of Directors of the Board holding office at any one time shall be not less than two (2) and not more than seven (7) including all kinds of Directors.

91. CHAIRMAN OF THE BOARD: The Chairman of the Board shall be nominated by the largest shareholder of the Company who shall preside over all the meetings of the Board of Directors as well as the general meetings. Provided that, there being no one single largest shareholder or the single largest shareholder not making such nomination, one among the Directors present at such meetings shall be elected as Chairman by the remaining Directors who shall chair only such meeting.

92. FIRST DIRECTORS: The persons hereinafter named are the first Directors of the Company:

(i). Mr. M.Goutham Reddy

(ii) Mr. Kishore Kumar Mohanty

(iii) Mr.M.Vikram Reddy

(iv) Mr. T.R. Bharatan

93. ADDITIONAL DIRECTOR:

(i) The Board shall have power at any time, and from time to time, to appoint a person as an additional Director, provided the number of the Directors and additional Directors together shall not at any time exceed the maximum strength fixed for the Board as above.

(ii) Such person shall hold office only up to the date of the next Annual General Meeting of the Company but shall be eligible for appointment by the Company as a Director at that meeting subject to the provisions of the Act.

94. ALTERNATE DIRECTOR:

(i) Subject to section 313 of the Act, the Board may appoint an alternate Director to act for a Director (hereinafter called "the original Director") at his suggestion or otherwise, during his absence for a period of not less than three months from the State in which meetings of the Board are ordinarily held;

(ii) An alternate Director appointed under clause (i) shall not hold office as such for a period longer than permissible to the original Director in whose place he has been appointed and shall vacate office if and when the original Director returns to the State in which meetings of the Board are ordinarily held;

(iii) If the term of office of the original Director is determined before he so returns to the State as aforesaid, any provision for automatic reappointment of retiring Director in default of another appointment shall apply to the original, and not to the alternate Director.

95. QUALIFICATION SHARES: No Director shall be required to hold any share or qualification shares of the Company.

96. DIRECTORS MAY ACT NOTWITHSTANDING VACANCY: Subject to the provisions of the Act, the continuing Directors may act notwithstanding any vacancy in their body but so that if the number falls below the minimum number fixed, the Directors shall not, except in emergencies or for the purpose of filling up vacancies or for summoning a general meeting of the Company, act so long as the number is below the minimum and they may so act notwithstanding the absence of a necessary quorum under the provisions of these Articles.

97. VACATION OF OFFICE BY DIRECTOR: Subject to the provisions of section 283 of the Act, the office of a Director shall become vacant if:

(i) the Director is found to be of unsound mind by a court of competent jurisdiction; or

(ii) the Director applies to be adjudicated an insolvent; or

(iii) the Director is adjudged an insolvent; or

(iv) he is convicted by a court for any offence involving moral turpitude and sentenced in respect thereof to imprisonment for not less than six months; or

(v) the Director fails to pay any calls in respect of shares of the Company held by the Director alone or jointly with others within six months from the last date fixed for the payment of such calls made unless the Central Government has, by notification in the official gazette, removed the disqualification incurred by such failure; or

(vi) the Director absents himself from three consecutive meetings of the Directors or from all meetings of the Directors for continuous period for three months whichever is the longer without leave of absence from the Board of Directors; or

(vii) the Director acts in contravention of section 299 of the Act; or

(viii) the Director becomes disqualified by an order of the court under section 203 of the Act; or

(ix) the Director is removed in pursuance of section 284 of the Act by an ordinary resolution of the Company, before the expiry of the Director's period of office; or

(x) the Director resigns office by notice in writing addressed to the Company or to the Directors; or

(xi) the Director, the Director's relative or partner or any firm in which the Director or the Director's relative is a partner or any private company of which the Director is a director, member, or holds any office of profit under the Company or any subsidiary thereof in contravention of section 314 of the Act; or

(xii) having been appointed a Director by virtue of his holding any office or other employment in the Company, he ceases to holds such office or other employment in the Company.

98. REMOVAL OF DIRECTORS: The Company may by ordinary resolution remove a Director before the expiry of his period of office pursuant to section 284 of the Act.

99. DISCLOSURE OF INTEREST BY DIRECTORS: Every Director of the Company who is in any way, whether directly or indirectly concerned with or interested in a contract or arrangement entered into or to be entered into, by or on behalf of the Company, shall disclose the nature of his concern or interest at a meeting of the Board. A general notice given to the Board by Director under section 299 of the Act shall be deemed to be a sufficient disclosure to concern or interest in relation to any contract or arrangement so made.

MANAGING DIRECTOR AND WHOLE-TIME DIRECTOR

100. APPOINTMENT OF MANAGING DIRECTOR OR WHOLE-TIME DIRECTOR: The Directors may from time to time appoint or re-appoint one or more of their body to be the Managing or Whole-Time Director of the Company for such term and subject to such remuneration and other conditions as they think fit.

PROCEEDINGS OF BOARD

101. NOTICE OF BOARD MEETINGS: Unless otherwise agreed by all of the Directors, at least seven (7) days' prior written notice of any meeting of the Board of Directors shall be given to all Directors and their alternates. Notice of every meeting of the Board shall be given in writing to every Director for the time being in India and at his usual address in India to every other Director and in addition, to every Director resident outside India, written notice shall be sent at his usual address outside India. Notice may be given by email, fax, telegram, cable, telex or other means of communication to any Director who is not in India. However, the Directors shall have power to waive any notice shorter than as prescribed above.

102. QUORUM: The quorum for all meetings of the Board of Directors shall be one-third of the total strength of the Board of Directors, (any fraction contained rounded off to one) or two Directors, whichever is higher.

103. BOARD ACTIONS: Except for actions in respect of which the Act requires a meeting, a resolution in writing approved and signed by the requisite majority of Directors shall be valid and effectual as if it had been a resolution passed at a meeting of the Directors duly convened and held. Except as otherwise provided in the Memorandum and Articles or under the Act, all actions of the Board of Directors shall require a simple majority (more than 50%) affirmative vote for approval.

104. MEETINGS OF THE BOARD: Meetings of the Board of Directors shall take place at such locations within or outside India and at such time or times as may be designated by the Chairman, but not less frequently than once every three (3) calendar months and at least 4 times in each year.

105. ADJOURNMENT OF MEETING: If a meeting of the Board cannot be held because a quorum is not present, the meeting shall automatically stand adjourned to such other date and time, if any, as may be fixed by the Chairman not being later than seven days from the date originally fixed for the meeting.

106. POWER OF BOARD: A meeting of the Board for the time being at which a quorum is present shall in accordance with these Articles be competent to exercise all or any of the authorities, powers and discretions which by or under the Act or these Articles are for the time being vested in or exercisable by the Board generally.

107. COMMITTEE OF DIRECTORS: Subject to the restrictions contained in section 292 of the Act, the Board may delegate any of their powers to Committees of the board consisting of such number or numbers of its body as it thinks fit, and it may from time to time revoke and discharge any such Committee of the Board either wholly or in part and either as to persons or purposes. Every Committee of the Board so formed shall in the exercise of

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the powers so delegated conform to any regulations that may from time to time be imposed on it by the Board. All acts done by any such Committee of the Board in conformity with such regulations and in fulfilment of the purposes of their appointment but not otherwise shall have the like force and effect as if done by the Board.

108. RESOLUTION BY CIRCULATION: No resolution shall be deemed to have been duly passed by the Board or by a Committee thereof by circulation unless the resolution has been circulated in draft, together with the necessary papers, if any, to all the Directors or to all the member-Directors of the Committee, as the case may be, then in India (not being less in number than the quorum fixed for a meeting of the Board or Committee, as the case may be) and to all other Directors or members at their usual address in India, and has been approved by such of the Directors as are then in India, or by a majority of such of them, as are entitled to vote on the resolution.

109. VALIDITY OF ACTIONS OF THE BOARD OR COMMITTEE THEREOF: All acts done by any meeting of the Board or by a Committee of the Board, or by any person acting as a Director in accordance with these Articles shall, notwithstanding that it shall afterwards be discovered that there was some defect in the appointment of such Director or a person acting as aforesaid, or that they were or any of them were disqualified or had vacated office or that the appointment of any of them had been terminated by virtue of any provisions contained in the Act or in these Articles, be as valid as if every such person had been duly appointed, and was qualified to be a Director and had not vacated his office or his appointment had not been terminated. Nothing in this Article shall be deemed to give validity to acts done by a Director after his appointment has been shown to the Company to be invalid or to have terminated.

110. PROCEDURE WHERE MEETING ADJOURNED FOR WANT OF QUORUM: If a meeting of the Board could not be held for want of quorum, the Chairman may adjourn the meeting at such day, date and time as he may consider convenient to the Board.

111. MEETINGS OF COMMITTEES HOW TO BE GOVERNED: The meetings and proceedings of any such Committee shall be governed by the provisions of these Articles for regulating the meetings and proceedings of the Directors, so far as the same are applicable thereto and are not superseded by any regulations made by the Directors under the last preceding Article.

112. MINUTES OF PROCEEDINGS OF BOARD AND COMMITTEES: The Company shall cause minutes of meetings of the Board of Directors and all Committees of the Board to be duly entered in a book or books provided for that purpose. The minutes shall contain:-

(i) a fair and correct summary of the proceedings at the meeting.

(ii) the names of the Directors present at the meeting of the Board of Directors or of any Committee of the Board;

(iii) all orders made by the Board and Committee of the Board and all appointments of officers and Committee of Directors ;

(iv) all resolutions and proceedings of meetings of the Board and the Committee of the Board; and

(v) in the case of each resolution passed at a meeting of the Board or Committee of the Board, the names of the Directors, if any, dissenting from, or not concurring in, the resolution.

113. BY WHOM MINUTES TO BE SIGNED: The minutes of proceedings of every meeting of the Board or any Committee of the Board, if purporting to be dated and signed by the Chairman of such meeting or by the Chairman of the next succeeding meeting in accordance with the provisions of section 193 of the Act, shall for all purposes whatsoever be evidence of the actual passing of the resolution recorded and actual and regular transaction or occurrence of the proceedings so recorded and of the regularity of the meeting at which the same shall appear to have taken place.

POWERS OF DIRECTORS

114. GENERAL POWERS OF COMPANY VESTED IN DIRECTORS:

Subject to the provisions of the Act and these Articles, the business of the Company shall be managed by the Directors who may exercise all such powers and do all such acts and things as the Company is by its Memorandum of Association or otherwise authorised to exercise and do and are not by these Articles or by statute directed or required to be exercised or done by the Company in general meeting, but subject nevertheless to the provisions of the Act and of the Memorandum of Association and these Articles and to any regulations not being inconsistent with the Memorandum of Association and these presents, from time to time, made by the Company in general meeting provided that no such regulation shall invalidate any prior act of the Directors which would have been valid if such regulation had not been made.

CERTAIN POWERS TO BE EXERCISED BY BOARD ONLY: The Board shall exercise the following powers on behalf of the Company, and it shall do so only by means of resolutions passed at its meetings:-

(i) the power to make calls on shareholders in respect of money unpaid on their shares;

(ii) the power to issue debentures;

(iii) the power to borrow moneys otherwise than by debentures;

(iv) the power to invest the funds of the Company; and

(v) the power to make loans.

Provided that the Board may, by a resolution passed at the meeting, delegate to any Committee of Directors , the Managing Director, the Whole-Time Director or any other principal officer of the Company or in the case of a branch office of the Company, the principal officer of the branch office, the powers specified in clauses (iii),(iv) and (v) to the extent specified in sub-sections (2),(3) and (4) respectively of section 292 of the Act, on such conditions as the Board may prescribe.

116. INTERESTED DIRECTOR MAY PARTICIPATE OR VOTE IN BOARD'S PROCEEDINGS:

(i) No Director shall be disqualified from his office by reason of his contracting with the Company either as a vendor, purchaser or otherwise nor shall any contract or arrangement entered into by or on behalf of the Company in which any Director shall be in any way interested be avoided nor shall any Director be liable to account for the Company any profit realised by any such contract or arrangement by reason only of such Director holding that office of the fiduciary relation in the very establishment.

(ii) Notwithstanding anything to the contrary contained in these Articles, a Director shall be entitled to take part in the discussions of and vote on, any contract or arrangement entered into, by or on behalf of the Company in spite of his being in any way, whether directly or indirectly concerned or interested in any such contract or arrangement and his presence shall be counted for the purpose of forming quorum at the time of any such discussion or vote and if he does vote, his vote shall be valid and effective for all purposes and in all respects.

COMMON SEAL

117. THE COMMON SEAL, ITS CUSTODY AND USE: The Directors shall provide a common seal for the purpose of the Company and shall have power from time to time to destroy the same and substitute a new seal in place thereof, and the Directors shall provide for the safe custody of the seal for the time being and the seal shall never be used except by or under the authority of the Directors or a Committee of Directors and in the presence of any one of the Directors or any other person as the Board may appoint for the purpose, who shall sign every instrument to which the seal is affixed. Provided that certificates of shares may be under the signatures of such person as provided by the Companies (Issue of Share Certificates) Rules in force from time to time. Save as otherwise expressly provided by the Act, a document or proceedings requiring authentication by the Company may be

signed by a Director, or the Secretary or any other officer authorised in that behalf by the Board and need not be under its seal.

DIVIDENDS

118. DIVISION OF PROFITS: The profits of the Company, subject to any special rights relating thereto created or authorised to be created by the Memorandum of Association or these presents and subject to the provisions of the Act, and these Articles shall be divisible among the members in proportion to the amount of capital paid up in the shares held by them respectively.

119. CAPITAL PAID UP IN ADVANCE AT INTEREST NOT TO EARN DIVIDEND: Where capital is paid up in advances of calls upon the footing that the same shall carry interest, such capital shall not, whilst carrying interest, confer a right (to dividend or) to participate in profits.

120. DIVIDEND IN PROPORTION TO AMOUNT PAID UP: The Company may pay dividends in proportion to the amount paid up or credited as paid up on each share, where a larger amount is paid up or credited as paid up on some shares than on others.

121. COMPANY IN GENERAL MEETING MAY DECLARE DIVIDEND: The Company in general meeting may declare a dividend to be paid to the members according to their respective rights and interests in the profits and may fix the time for payment.

122. NO LARGER DIVIDEND THAN RECOMMENDED BY DIRECTORS: No larger dividend shall be declared than is recommended by the Directors but the Company in general meeting may declare a smaller dividend, subject to the provisions of section 205 of the Act, and no dividend shall carry interest as against the Company. The declaration of the Directors as to the amount of the net profits of the Company shall be conclusive.

123. INTERIM DIVIDEND: The Directors may, from time to time, pay to the members such interim dividends as in their judgment the position of the Company justifies.

124. RETENTION OF DIVIDENDS UNTIL COMPLETION OF TRANSFER: The Directors may retain the dividends payable upon shares in respect of which any person is entitled to transfer, until such person shall become a member in respect of such shares.

125. NO MEMBER TO RECEIVE DIVIDEND WHILE INDEBTED TO THE COMPANY: Subject to section 205 of the Act, no member shall be entitled to receive payment of any interest or dividend in respect of his share or shares whilst any money may be due or owing from him to the Company in respect of such share or shares or otherwise howsoever either alone or jointly with any other person or persons and the Directors may deduct from the

interest or dividend payable to any member all sums of money so due from him to the Company.

126. TRANSFER OF SHARES MUST BE REGISTERED: A transfer of shares shall not pass the right to any dividend declared thereon before the registration of the transfer.

127. SPECIAL PROVISIONS WITH REFERENCE TO DIVIDEND: No dividend shall be payable except in cash. Provided that, nothing in this Article shall be deemed to prohibit the capitalization of profits or reserves of the Company for the purpose of issuing fully paid up bonus shares or paying up any amount for the time being unpaid on any shares held by the members of the Company.

128. DIVIDEND HOW REMITTED: Any dividend, interest or other moneys payable in cash in respect of shares may be paid by cheque or warrant sent through the post directed to the registered address of the holder or in the case of joint holders, to the registered address of one of the joint holders who is first named on the register of members, or to such person and to such address as the holder or joint holder may in writing direct. Every such cheque or warrant shall be made payable to the order of the person to whom it is sent.

129. SETTING ASIDE PROFITS BEFORE RECOMMENDING DIVIDEND:

(i) The Board may, before recommending any dividend, set aside out of the profits of the Company such sums as it thinks proper as a reserve or reserves which shall at the discretion of the Board, be applicable for any purpose to which the profits of the Company may be properly applied, including provision for meeting contingencies or for equalising dividends; and pending such application, may, at the like discretion, either be employed in the business of the Company or be invested in such investments as the Board may, from time to time, think fit.

(ii) The Board may also carry forward any profits which it may think prudent not to divide, without setting them aside as a reserve.

CAPITALISATION

130. CAPITALISATION OF PROFITS:

(i) Any general meeting may upon the recommendation of the Directors resolve that any moneys, investments or other assets forming part of the undivided profits of the Company standing to the credit of any of the Company's Reserve Account or to the credit of the profit & loss account or any Capital Redemption Reserve Account or in the hands of the Company and available for dividend or representing premiums received on the issue of shares and standing to the credit of

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the Securities Premium Account be capitalised and distributed amongst such of the members as would be entitled to receive the same if distributed by way of dividend and in the same proportions on the footing that they become entitled thereto as capital and that all or any part of such capitalised funds shall not be paid in cash but shall be applied subject to the provisions contained in clause (ii) hereof on behalf of such member either in or towards:-

(a) paying up any amounts for the time being remaining unpaid on any share held by such members respectively; or

(b) paying up in full the un-issued shares or debentures of the Company to be allotted and distributed and credited as fully paid up to the and amongst such members in the proportions aforesaid; or

(c) partly in the way specified in sub-clause (a) and partly in that specified in sub-clause (b) and that such distribution or payment shall be accepted by such members in full satisfaction of their interest in the capitalised sum.

(ii) (a) Any moneys, investments or other assets representing premiums received on the issue of shares and standing to the credit of Securities Premium Account;

(b) If the Company shall have redeemed any redeemable preference shares, all or any part of any Capital Redemption Reserve arising from the redemption of such shares, may by resolution of the Company be applied only in payment in full or part any new share or any shares then remaining un-issued to be issued to such members of the Company as the general meeting may resolve up to an amount equal to the nominal amount of the shares so issued.

(iii) Any general meting may resolve that any surplus moneys arising from the realisation of any capital assets of the Company or any investments representing the same or any other undistributed profits of the Company not subject to charge for income tax be distributed among the members on the footing that they receive the same as capital.

(iv) Whenever such a resolution under this Article shall have been passed the Board shall -

(a) make all appropriations and applications of the undivided profits resolved to be capitalised thereby and all allotments and issues of fully paid shares or debentures, if any, and

(b) generally do all acts and things required to give effect thereto.

(v) The Board shall have power -

(a) to make such provision by the issue of fractional certificate or by payment in cash or otherwise as it thinks fit, in the case of the shares becoming distributable in fractions and the fraction of less value than Re.1 (Rupee One only) may be disregarded;

(b) to authorise any person to enter on behalf of all the members entitled thereto, into an agreement with the Company providing for the allotment to them respectively credited as fully paid up, of any further shares to which they may be entitled upon such capitalization, or (as the case may require) for the payment by the Company on the application of their respective proportions of the profits resolved to be capitalised of the amounts or any part of the amounts remaining unpaid on their existing shares and may vest any such cash or specific assets in trustees upon the trust for the person entitled to the dividend or capitalised funds as may seem expedient to the Board.

(vi) Any agreement made under such authority shall be effective and binding on all such members.

ACCOUNTS

131. MAINTENANCE OF BOOKS OF ACCOUNT; The Directors shall cause true accounts to be prepared in accordance with the generally accepted accounting principles of both India and United States of America and to be kept of (i) all sums of money received and expended by the Company and the matters in respect of which such receipt and expenditure take place (ii) all sales and purchases of goods by the Company and (iii) the assets, credits and liabilities of the Company, and generally of all its commercial, financial and other affairs, transactions and engagements and of all other matters, necessary for showing the true financial state and condition of the Company, and the books of accounts shall be kept in English and in the manner provided in section 209(3) of the Act and the books of accounts shall be kept at the registered office or such other place or places in India as the Directors think fit, and shall be open to inspection by the Directors during business hours.

132. STATEMENT OF ACCOUNTS AND REPORT TO BE FURNISHED TO THE GENERAL MEETING: Once at least in every calendar year the Directors shall place before the Company in annual general meeting a Profit and Loss Account for the period since the preceding account and a Balance Sheet containing a summary of the assets and liabilities of the Company

made up to a date not more than six months before the meeting or in case where an extension of time has been granted for holding the meeting up to such extended time and every such Balance Sheet shall as required by section 217 of the Act, be accompanied by a Report (to be attached thereto) of the Directors as to the state and condition of the Company, and as to the amount (if any) set aside by them for the Reserve Fund, General Reserve or Reserve Account shown specifically in the accounts.

133. FORM AND CONTENTS OF BALANCE SHEET AND PROFIT AND LOSS ACCOUNT: Every Balance Sheet and Profit and Loss Account of the Company shall give a true and fair view of the state of affairs of the Company and shall, subject to the provisions of section 211 of the Act, be in the forms set out in Parts I and II respectively of Schedule VI of the Act, or as near thereto as circumstances admit.

134. AUTHENTICATED ACCOUNTS TO BE SENT TO MEMBERS: The Balance Sheet and the Profit and Loss Account of the Company shall be signed by the Manager or Secretary if any, and by not less than two Directors of the Company one of whom shall be a Managing Director, if appointed or when only one Director is for the time being in India by such Director and by the Manager or Secretary. The Balance Sheet and the Profit and Loss Account shall be approved by the Board of Directors before they are signed on behalf of the Board in accordance with the provisions of this Article and before they are submitted to the Auditors for their report thereon. The Auditors' Report shall be attached to the Balance Sheet and the Profit and Loss Account. A copy of such Balance Sheet and Profit and Loss Account so audited together with a copy of the Auditor's Report shall at least fourteen days before the meeting at which the same are to be laid before the members of the Company, subject to the provisions of section 219 of the Act, be sent to every member of the Company, to every trustee for the holders of any debentures issued by the Company, whether such member or trustee is or is not entitled to notices of general meeting of the Company sent to him, and to all persons other than such members or trustees, being persons so entitled and a copy of the same may be made available at the registered office of the Company for inspection by the members of the Company during a period of at least fourteen days before that meeting.

135. INSPECTION BY MEMBERS OF ACCOUNTS:

(i) The Board shall from time to time determine whether and to what extent and at what times and places and under what conditions or regulations, the accounts and books of the company, or any of them, shall be open to the inspection of members not being Directors.

(ii) No member (not being a Director) shall have any right of inspecting any account or book or document of the Company except as conferred by law or authorised by the Board or by the Company in general meeting.

AUDIT

136. ACCOUNTS TO BE AUDITED: Once at least in every year the accounts of the Company shall be balanced and audited and the correctness of the Profit and Loss Account and Balance Sheet as ascertained by one or more Auditor or Auditors.

137. APPOINTMENT AND QUALIFICATION OF AUDITORS:

(i) The Company shall at each Annual General Meeting appoint an Auditor or Auditors being Chartered Accountants to hold office from the conclusion of that meeting until the next Annual General Meeting and shall, within seven days of the appointment thereof give intimation thereof to every Auditor so appointed.

(ii) The Directors may fill up any casual vacancy that may occur in the office of Auditor by the appointment of a person being a Chartered Accountant who shall hold such office until the conclusion of the next Annual General Meeting, but while any such vacancy continues, the serving or continuing Auditors or Auditors (if any) may act. Provided that where such vacancy is caused by the resignation of the Auditor, the vacancy shall only be filled by the Company in general meeting.

(iii) No person other than a retiring Auditor shall be capable of being appointed to the office of Auditor at any Annual General Meeting unless special notice of a resolution for appointment of that person to the office of Auditor has been given by a member to the Company not less than 14 days before the meeting in accordance with section 190 of the Act, and the Company shall send a copy of any such notice to the retiring Auditor and shall give notice thereof to the members in accordance with section 190 of the Act and all the other provisions of section 225 of the Act shall be complied with. These provisions shall also apply to a resolution that a retiring Auditor shall not be re-appointed.

(iv) The remuneration of the Auditors of the Company shall be fixed by the Company in general meting except that the remuneration of any Auditor appointed to fill any casual vacancy, may be fixed by the Directors.

NOTICE

138 MANNER IN WHICH THE DOCUMENTS MAY BE SERVED ON MEMBERS:

(i) A notice (which expression for the purposes of these Articles shall be deemed to include any summons, process, order, judgment or any other document in relation to or in the winding up of the Company)

may be given by the Company to any member either personally or by sending it by post to him to his registered address or if he has no registered address in India to the address, if any , within India, supplied by him to the Company for giving notice to him.

(ii) Where a document (which shall for this purpose be deemed to include any summons, requisition, process, order, judgment or any other documents in relation to the winding-up of the Company) or a notice is sent by post, the service of such notice shall be deemed to be effected by properly addressing, pre-paying and posting a letter containing the notice. Provided that where a member has intimated to the Company in advance that document should be sent to him under a certificate of posting or by registered post, with or without acknowledgement due, and has deposited with the Company a sum sufficient to defray the expenses of doing so, service of the document or notice shall not be deemed to be effected unless it is sent in the manner intimated by the member, and, unless the contrary is proved, such service shall be deemed to have been effected in the case of a notice of a meeting at the expiration of 48 hours after the letter containing the same is posted, and in any other case, at the time at which the letter would have been delivered in the ordinary course of post.

(iii) A notice advertised in a newspaper circulating in the neighbourhood of the registered office of the Company shall be deemed to be duly served on the day on which the advertisement appears on every member of the Company who has no registered address in India and has not supplied to the Company an address within India for the giving of notice to him.

(iv) A notice may be served by the Company on the joint holders of a share by serving it on the joint holder named first in the register in respect of the share.

139. NOTICE ON PERSON ACQUIRING SHARES ON DEATH OR INSOLVENCY OF MEMBER: A notice may be given by the Company to the person entitled to a share in consequence of the death or insolvency of a member by sending it through the post in a pre-paid letter addressed to them by name or by the title of representatives of the deceased or assignee of the insolvent or by any like description at the address (if any) in India supplied for the purpose by the person claiming to be so entitled or until such an address has been so supplied) by giving the notice in any manner in which the same might have been given if the death or insolvency had not occurred.

140. NOTICE BY COMPANY AND SIGNATURE THERETO: Any notice to be given by the Company shall be signed by the Secretary or by such officer as the Directors may appoint. Such signature may be written, printed or lithographed.

141. SERVICE OF DOCUMENT ON THE COMPANY: A document may be served on the Company or an officer thereof by sending it to the Company or officer at the registered office of the Company by post under a certificate of posting or by registered post or by leaving it at its registered office.

WINDING UP

142. DISTRIBUTION OF ASSETS: If the Company shall be wound up and the assets available for distribution among the members as such shall be insufficient to repay the whole of the paid up capital, such assets shall be distributed so that, as nearly as may be, the losses shall be borne by the members in proportion to the capital paid up, or which ought to have been paid up, at the commencement of the winding up, on the shares held by them respectively, and if in a winding up the assets available for distribution among the members shall be more than sufficient to repay the whole of the capital paid up at the commencement of the winding up, the excess shall be distributed amongst the members in proportion to the capital paid up at the commencement of the winding up or which ought to have been paid up on the shared held by them respectively. But this Article is to be without prejudice to the right of the holders of shares issued upon special terms and conditions.

143. DISTRIBUTION IN SPECIE OR KIND:

(i) If the Company shall be wound up whether voluntarily or otherwise, the liquidators may, with the sanction of a special resolution, and any other sanction required by the Act, divide amongst the contributories in specie or kind, the whole or any part of the assets of the Company and may, with the like sanction, vest the whole or any part of the assets of the Company in trustees upon such trusts for the benefit of the contributories or any of them, as the liquidators with the like sanction shall think fit.

(ii) If thought expedient, any such division may subject to the provisions of the Act be otherwise than in accordance with the legal rights of the contributories (except where unalteration) and in particular any class may be given preference or special rights or may be excluded altogether or in part but in case any division otherwise than in accordance with the legal rights of the contributories shall be determined on, any contributory who would be prejudiced thereby shall have a right to dissent and ancillary rights as if such determination were a special resolution passed pursuant to section 494 of the Act.

(iii) In case any shares to be divided as aforesaid involve liability to calls or otherwise any person entitled under such division to any of the said shares may within ten days after the passing of the special

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resolution by notice in writing direct the liquidators to sell his proportion and pay him the net proceeds and the liquidators shall, if practicable, act accordingly.

144. RIGHT OF SHAREHOLDERS IN CASE OF SALE: A special resolution sanctioning a sale to any other company duly passed pursuant to section 494 of the Act may in like manner as aforesaid determine that any shares or other consideration receivable by the liquidators shall be distributed amongst existing members otherwise than in accordance with their rights and any such determination shall be binding upon all the members, subject to the rights of dissent and consequential rights conferred by the said section.

INDEMNITY

145. INDEMNITY: Subject to the provisions of the Act, every Director, member, Managing Director, Whole-Time Director or other officer of the Company or any person (whether an officer of the Company or not) employed by the Company as Auditor shall be indemnified out of the funds of the Company against all liabilities incurred by him as such Director, Manager, Managing Director, Whole-Time Director, officer or Auditor in which judgment is given in his favour or in which he is acquitted or in connection with any application under section 633 of the Act in which relief is granted to him by the court.

146. INDIVIDUAL RESPONSIBILITY OF DIRECTORS: Subject to the provisions of the Act, no Director, Auditor or other officer of the Company shall be liable for the acts, receipts, neglects or defaults of any other Director or officer or for joining in any receipt of other act for conformity or for any loss or expenses happening to the Company through the insufficiency or deficiency of title to any property acquired by the order of the Board for and on behalf of the Company through the insufficiency or deficiency of any security in or upon which any of the moneys of the Company shall be invested or for any loss or damage arising from the bankruptcy, insolvency or tortious act of any person firm or company to or with whom any moneys, securities or effects shall be entrusted or deposited or for any loss occasioned by any person, firm or company to or with whom any moneys, securities or effects shall be entrusted or deposited or for any loss occasioned by any error of judgment, omission, other loss, damage or misfortune whatsoever which shall happen in relation to the execution of the duties of his office or in relation thereto unless the same shall happen through his own dishonesty.

SECRECY

147. Every Director, Manager, Secretary, accountant, Auditor, trustee, member of a committee, officer, servant, agent or other person employed, in or dealing with its affairs including transactions with its customers and the state of accounts with any person shall not reveal any of the matters which may come to his knowledge in the discharge of his duties, except when required to do

National Highways Authority of India New Delhi

so by the Board or by a Court of Law or as be necessary in order to comply with any of the provisions contained in these Articles or the Act.

148. No member shall be entitled to require disclosure of any information respecting any of the Company's affairs save and except as required to be furnished by the Company to the members under the Act or considered expedient by the Board in the absolute discretion of the Directors.

We, the several persons whose names, address and occupations are subscribed hereunder are desirous of being formed in a company in pursuance of these Articles of Association.

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S.No.	Name, address, description and occupation of the Subscribers with their Signatures	No. of Equity Shares taken by each Subscriber	Signature of witness with address and occupation.
1.	Sd/- SREI Infrastructure Finance Ltd Vishwakarma,86-C Topsia Road (South) Kolkata – 700 046 Represented by Kishore Kumar Mohanty, Executive Director	5,000 (Five Thousand only)	Sd/- L.D.Reddy, Company Secretary 504,Afzal Commercial Complex Lakadikapool, Hyderabad-04
2.	Sd/- KMC Constructions Ltd MCH No.555, Arora Colony Road No.3, Banjara Hills Hyderabad – 500 034 Represented by M.Vikram Reddy Director	5,000 (Five Thousand only)	
3.	Sd/- M.Goutham Reddy S/o M.Raja Mohan Reddy Plot No.188,Road No.13 Jubilee Hills Hyderabad Occupation: Business Date of Birth: 02.11.1971	100 (One Hundred only)	

Place : Hyderabad

Date : 21.11.2005

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Letter No.1621/KMC/NHAI/15 BOT Projects/2005 Date: 27.02.2006

To

Mr.Pranavant

The General Manager (NS-II)

National Highways Authority of India

G-5 & G- 6, Sector - 10, Dwaraka

New Delhi - 110 075

Pl. obtain the comments of M/s Alliance urgently.
DGM(NS-2)SK
01/03

Sir,

Sub: (i) Design, Construction, Development, Finance, Operation and maintenance of Km 270.00 (Thrissur) to Km 316.70 (Angamali) and (ii) Improvement, operation and maint7enance of Km 316.700 (Angamali) to Km 342.00 (Edapalli) on NH-47 together called the "Project" in the State of Kerala on Build, Operate & Transfer (BOT) basis: Project Reference No. NS2/BOT/KL-1 - Reg.

Ref: Our Letter No. 1621/KMC/NHAI/15 BOT Projects/2005 dated 02.02.2006

In continuation of our letter cited above, we are pleased to submit that the SPV i.e. Guruvayoor Infrastructure Pvt. Ltd. has allotted 500 equity shares of Rs.10/- each to KMC Constructions Limited, Lead Member. We enclose herewith Form No.2 (Return of Allotments) for your information. At present KMC Constructions Limited is holding 5500 equity shares of Rs. 10/- each, which works out to approximately 52%.

From the above, it is understood that KMC Constructions Limited, Lead Member is holding 52% equity participation in the aforesaid SPV which is in line with the Clause 11.1 (xiii) of the Concession Agreement.

This is for your kind information.

Thanking you,

Yours faithfully,
KMC - SREI (Consortium)

B. Chandra Sekhar Reddy
Authorised Signatory

Encl : As above

National Highways Authority of India * New Delhi *

Guruvayoor Infrastructure Pvt. Ltd.

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FORM No. 2

RETURN OF ALLOTMENTS

Pursuant to Section 75(1) of THE COMPANIES ACT, 1956

Registration No. of Company 01-40180 Nominal Capital Rs. [illegible]/-

Name of Company GURUVAYOOR INFRASTRUCTURE PVT. LTD.

LIMITED / PRIVATE LIMITED

Presented by M. VIKRAM REDDY

Return of Allotments of the Guruvayoor Infrastructure Pvt. Ltd.

made on the following date /dates 17.02.2006

Registrar of Companies pursuant to section 75(1) filed with the

1. Shares allotted payable in cash:—

Class of shares	No. of Shares allotted	NOMINAL AMOUNT		Amount paid on application (excluding premium) Rs.	Amount paid or due and payable on allotment		Amount of Premium (if any) payable on shares Rs.	Amount of discount (if any) Rs.
		Per Share Rs.	Total Rs.		Paid Rs.	Due and payable Rs.		
1	2	3	4	5	6	7	8	9
1. Equity shares	500	10	5000	-	5000	-	-	-
2. Preference shares other than Redeemable preference shares								
3. Redeemable preference shares								

2. (a) Shares allotted for a consideration otherwise than in cash:—

(i) Equity Shares

(ii) Preference Shares

(iii) Redeemable Preference Shares

Number of Shares † .....

Nominal Amount of Shares Rs. -

Amount to be treated as paid-up on each share Rs. -

The consideration for which such shares have been allotted is as follows:-

Property and Assets acquired (Description)

Goodwill Rs. -

Service (give nature of service) Rs. -

Other items (to be specified) Rs. -

3. † Shares issued at a Discount—Number of shares -

Nominal amount of shares -

Amount of discount per share -

Paid-up per share -

(A copy of the resolution for the issue of the shares at a discount with a copy of the order of the Court and also a copy of the order of the Central Government where the discount exceeds 10 per cent should be attached to this return.)

4. Number of Bonus shares

Nominal amount of shares

Amount to be treated as paid up on each share Rs.

(A copy of the resolution authorising the issue of the Bonus shares [illegible])

DEPARTMENT OF COMPANY AFFAIRS
ROC CASH COUNTER RECEIPT
OFFICE OF THE REGISTRAR OF COMPANIES

REGISTRAR OF COMPANIES, HYDERABAD 20/02/2004

REC. NO.: 536147 REG NO.: 01-043139

[illegible] PRIVATE LIMITED

TYPE OF DOCUMENT	MODE OF PAYMENT	DATE OF DOCUMENT	AMOUNT RS.
FORM 2	CASH	[illegible]	300

[illegible] 15:30 300

TOTAL

N: NORMAL FEE A: ADDITIONAL FEE

COMPUTER SUPPORT BY INDUSTRY DIVISION N.I.C.

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POWER OF ATTORNEY RESOLUTION

AGREEMENT

Guruvayoor Infrastructure Private Limited

MCH No. 555, Arora Colony, Road No.3, Banjara Hills, Hyderabad - 500 034. A.P.
Tel No 040-23543541/23543545, Fax No. 040-23543538

Letter No.1621/KMC/NHAI/15 BOT Projects/2005 Date: 24.03.2006

To
Mr. Pranavant
The General Manager (NS-II)
National Highways Authority of India
G-5 & G- 6, Sector – 10, Dwaraka
New Delhi – 110 075
Ph No. 011 – 25074100, Extn: 1312
Fax No. 011 – 25074100, Extn: 2423

Sir,

Sub: (i) Design, Construction, Development, Finance, Operation and maintenance of Km 270.00 (Thrissur) to Km 316.70 (Angamali) and (ii) Improvement, operating and maintenance of Km 316.700 (Angamali) to Km 342.00 (Edapalli) on NH-47 together called the "Project" in the State of Kerala on Build, Operate & Transfer (BOT) basis: Project Reference No. NS2/BOT/KL-1 – Power of Attorney to sign Concession Agreement - Reg.

We enclose herewith Power of Attorney infavour of Shri. Shashank Shekhar for signing the Concession Agreement for the above work.

Thanking you.

Yours faithfully,
For Guruvayoor Infrastructure Pvt. Ltd.

Director

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Guruvayoor Infrastructure Private Limited
MCH No. 555, Arora Colony, Road No.3, Banjara Hills, Hyderabad - 500 034. A.P.
Tel No. 040-23543541/23543545, Fax No. 040-23543538

Date: 24.03.2006

EXTRACTS OF THE MINUTES OF BOARD OF DIRECTORS OF GURUVAYOOR INFRASTRUCTURE PRIVATE LIMITED AT ITS MEETING HELD ON 24.03.2006 AT 10 AM AT MCH NO.555, ARORA COLONY, ROAD NO. 3, BANJARA HILLS, HYDERABAD, THE REGISTERED OFFICE OF THE COMPANY.

1. Resolved that Shri Shashank Shekhar be and is hereby authorized to execute concession agreement to be entered between Guruvayoor Infrastructure Private Limited and National Highways Authority of India for (i) Design, Construction, Development, Finance, Operation and maintenance of Km 270.00 (Thrissur) to Km 316.70 (Angamali) and (ii) Improvement, operation and maintenance of Km 316.700 (Angamali) to Km 342.00 (Edapalli) on NH-47 together called the "Project" in the State of Kerala on Build, Operate& Transfer (BOT) basis: Project Reference No. NS2/BOT/KL-1.

2. Resolved further that a Power of Attorney, as per the draft, placed before the meeting be executed for this purpose in favour of Shri Shashank Shekhar and that Shri M.Goutham Reddy, Director of the company be and is hereby authorized to sign the same on behalf of the company.

// Certified to be true //

for GURUVAYOOR INFRASTRUCTURE PVT. LTD.

DIRECTOR

ANDHRA PRADESH

B. CHAITANYA
STAMP VENDOR
L.No. 13/95, R/No.
282/97, S.R. NAGAR,
HYDERABAD-500 038

POWER OF ATTORNEY

Known to all that, the company M/s. Guruvayoor Infrastructure Private Limited, having Registered office at MCH No: 556, Andra Colony, Road No.2, Banjara Hills, Hyderabad - 500 034, Andhra Pradesh, India (herein after called the "Company") has this 24th day of March 2006 authorise Shri Shashank Shekhar, S/o Shri [illegible], General Manager (Tech), KMC Constructions Limited to execute the Contract [illegible] Railways Authority of India, G-6/7 & 10, Sector-10, Dwarka, New Delhi - 110 075 [illegible] (i) Design, Construction, Development, Finance, Operation, maintenance of Km 270.00 (Thrissur) to Km 315.200 (Angamaly) Stage (ii) Government, operation and maintenance of Km 315.200 (Angamaly) to Km [illegible] Corridor.

For Guruvayoor Infrastructure Pvt. Ltd

Director

For Guruvayoor Infrastructure Pvt. Ltd

Director

B. NAGABHUSHANA RAO, Advocate & Notary, S.R. Nagar, Hyderabad

Guruvayoor Infrastructure Pvt. Ltd.

342.00 (Edapalli) on NH-47 together called the "Project" in the State of Kerala on ild, Operate & Transfer (BOT) basis: Project Reference No. NS2/BOT/KL-1", on alf of M/s. Guruvayoor Infrastructure Private Limited.

do hereby agree to confirm and ratify all and every act or thing done by the said rney within the scope of the authority hereby conferred on him executed by him in name of the SPV or on behalf of the SPV under this Power of Attorney shall be ng on the S/PV namely M/s. Guruvayoor Infrastructure Private Limited, as if the were executed by the SPV.

24.03.2006

For and on behalf of
M/s. Guruvayoor Infrastructure Private Limited

Shri M. Goutham Reddy
Director

hen Signature of
d on behalf of
uted attorney

ushank Shekhar

M/s. Guruvayoor Infrastructure Private Limited

Shri K.K. Mohanti
Director

ATTESTED
B. NAGENDER RAO, B.Sc., DPM., LLB
ADVOCATE & NOTARY
APPOINTED BY GOVT. OF A.P.
(SHOP No. 10, HUDA MAITRIVANAM
AMEERPET (S.R. NAGAR POST)
HYDERABAD-38.
24/3/06

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WHAT POLICY MATTERS REGARDING
ARBITRATION FEES

भारतीय राष्ट्रीय राजमार्ग प्राधिकरण
(सड़क परिवहन और राजमार्ग मंत्रालय)
National Highways Authority of India
(Ministry of Road Transport & Highways)
G-5 & 6, Sector-10, Dwarka, New Delhi-110075

Phone : 91-11-25074100/2574200
Fax : 91-11-25093507/25093514
Extn. : 2223/2318/2468/2553

No. 11041/21/2002-Admn.

31st May, 2004

POLICY MATTER – ADMINISTRATION/FINANCE (86/2004)
[Decision taken on DR&QA Cell File No. NHAI/DR&QA Cell/G-1/2003]

Sub.: Fee of Arbitrators in the cases of Civil Engineering Construction Contracts / Supervision Consultancies.

In supersession to our Policy Circular No. 37/2003 dated March 27, 2003 on the above subject, it has now been decided that the maximum limit for payment of fee in Arbitration cases shall be as indicated below:

Sr.	Particulars	Maximum amount payable per Arbitrator
1	Arbitrator fee	Rs.5,000/- per day subject to a maximum of Rs.1.50 lacs per case.
2	Reading Charges	Rs.6,000/- per arbitrator per case.
3	Secretarial Assistance	Rs.6,000/- per arbitrator per case.
4	Incidental Charges (telephone, fax, postage etc.)	Rs.6,000/- per arbitrator per case.
5	Charges for Publishing/declaration of the Award	Maximum of Rs. 10,000/-
6	Other expenses (actuals against bills subject to the prescribed ceiling) – applicable for the days of hearing only.	Maximum ceilings
i)	Traveling Expenses	Economy class (By Air), First class AC (By train) and AC car (By road).
ii)	Lodging and Boarding	a)Rs.8,000/- per day (in metro cities) b)Rs.5,000/- per day (in other cities) c)Rs.2,000/- per day, if any Arbitrator makes their own arrangement.
iii)	Local Travel	Rs.700/- per day

2. Since the fee structure has to be agreed to by both the parties (i.e. NHAI and the Contractor / Supervision Consultant), the above fee structure may also be got accepted by the respective Contractors / Supervision Consultants through supplementary agreement. It has also been decided that in exceptional cases, such as cases involving major legal implications/wider ramifications/higher financial stakes etc., a special fee structure could be fixed in consultation with the Contractor / Supervision Consultants and with the specific approval of the Chairman, NHAI before appointment of the Arbitrator.

Contd..

3. A draft supplementary agreement incorporating the above provisions is enclosed as Annexure. The concerned Member/CGM may ensure that this is adhered to strictly.

4. In case of future contracts the fee structure may be included as part of the Bidding Documents/Contract Documents and the acceptance of the above fee structure by the Contractors / Supervision Consultants may be kept as a pre-condition for signing the contract.

5. This issues with the approval of Chairman.

(V.K. Sharma)
General Manager (Admn.)

1. All Members/CGMs
2. All GMs/DGMs/Managers
3. All PDs of PIUs/CMUs

Shravant