REGIONAL OFFICE – GUWAHATI
National Highways & Infrastructure Development Corporation Ltd.
(A Government of India Undertaking)

NATIONAL COMPETITIVE BIDDING
(THROUGH E-TENDERING MODE)

Name of the Work: Construction of 2 Nos. of Major Bridge at Km. 508+414 and Km 523+271 in Jhanji to Demow section of NH-37(Old) in State of Assam in FY:25-26

[Contract Package No.: AS/NH-2/Jor/Cons/JD4/25-26/1]

BID DOCUMENT

September, 2025

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(SECTION-I)

NOTICE INVITING TENDER

(E-TENDERING MODE ONLY)

Regional Office - Guwahati of
National Highways & Infrastructure Development Corporation Limited
Notice Inviting e-Tender
(National Competitive Bidding through e-Tendering mode only)

AS/NH-2/Jor/Cons/JD4/25-26/1 **Date: 01.09.2025**

1. National Highways and Infrastructure Development Corporation Ltd. (hereinafter called "the Employer") invites sealed bids in single stage two cover system i.e., the Technical and Financial Bids on item rate basis for the following works from the experienced Road/Bridge Contractors/firms/organizations excluding those firms who have been declared as non-performing by MoRT&H/NHAI/NHIDCL or the firms those are blacklisted/debarred for specified period by MoRT&H/NHAI/NHIDCL: -

Sr. No.	Name of work/Contract Package	Length (m)	Estimated Civil Cost Put to Tender (Rs. In Lakh)	Bid Security (Rs. In Lakh)	Time of Completion /DLP	Eligibility Criteria Average annual turnover for last 5 Years (Rs. In Lakh)	Eligibility Criteria as Completed work of similar nature during last 5 Years (Rs. In Lakh)
1	Name of the Work: Construction of 2 Nos. of Major Bridge at Km. 508+414 and Km 523+271 in Jhanji to Demow section of NH-37(Old) in State of Assam in FY:25-26	166.20+129.61=295.81 m	4942.90 (Excl. of GST)	98.86	05 Months	4942.90	One similar Completed work not less than 40% of the total cost put to tender (Rs.1977.16 Lakh) & 40 % length of total length of two Bridges (73.95 m) involving Pre Stressed Concrete (PSC) Superstructure Arrangement

**** Cost is exclusive of GST***

Cost of Bid Documents: Rs. 11,800/- in the form of DD in favour of **NHIDCL** payable at **Guwahati** (Non-Refundable)

2. Date of Publishing is from **01.09.2025**
3. The complete BID document can be viewed / downloaded from web portal www.eprocure.gov.in from **01.09.2025 to 22.09.2025 (upto 17:00 Hrs. IST)**.
4. Bidder must submit its financial bid and Technical Bid at https://eprocure.gov.in on or before

22.09.2025 upto 17:00 hours IST. Bids received online shall be opened on **23.09.2025 (at 17:00 hours IST)**.

5. Bid documents can be seen at and downloaded from the website www.nhidcl.com and https://eprocure.gov.in Bid documents contain qualifying criteria for bidder, specification, bill of quantities, conditions, and other details.
6. The site for the work is available.
7. Bidder shall submit the following documents in physical form in original and in scanned copy to be uploaded.
   i) Copy of PAN Card
   ii) Demand Draft for cost of documents
   iii) Bid Security
8. The interested bidder can download the NIT / bidding document from the website https://eprocure.gov.in & www.nhidcl.com
9. To participate in bidding process, bidder have to get (DSC) "Digital Signature Certificate" as per Information Technology Act-2000, to participate in online bidding. This certificate will be required for digitally signing the bid. Bidder can get above mentioned digital certificate from any approved vendors. The Bidder, who already possesses valid (DSC)" Digital Signature Certificate" need not to procure new Digital Signature Certificate.
10. The bidders have to submit their bids online in electronic format with Digital Signature. The bid cannot be uploaded without Digital Signature. No proposal (Except the documents as mentioned in point 7 above) will be accepted in physical form.
11. Bids will be opened online as per time schedule mentioned at Sr. No. 19.
12. Before submission of online bids, bidder must ensure that scanned copy of all the necessary documents have been attached with bid.
13. The department will not be responsible for delay in online submission of bids whatsoever reasons may be.
14. All the required information for bid must be filled and submitted online.
15. Bidders should get ready with the scanned copies of cost of documents & Bid Security as specified in the tender documents. The original instruments in respect of cost of documents, Bid Security and relevant documents will be submitted to the Tenders Inviting Authority by Registered post/courier/by hand as per time schedule specified.
16. The details of cost of documents, Bid Security specified in the tender documents should be the same, as submitted online (Scanned copies) otherwise bid will not be accepted.
17. Bidders are advised to study the procedures related to e-procurement by Government of India, carefully before submission of Bids. For this, Bidders may refer the Bidders Manual Kit available in the Central Public Procurement Portal of Government of India (https://eprocure.gov.in).
18. The guidelines for submission of bid online can be downloaded from the website www.nhidcl.com **&** https://eprocure.gov.in.
19. **Schedule of Bidding Process**

    The Company shall endeavor to adhere to the following schedule:

S. No	Description	Period
1.	Date of issue of NIT	01.09.2025
2.	Date of issue of Sale of Tender Documents	01.09.2025
3.	Date of close of sale of Tender Documents (through online)	22.09.2025 (upto 17:00 Hrs)
4.	Last Date of receipt of pre-bid queries	08.09.2025 (till 11:00 hours)
5.	Date of Pre-Bid meeting	09.09.2025 (at 16: 00 Hrs)
6.	Date of uploading of reply to the pre-bid queries	10.09.2025

7.	Date of submission of Tender/Bid (online& hard copy)	22.09.2025 (upto 17:00 Hrs)
8.	Opening of Technical BIDs at venue	23.09.2025 (at 17:00 Hrs)
9	Date of Uploading of list of Technically Qualified Applicants	To be intimated later
10.	Date of Opening of Financial Bids of Qualified Applicants	To be intimated later
11.	Date of issue of letter of award (LOA)	To be intimated later
12.	Validity of Bid	120 Days
13.	Return of signed duplicate copy of LOA	To be intimated later
14.	Submission of Performance Security (PS) and Additional Performance Security (APS), if any	Within 07 days of receipt of LOA.
15.	Signing of Agreement	Within 10 days of receipt of LOA.

20. Conditional bids would be rejected.
21. Any corrigendum or information with regard to this NIT shall only be uploaded online on www.nhidcl.com&https://eprocure.gov.in.
22. NHIDCL reserves the right to accept/reject any or all the bids without assigning any reasons thereof.

Date: 01.09.2025

General Manager (P)
National Highways & Infrastructure Development Corporation Limited.
Regional Office, 2nd Floor, Agnishanti Business Park, Opp. AGP Office
GNB Road, Ambari, Guwahati-781001
Email: edpnhidclghy1@gmail.com

(SECTION-II)
INSTRUCTIONS TO BIDDERS
& APPENDIX TO BID

Section II: Instructions to Bidders			
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Section II
Instructions to Bidders (ITB)
A. General

1. Scope of Bid

1.1 The Employer (i.e., Managing Director, National Highways & Infrastructure Development Corporation ltd.) invites bids for "as described in these documents and referred to as "the works". The name and identification number of the works is provided in the Notice Inviting Tender.

1.2 The successful bidder will be expected to complete the works by the intended completion date specified in the Contract data.

1.3 Throughout these Bidding Documents, the terms "bid" and "tender" and their derivatives (bidder/tender, bid/tender, bidding/tendering, etc.) are synonymous.

1.4 The Scope of work includes construction of 2 Nos. of Major Bridge at Km. 508+414 and Km 523+271, having total length of 295.81 m (166.20 m +129.61 m) in Jhanji to Demow section of NH- 37(Old) in State of Assam in FY:25-26. The Major Bridge at Km 508+414 has total length of 166.20 (41.550*4=166.20 m) and the major bridge has total length of 129.61 m (42.755*2+44.10=129.61 m). The work consists of Bill of Quantities attached with the bid.

1.5 The Employer shall engage an Authority's Engineer or any other person to act as Engineer for the project. There will also be a General Manager(P) of the Employer acting as the Employer's representative.

1.6 The Employer has engaged a Supervision Consultant or any other person to act as Engineer for the project, who will supervise and monitor the execution of work including quality of work. His role and responsibilities are defined in the General Conditions of Contract. There will also be a General Manager (Project) of the Employer acting as the Employer's representative. The tender drawings have been attached with the tender. However, "Good for Construction" drawings shall be issued by the Employer on the appointment of the Contractor.

1.7 The Employer shall provide the right-of-way for bridge works and other appurtenances works to the contractor after signing of the Contract. However, the contractor shall have to make his own arrangements for the land required by him for quarries, site offices, installation of Plant, crusher, concrete batching plant, casting yard, testing laboratories, labour camps, other camps, etc.

2. Source of Funds

2.1 The expenditure on this project will be met by National Highways & Infrastructure Development Corporation ltd (NHIDCL).

3 Eligible Bidders

3.1 This Invitation for Bids is open to all bidders meeting the qualification requirements prescribed in this document.

3.2 Bidders shall not be under a declaration of ineligibility for corrupt and fraudulent practices by the Central Government, the State Government or any public undertaking, autonomous body, authority by whatever name called under the Central or the State Government.

4 Qualification of the Bidder

4.1 Deleted

4.2 All bidders shall furnish the following information and documents with their bids in Section-III, Qualification Information.

a) Scanned copies of Original documents defining the constitution or legal status, place of registration, and principal place of business; scanned copy of written power of attorney of the signatory of the Bid to commit the Bidder; & original copy of Written Power of Attorney to be submitted in the envelop of physical form. (Pl. Refer clause 12.2 of ITB)

b) Scanned copy of total monetary value of civil engineering construction works performed for each of the last five years; (2019-20, 2020-21, 2021-2022, 2022-2023, 2023-24). In case, audited statement for the year 2024-25 is available with the bidder, the same to be uploaded and for such cases, the audited statements for the years: 2020-21, 2021-2022, 2022-2023, 2023-24 & 2024-25 shall be considered.

c) Scanned copy of experience certificate in works of a similar nature and size for each of the last five financial years (commencing from year 2020-21) with **certificates from the concerned officer of the rank of Executive Engineer or equivalent;**

d) Scanned copy of evidence of availability (either owned or leased or rented) of items of construction equipment named in the Appendix to ITB. [Clause 4.4 B(b) (i)]

e) Scanned copy of details of the technical personnel proposed to be employed for the Contract having the qualifications defined in Appendix to ITB. [Clause 4.4 B(b) (ii)]

f) Scanned copy of reports on the financial standing of the Bidder, and a certificate from Chartered Accountant as a proof of turnover for the last five years;

g) Scanned document in support of evidence access to line (s) of credit and availability of other financial resource facilities (10 % of Contract value), certified by bankers (not more than 3 months old).

h) Scanned undertaking that the bidder will be able to invest minimum cash upto 25 % of contract value of work, during implementation of work.

i) Deleted

j) Scanned copy of information regarding any litigation or arbitration during the last five years in which the Bidder is involved, the parties concerned, the disputed amount, and the present status;

k) Deleted

l) Deleted.

4.3 **Bids from joint ventures, consortiums, combination, or any sort of arrangement between two or more than two entities are not allowed.**

4.4 **A. To qualify for award of the contract, each bidder in its name should have the following; -**

4.5 Achieved an average annual financial turnover (in all classes of civil engineering construction works only) equal to the amount indicated in NIT during last five years ending 31st March of the previous financial year (**to be considered as**

31.03.2024/31.03.2025 as mentioned above), duly certified by Chartered Accountant.

Experience in successfully completing or substantially completing at **least one contract of highway (road and/or bridge works)/airport runway of at-least 40 percent (%) of the value of proposed contract within the last five years**. For evaluation of the aforesaid 40% value, **no** escalation factor shall be used to bring the value of such completed work at the level of current financial year i.e., 2025-26.

AND

The Bidder shall provide evidence that it has successfully completed or substantially completed within the last five years at least one Contract pertaining to Major Bridge Work having length greater than 40 % length of total length of two Bridges (73.95 m) involving Pre Stressed Concrete (PSC) Superstructure Arrangement

The works may have been executed by the Applicant as Prime Contractor or as a member of JV or Sub Contractor. As Sub-Contractor, he should have acquired the experience of execution of all major items of works under the proposed contract. In case a project has been executed by a Joint Venture, weightage towards experience of the project would be given to each joint venture in proportion to their participation in the Joint Venture.

Substantially Completed Works means those works which are at-least 90% completed as on the date of submission and continuing satisfactorily.

4.4 B.

a) Each bidder must upload the scanned copies of following documents along with the submission of online bidding:

i. An affidavit on a Stamp Paper, duly attested from the Notary Public, that the information furnished with the bid documents is correct in all respects; and

ii. Such other certificates as defined in Section- III.

iii. Failure to submit the certificates/documents as specified above shall make the bid non-responsive.

b) Each bidder must demonstrate:

i. Evidence of availability (either owned or leased or rented) of the key equipments for this work as stated in the Appendix to ITB.

ii. Availability for this work of personnel with qualification & experience as stated in the Appendix to ITB.

c) Deleted.

d) Deleted.

4.4 C. Deleted

4.5 Contractors' experience and resources shall not be taken into account in determining the bidder's compliance with the qualifying criteria.

4.6 Bidders who meet the minimum qualification criteria will be qualified only if their

available bid capacity is more than the total bid value. The available bid capacity will be calculated as under:

Assessed Available Bid capacity = **(A* N* 2 - B)**
Where,
A = Maximum value of civil engineering works executed in any one year during the last five years (escalation factor as specified in this section shall be used to bring the maximum value of civil engineering works to the level of financial year i.e., 2024-25) taking into account the completed as well as works in progress.

N = Number of years prescribed for completion of the works for which bid is invited.

B = Value (escalation factor as specified in this section shall be used to bring the value to the level of current financial year i.e., 2025-26) of existing commitments and on-going works to be completed during the **next 05 months** (period of completion of the works for which bid is invited)

(Following escalation factor shall be used to bring the value of such completed works at the level of **current financial year i.e., 2025-26**)

Year Before	Multiplying Factor
One	1.10
Two	1.21
Three	1.33
Four	1.46
Five	1.61

4.7 Even though the bidders meet the above qualifying criteria, they are subject to be disqualified if they have:

i. Made misleading or false representations in the forms, statements, affidavits and attachments submitted in proof of the qualification requirements; and/or

ii. Record of poor performance such as abandoning the works, not properly completing the contract, inordinate delays in completion, litigation history, or financial failures etc. or debarring from MoRT&H/NHAI/NHIDCL/State PWD work etc.

iii. Tampered the bid document in any manner.

5 One Bid per Bidder

5.1 Each Bidder shall submit only one Bid for a particular package. A Bidder who submits more than one Bid for the same package will cause be disqualified.

6 Cost of Bidding

6.1 The Bidder shall bear all costs associated with the preparation and submission of his Bid, and the Employer will, in no case, be responsible or liable for those costs.

7 Site Visit

7.1 The Bidder, at his own cost, responsibility and risk, is required to visit, examine and familiarize himself with the Site of Works and its surroundings, includ-ing source of earth, water, road aggregates, etc. and obtain all information that may be necessary for pre-paring the Bid and entering into a contract for con-struction of the Works. The costs

of visiting the Site shall be at the Bidder's own expense. He may contact the Project Monitoring Unit, Jorhat of NHIDCL in this regard. **A joint site visit in the presence of GM(P), PMU Jorhat or Manager, SO Sivasagar, shall be facilitated, and a certificate of GM(P) bearing that the bidder has visited the site shall be obtained by the bidder, submitted along with the Technical bid. The bidders who do not visit the site and fail to submit the joint site visit certificate shall be disqualified.**

Section II
Instructions to Bidders (ITB)

B. Bidding Documents (On line)

8 Content of Bidding Documents

8.1 The set of bidding documents comprises the documents listed below and addenda (if any) issued in accordance with Clause 10:

Volume- I:-

1. Notice Inviting Tender
2. Instructions to Bidders & Appendix to Bid
3. Qualification Information
4. Forms Bid Security, Bank Guarantee, Agreement & LOA
5. Conditions of Contract & Contract Data
6. Scope of work
7. Technical Specifications
8. Implementation Manual & Maintenance Intervention Levels

Volume - II:-

9. Bill of Quantities (Should be filled in the prescribed format given in the bid document)

8.2 DELETED.

8.3 The bidder is expected to examine carefully all instructions, conditions of contract, contract data, forms, terms, specifications, bill of quantities, etc. in the Bid Document. Failure to comply with the requirements of Bid Documents shall be at the bidder's own risk. Pursuant to clause 26 hereof, bids, which are not substantially responsive to the requirements of the Bid Documents, shall be rejected.

9 Clarifications on Bid Documents

9.1 A prospective Bidder requiring any clarification on the bid documents may notify the Employer in writing through e-mail, at the e-mail ID specified in NIT and/or through a letter addressed to the Tender Inviting Authority, indicated in NIT. The Employer will respond to any request for clarification within the timeline as indicated in NIT. Copies of the Employer's response will be hosted on website i.e. www.nhidcl.com & https://eprocure.gov.in. or which are required in the opinion of the Employer including a description of the enquiry, but without identifying its source.

9.2 **Pre-bid meeting**

9.2.1 The bidder or his official representative is invited to attend pre-bid meeting which will take place at the office of **Executive Director (Project), National Highways & Infrastructure Development Corporation Limited. Regional Office, 2nd Floor, Agnishanti Business Park, Opp. AGP Office GNB Road, Ambari, Guwahati-781001.**

9.1.1 The purpose of the meeting will be to clarify issues and to answer question on any matter that may be raised at that stage.

9.1.2 The bidder is requested to submit any questions in writing or by cable/email so as to reach the Employer not later than one week before the meeting.

9.1.3 Minutes of the meeting, including the text of the questions rose (without identifying the source of the enquiry) and the responses given will be transmitted without delay on website www.nhidcl.com & https://eprocure.gov.in. Any modifications of the bid documents listed in Clause 8.1, which may become necessary as a result of the pre-bid meeting or which are required in the opinion of the Employer shall be made by the Employer exclusively through the issue of an Addendum pursuant to Clause 10 and not through the minutes of the pre-bid meeting.

9.1.4 Deleted

10 Amendment of Bidding Documents

10.1 Before the deadline for submission of bids, the Employer may modify the Bidding Documents by issuing addenda.

10.2 Any addendum thus issued shall be part of the Bidding Documents and shall be hosted online on https://eprocure.gov.in and www.nhidcl.com. Bidders are advised to keep them self updated of all the addendums issued on e-tendering portal by suitably checking the aforementioned website/portal and, NHIDCL does not assume any responsibility in case the bidder fails to do so and does not take any action, if required, with respect any relevant addendum.

10.3 To give prospective bidders reasonable time to take an addendum into account in preparing their bids, the Employer shall extend, as necessary, the deadline for submission of bids, in accordance with Clause 20.2.

Section II
Instructions to Bidders (ITB)

C. Preparation of Bids

11 Language of Bid

11.1 All documents relating to the Bid shall be in English.

12 Documents Comprising the Bid

12.1 The e-bid submitted by the bidder shall be in two separate parts.

Part-I - This shall be named Technical Bid and shall comprise of information submitted in section-III.

Part-II - It shall be named Financial Bid and shall comprise of Priced bill of quantities.

Documents to be submitted in physical form must reach the **Executive Director (Project), National Highways & Infrastructure Development Corporation Limited. Regional Office, 2nd Floor, Agnishanti Business Park, Opp. AGP Office GNB Road, Ambari, Guwahati-781001** by **17:00 Hrs** on Bid Due Date.

12.2 Though, the scanned copies of following documents is required to be uploaded during submission of e-bid on the e-tendering portal, As per clause 12.1 above, however, following original documents in physical form shall be submitted in a sealed envelope by **17:00 Hrs** on the date of submission of bid and addressed to the addressee given in the NIT duly super scribed "Name of Work, Bid due date and time". Name and address of the bidder should also be indicated on the envelope.

a) Bid Security

b) Bid Document Fee

c) Deleted

d) Written Power of Attorney of the signatory (whose digital signature certificate is used during e-tender submission) of the bidder to commit the bid

e) Affidavit duly notarized

f) Original experience certificate or notarized copy of certificate duly signed by authorized signatory.

12.3 The following documents, which are not submitted with the bid, will be deemed to be part of the bid.

Section	Particulars
1.	Notice Inviting Tender
2.	Instruction to the bidders
3.	Conditions of Contract
4.	Contract Data
5.	Technical Specifications

13 Bid Prices

13.1 The Contract shall be for the whole Works, as described in Clause 1.1 based on the priced Bill of Quantities submitted by the Bidder.

13.2 The bidder shall quote bid prices on appropriate format enclosed as part of tender document on e-tender portal i.e., https://eprocure.gov.in. The items for which no rate or price is entered by the Bidder will be required to be executed free of cost and shall be deemed covered under the other rates and prices in the Bill of Quantities quoted.

13.3 All duties, taxes (except GST), royalties and other levies payable by the Contractor under the Contract, or for any other cause, shall be included in the rates, prices, and total Bid price submitted by the Bidder.

13.4 The rates and prices quoted by the Bidder shall be fixed for the duration of the Contract and shall not be subject to adjustment.

14 Currencies of Bid and Payment

14.1 The unit rates and the prices shall be quoted by the bidder entirely in Indian Rupees. All payments shall be made in Indian Rupees.

15 Bid Validity

15.1 Bids shall remain valid for a period of **120 days** after the deadline date for bid submission specified in Clause 20. A bid valid for a shorter period shall be rejected by the Employer as non-responsive.

15.2 In exceptional circumstances, prior to expiry of the original time limit, the Employer may request that the bidders may extend the period of validity for a specified additional period. The request and the bidders' responses shall be made online on http://www.nhidcl.com & https://eprocure.gov.in. A bidder may refuse the request without forfeiting his bid security. A bidder agreeing to the request will not be required or permitted to modify his bid, but will be required to extend the validity of his bid security for a period of the extension, and in compliance with Clause 16 in all respects.

16 Earnest Money / Bid Security/ Forfeiture/ Debarment

16.1 The Bidder shall furnish, as part of the Bid, Earnest Money/Bid Security, in the amount as specified in the NIT.

16.2 The Earnest Money/ Bid Security shall, at the Bidder's option, be in the form of **e-Bank Guarantee/RTGS/ NEFT only (any other form will not be acceptable)** of any scheduled commercial bank approved by RBI having a net worth of not less than Rs. 500 crore as per the latest annual report of the bank and must be in the name of the Employer. In case of foreign bank (issued by a branch in India) the net worth in respect of the Indian operations shall only be taken into account. It shall be valid for 45 days beyond the validity of the bid. Any bid having bid security for lesser value and shorter validity period shall be treated as non-responsive. Any Bid not accompanied by Bid Security shall also be treated as **NON-RESPONSIVE.**

16.2.1 For E-BGs, Entity ID of NHIDCL is AAECN7759E, which may be quoted for getting EBG. The E-BGs shall be as per the format specified in Appendix N of this RFP document and shall be valid for 45 days beyond the validity of the bid. The bank details (Bank Name, IFSC etc.) are given below:

Sl. No.	Particulars	Details
1	Name of Beneficiary	RO NHIDCL Projects
2	Beneficiary Bank Account No.	73653210000013
3	Beneficiary Bank Branch	CNRB0007374
4	Beneficiary Bank Branch Name	Canara Bank, Specialized Government Business Branch
5	Beneficiary Bank Address	Kay M Plaza, 1st Floor, Near KAR Bhawan, GS Road, Ganeshguri, Guwahati, Assam - 781006
6	Beneficiary UIN	NCTGC2506P

No BG shall be accepted in the physical form. For Further details, the bidders may visit the website of National E Governance Services Limited at https://nesl.co.in/ebg/ . Also, the bidders may refer to the Office Order of NHIDCL displayed on the website https://nhidcl.com/wp-content/uploads/2023/03/Notice-for-e-PBGTender-Fee-and-EMD.pdf for ready reference. The Bid submitted without Bid Security will be summarily rejected.

A. e-Bank Guarantee /RTGS/ NEFT receipts, in the name of the Employer, from following banks would be accepted: -

i. State Bank of India or its subsidiaries,
ii. Any Indian Nationalized Bank
iii. IDBI / ICICI Bank
iv. **A Foreign Bank (issued by a branch outside India) with** a **counter guarantee from SBI or its subsidiaries or any Indian Nationalized Bank.**
v. Any Scheduled Commercial Bank approved by RBI having a net worth of not less than Rs. 500 Crores as per the latest Annual Report of the Bank. In the case of a Foreign Bank (issued by a branch in India), the net worth in respect of the Indian operations shall only be taken into account.

B. The acceptance of the guarantees shall also be subject to the following conditions: -

i. The capital adequacy of the Bank shall not be less than the norms prescribed by RBI (presently 9, with effect from 31st March, 2003,).
ii. The e-bank guarantee issued by a Cooperative Bank shall not be accepted.

16.3 Any bid not accompanied by an acceptable bid security shall be rejected by the Employer as non -responsive.

16.4 Bid securities of the unsuccessful bidders should be returned to them at the earliest after expiry of the final bid validity and latest on or before the 30th day after the award of the contract.

16.5 The Bid Security of the successful Bidder will be discharged when the Bidder has signed the Agreement and furnished the required Performance Security.

16.6 The Bid Security/ Earnest Money will be forfeited:

i. if the Bidder withdraws the Bid after its submission during the period of Bid validity;

ii. if the Bidder does not accept the correction of the bid price, pursuant to Clause 27; or

iii. in the case of a successful Bidder, if the Bidder fails within the specified time limit to

a) Sign the Agreement; and/or

b) Furnish the required Performance Security.

16.7 DELETED

17 Alternative Proposals by Bidders

17.1 Bidder shall submit offers that fully comply with the requirement of the Bidding Documents. Conditional offer or alternate offer will not be considered further in the process of evaluation and the bid will be declared non-responsive.

18 Format and Signing of Bid

18.1 The Bidder shall submit e-bid comprising of the documents as described in Clause 12 of the ITB.

18.2 DELETED.

18.3 DELETED.

18.4 All pages of the documents to be uploaded online/submitted in the physical form along with the demand draft for fees/security shall be typed or written in ink and shall be signed by a person duly authorized to sign on behalf of the bidder. Documents shall contain no overwriting, alterations or additions, except those to comply with instructions, issued by the employer or as necessary to correct errors made by the bidder, in which case such corrections shall be made by scoring out the cancelled portion, writing the correction and signing and dating it along with the stamp by the person or persons authorized for signing the Bid

Section II
Instructions to Bidders (ITB)

D. Submission of Bids

19 Marking of Bids

19.1 The documents to be submitted in physical form as per clause 12.2 of ITB shall be submitted in a sealed Envelope super scribed as "Documents in Physical Form" at the top left corner.

19.2 DELETED.

19.3 DELETED.

19.4 DELETED.

19.5 DELETED.

20 Deadline for Submission of Bids

20.1 Complete e-Bid to be uploaded on the CPP portal i.e https://eprocure.gov.in before due date & time. The Envelope containing "Documents in Physical Form" must also be received by the Employer at the address **Executive Director (Project), National Highways & Infrastructure Development Corporation Limited. Regional Office, 2nd Floor, Agnishanti Business Park, Opp. AGP Office GNB Road, Ambari, Guwahati-781001** not later than the date and time indicated in the NIT. In the event of the specified date for the submission of documents in Physical form being declared a holiday for the Employer, the same will be received up to the specified time on the next working day.

20.2 The Employer may extend the deadline for submission of bids by issuing an amendment in accordance with Clause 10, in which case all rights and obligations of the Employer and the bidders previously subject to the original deadline will then be subject to the new deadline.

21 Late Submission of Documents in Physical Form:

21.1 Any document in physical form if received by the Employer after the deadline prescribed in Clause 20 will be returned unopened to the Bidder and also the e-bid submitted by such bidder shall not be considered.

22 Modification and Withdrawal of Bids

22.1 Bidders may modify or withdraw their e-bids as directed on the e-tendering portal, before the Bid Due Date and time as prescribed in Clause 20.

22.2 DELETED.

22.3 No bid may be modified after the deadline for online submission of bids.

22.4 Withdrawal or modification of a Bid between the deadline for submission of bids and the expiration of the original period of bid validity specified in Clause 15.1 above or as extended pursuant to Clause 15.2 shall result in punitive action including of forfeiture of the Bid Security.

22.5 Bidders may modify the prices of their bids before deadline of online submission of bid.

Section II
Instructions to Bidders (ITB)

E. Bid Opening and Evaluation

23 Bid Opening

Bid opening shall be carried out in two stages. Firstly, 'Technical Bid' of all the bids received (except those received late) shall be opened online on the date and time mentioned in Notice Inviting Tender (NIT). 'Financial Bid' of those bidders whose technical bid has been determined to be substantially responsive shall be opened online on a subsequent date through online process of e-tendering, which will be notified to such bidders.

23.1 The Employer will open the "Technical Bid" of all the bids received (except those received late), in the presence of the bidders/bidders' representatives who choose to attend at the time, date and place specified in the NIT. In the event of the specified date for the submission of bids being declared a holiday for the Employer, the Bids will be opened at the appointed time and location on the next working day.

23.1.1 DELETED

23.1.2 DELETED

23.2 In all cases, Bid Security, forms and validity shall be announced. Thereafter, the Employer at the opening as the Employer may consider appropriate, will announce the bidders' names and such other details.

23.3 The Employer will prepare minutes of the Bid opening, including the information disclosed to those present in accordance with Clause 23.1.

23.4

(i) The bids accompanied with valid bid security and bid document fee will be taken up for evaluation with respect to the information furnished in Part I of the Qualification Information and other bid.

(ii) As soon as possible, the Evaluation Committee will finalize the list of responsive bidders whose financial bids are eligible for consideration. However, to assist in the examination, evaluation of technical bids, the Employer may at his discretion, ask any bidder for clarification of his bid, however, no additional documents in support of clarification will be entertained.

23.5 The Employer shall inform the bidders, whose technical bids are found responsive, of the date, time and place of opening of the financial bids. The bidders so informed, or their representative, may attend the meeting of opening of financial bids.

23.6 At the time of the opening of the 'Financial Bid', the names o f the bidders whose bids were found responsive in accordance with clause 23.5 will be announced. The financial bids of only these bidders will be opened. The responsive bidders' names, the Bid prices, the total amount of each bid, pursuant to clause 22 and such other details as the Employer may consider appropriate will be announced by the Employer at the time of bid opening. Any Bid price, which is not read out and recorded, will not be taken into account in Bid Evaluation.

23.7 The Employer shall prepare the minutes of the opening of the Financial Bids.

24 Process to be Confidential

24.1 Information relating to the examination, clarification, evaluation, and comparison of bids and recommendations for the award of a contract shall not be disclosed to bidders or any other person not officially concerned with such process until the award to the successful Bidder has been announced. Any attempt by a Bidder to influence the Employer's processing of bids or award decisions may result in the rejection of his Bid

25 Clarification of Bids and Contacting the Employer

25.1 To assist in the examination, evaluation, and comparison of Bids, the Employer may, at his discretion, ask any Bidder for clarification of his Bid, including breakdowns of unit rates. The request for clarification and the response shall be in writing or by cable, but no change in the price or substance of the Bid shall be sought, offered, or permitted.

25.2 Subject to sub-clause 25.1, no Bidder shall contact the Employer on any matter relating to his bid from the time of the bid opening to the time the contract is awarded.

25.3 Any effort by the Bidder to influence the Employer in the Employer's bid evaluation, bid comparison or contract award decisions may result in the rejection of the Bidders' bid.

26 Examination of Bids and Determination of Responsiveness

26.1 During the detailed evaluation of "Technical Bids", the Employer will determine whether each Bid

a) meets the eligibility criteria defined in Clauses 3 and 4 of ITB;

b) the required documents in physical form submitted by the bidder as well as the documents uploaded by the bidder are in order; and

c) is substantially responsive to the requirements of the Bidding Documents. During the detailed evaluation of the "Financial Bids", the responsiveness of the bids will be further determined with respect to the remaining bid conditions, i.e., priced bill of quantities, technical specifications etc.

26.2 DELETED.

26.3 DELETED.

27 DELETED.

28 Evaluation and Comparison of Financial Bids

28.1 The Employer will evaluate and compare only the bids determined to be substantially responsive in accordance with Clause 26.

28.2 DELETED

28.3 If the Bid of the successful Bidder is seriously unbalanced in relation to the Engineer's/Employer's estimate of the cost of work to be performed under the contract, the Employer may require the Bidder to produce detailed price analyses for any or all items of the Bill of Quantities, to demonstrate the internal consistency of those prices with the construction methods and schedule proposed. After evaluation of the price analyses, the Employer may require that the amount of the performance security set forth in Clause 34 be increased and an additional performance security as per Clause 44 of Section V of Conditions

of Contract may be obtained at the expense of the successful Bidder to a level sufficient to protect the Employer against financial loss in the event of default of the successful Bidder under the Contract.

28.4 A bid, which contains several items in the Bill of Quantities which are unrealistically priced low and which cannot be substantiated satisfactorily by the bidder, may be rejected as non-responsive.

29 Price Preference

29.1 There will be no price preference to any bidder.

F. Award of Contract

30 Award Criteria

30.1 Subject to Clause 32, the Employer will award the Contract to the Bidder whose Bid has been determined to be substantially responsive to the bidding documents and who has offered the lowest evaluated Bid Price.

31 Employer's Right to Accept any Bid and to Reject any or all Bids

31.1 Notwithstanding Clause 30, the Employer reserves the right to accept or reject any Bid, and to cancel the bidding process and reject all bids, at any time prior to the award of Contract, without thereby incurring any liability to the affected Bidder or bidders or any obligation to inform the affected Bidder or bidders of the grounds for the Employer's action.

32 Notification of Award and Signing of Agreement.

32.1 The bidder whose Bid has been accepted will be notified of the award by the Employer prior to expiration of the Bid validity period by cable, telex or facsimile confirmed by registered letter. This letter (hereinafter and in the Part I *General Conditions of Contract* called the "Letter of Acceptance") will state the sum that the Employer will pay to the Contractor in consideration of the execution, completion and maintenance of the Works, by the Contractor as prescribed by the Contract (hereinafter and in the Contract called the "Contract Price").

32.2 The notification of award (LOA) will constitute the formation of the Contract, subject only to the furnishing of a performance security in accordance with the provisions of Clause

32.3 The Agreement will incorporate all agreements between the Employer and the successful Bidder. It will be signed by the Employer and the successful Bidder after the performance security is furnished.

32.4 Upon furnishing by the successful Bidder of the Performance Security (In the form of e-BG as prescribed in Section IV), the Employer will promptly notify the other Bidders that their Bids have been unsuccessful.

33 Performance Security

33.1 Within 07 (Seven) days of receipt of Letter of Acceptance, the Selected Bidder shall furnish to the Authority in the form of Insurance Surety Bond in the format at Section – IX or irrevocable and unconditional Bank Guarantee (e-Bank Guarantee ONLY) from a Bank in the form set forth in Section IX (the "Performance Security") for an amount equal to 5% (five percent) of its Bid Price. In case of bids mentioned below, the Selected Bidder, along with the Performance Security, shall also furnish to the Authority in the form of Insurance Surety Bond (issued by Insurance Company authorized by Insurance Regulatory and Development Authority of India in the format at Section - IX) or irrevocable and unconditional Bank Guarantee (e-Bank Guarantee ONLY) from a Bank in the same form towards an Additional Performance Security (the "Additional Performance Security") for an amount calculated as under:

(i) If the Bid Price offered by the Selected Bidder is lower than 20% of the Estimated Project Cost/cost put to tender, the Additional Performance Security shall be calculated @20% of the difference in the (i) Estimated Project Cost (as mentioned in Bid Document)-20% of the Estimated Project Cost and (ii) the Bid Price offered by the

selected Bidder.

(ii) Maximum limit of additional Performance Security shall be limited to 5% of the Bid price offered by the Selected Bidder.

(iii) This Additional Performance Security shall be treated as part of the Performance Security.

33.2 The Performance Security shall remain valid until a date 60 days after the expiry of the Defects Liability Period. The Additional Performance Security shall be valid until 28 (twenty-eight) days after completion of Works.

33.3 For avoidance of any doubt, in case of failure of submission of Performance Security and Additional Performance Security, if any, within the additional 15 days' time period, the award shall be deemed to be cancelled/ withdrawn and the Bid Security shall be encashed and the proceeds thereof appropriated by the Authority. Thereupon all rights, privileges, claims and entitlements of the Con-tractor under or arising out of the Award shall be deemed to have been waived by, and to have ceased with the concurrence of the Contractor, and the Award shall be deemed to have been withdrawn by the Authority.

33.4 The Selected Bidder has the option to provide 50% of the Performance Security and 50% of the Additional Performance Security, if any, within 7 (seven) days of receipt of Letter of Acceptance, in any case before signing of the Contract Agreement and the remaining Performance Security and Additional Performance Security, if any, shall be submitted within 7 days of signing of the agreement.

33.5 In the event the Selected Bidder fails to provide the remaining Performance Security and Additional Performance Security, if any, as prescribed herein, it may seek extension of time for a further period upto 15 days by paying the Damages upfront along with the request letter seeking the extension. The Damages shall be the sum calculated at the rate of 0.01% (zero point zero one per cent) of the Bid Price offered by the Selected Bidder for each day until the Performance Security and Additional Performance Security, if any, is provided in full as pre-scribed herein. The damages at full rate as given above shall be applicable even if a part of the Performance Security and the Additional Performance Security is provided.

33.6 The agreement will be executed within 3 days of receipt of 50% Performance Security and 50% of Additional Performance Security, if any, as per sub-clause 33 above.

34 Advances - Deleted

35 Corrupt or Fraudulent Practices

The Employer will reject a proposal for award if it determines that the Bidder recommended for award has engaged in corrupt or fraudulent practices in competing for the contract in question and will declare the firm ineligible, either indefinitely or for a stated period of time, to be awarded a contract with NHIDCL and any other agencies, if it at any time determines that the firm has engaged in corrupt or fraudulent practices in competing for the contractor, or in execution.

The Employer requires the bidders/Contractors to strictly observe the laws against fraud and corruption enforced in India, namely, Prevention of Corruption Act, 1988.

Appendix to ITB				
Instructions to Bidders Clause Reference				
(1.1)		The Employer is **National Highways & Infrastructure Development Corporation Limited, 1st & 2nd Floor, Tower A, World Trade Centre, Nauroji Nagar, New Delhi-110029**		
(1.1)		**Name of the Work: Construction of 2 Nos. of Major Bridge at Km. 508+414 and Km 523+271 in Jhanji to Demow section of NH- 37(Old) in State of Assam in FY:25-26**		
(4.4) B) (b) (i)		**Name of the Equipment**		**Quantity**
		Tipper/Trucks		8
		Hydraulic Excavator /JCB		2
		Excavator 1.0 cum bucket capacity		2
		Front end Loader		2
		RMC Plant		1
		Generator set (63/100/250 KVA)		3
		Any other equipment required for carrying out work as per Ministry's specification.		
		Note: The bidder must upload scanned copy of the documentary evidence in support of his owning/leased/ rented of the above equipments. In case the bidder proposes to hire or take the above equipment on lease, he should, along with the lease/rent agreement, attach the proof of ownership of these equipments with the company/ entity from whom the equipments are proposed to be hired on lease/ rent.		
(4.4) (B) (b) (ii)		**The Number of Technical personnel, Qualifications and Experience will be as follows:** **The Technical Personnel are:**		
SL. No.	**Personnel**	**Qualification**	**Particular Experience (minimum requirement)**	**No. of Persons**
1	Project Manager	B.E (Civil) or equivalent + 10 Years Exp.	5 years on Bridge constructions	1
2	Plant manager	B.E (Mech.) or equivalent + 10 Years Exp.	2-year relevant Exp.	1
3	Site Engineer	B.E (Civil) + 3Years Exp. Or Diploma + 5 Years Exp.	2 years on Bridge constructions	2
4	Quantity Surveyor	B.E. Civil + 3Years Exp. Or Dip. Civil. + 5Years Exp.	2 years on Bridge constructions	1
5	Soil and Material Engineer	B.E. Civil+ 5 Year Exp. Or Dip. Civil+ 7year Exp.	2 years on Bridge construction	1
6	Bridge Engineer	B.E (Civil) or equivalent + 10 Years Exp.	5 years on Bridge Constrction	1
			Total	**6**
		Note: The detailed signed and scanned CV's of the Key Technical Personnel at S. No. 1 signed by the key personnel himself, must be		

		uploaded along with the bid. The name and educational qualification of other personnel should be given. Non compliance of the above or non furnishing of the CV as above.

SECTION III

QUALIFCATION INFORMATION

(To be Filled by Bidder)

SECTION III

QUALIFCATION INFORMATION

The information to be filled in by the Bidder in this section & document submitted in physical form will be used for the purposes of post qualification as provided for in Clause 4 of the Instructions to Bidders. This information will not be incorporated in the Contract.

1. For Individual Bidders

1.1

a) Year of Constitution

b) legal status of Bidder (Proprietorship/Partnership or Pvt. Ltd. firm)

[Upload scanned copy of original]

c) Place of registration:

_____

d) Principal place of business:

_____

1.2 Power of attorney of signatory of Bid *[Upload scanned copy & also supply Original copy in envelop of physical form]*

1.3 Total value of Civil Engineering construction work performed in the last Five years (in Rs. _____Lakhs) refer ITB Clause 4.4 A (a)
(Upload scanned copies of certificate from Chartered Accountant & also supply original certificate from Chartered Accountant)

2023-2024---------
2022-2023----------
2021-2022---------
2020-2021----------
2019-2020---------

Total ----------

Average per year----------

1.4 (a) Work performed as prime contractor; work performed in the past as a nominated sub-contractor provided further that all other qualification criteria are satisfied (in the same name) of a similar nature during the last five years as per ITB Clause 4.4A(b).

Project Name	Name of the Employer *	Description of work	Contract No.	Value of Contract (Rs. Crore)	Date of issue of work order	Stipulated period completion	Actual date of completion	Remarks explaining reasons for delay & work

**** Upload certificate(s) from the Employer (to be given by an officer at the rank of Executive Engineer or equivalent & also supply original or certified copy in physical form in envelope)***

Note: In case of nominated sub-contractor – a certificate from the Executive Engineer or equivalent of the Prime Employer should be obtained from whom an approval for subcontractor has been obtained.

1.4 (b) Information on Bid Capacity (works for which bids have been submitted and accepted and works which are yet to be completed) as on the date 7 days before the last date for bid submission (as per Cl 4.6 of the ITB).

(i) Existing commitments and on-going works (B)

Description of works	Place & State	Contract No.	Name & Address of Employer	Value of Contract (Rs Cr)	Stipulated Period of Completion	Value of works remaining to be completed (Rs. Cr)	Escalation factor	Anticipated date of completion factor	Escalated value of remaining work during completion on period of work of which bids are invited
1	2	3	4	5	6	7	8	9	10

* **Upload certificate (s) from the Engineer(s)-in-Charge of the rank of Executive Engineer or equivalent & also supply original or certified copy of certificate in physical form envelop**.

(ii) Details of works for which bid submitted and accepted (i.e., where contract signing is pending)

Description of works	Place & State	Name & Address of Employer	Date of issue of Letter of Acceptance (LOA) *	Value Given in LOA	Stipulated period for completion	Value of Work During Completion period of work for which bids are invited
1	2	3	4	5	6	7

* Upload copy of LOA

(iii) Bid Capacity (Bidder shall calculate, mention his bid capacity, and enclose the supporting calculation)

A = Rs..... lakh (enclose the details)

N = …..... years

B = Rs..... lakh (enclose the details)

Assessed available bid capacity = AxNx2 – B

= Rs. .....Lakhs

1.5 Availability of Key Equipment essential for carrying out the Works [Ref. Clause 4.4(B) (b) (i)]. The Bidder should list all the information requested below.

Item of Equipment	Requirement	Availability Proposals			Page no. of the proof attached
		Owned/Leased/ rented	Nos./Capacity	Age/Condition	
Tipper/Trucks	8				
Hydraulic Excavator /JCB	2				
Excavator 1.0 cum bucket capacity	2				
Front end Loader	2				
RMC Plant	1				
Generator set (63/100/250 KVA)	3				

Note: The bidder must upload the documentary evidence in support of his owning/leased/ rented of the above equipments. In case the bidder proposes to hire or take the above equipment on lease, he should, along with the lease/rent agreement, attach the proof of ownership of these equipments with the company/ entity from whom the equipments are proposed to be hired on lease/ rent. The bidder shall submit an undertaking as per Performa Appendix 1.7 (ITB, Section -2) of the bid document.

1.6 Qualification and Experience of Key Personnel required for administration and execution of the Contract [Ref. Clause 4.4 (B) (b) (ii)]. **Upload biographical data for technical personnel (Refer also to Cl. 4.2 (e) of Instruction to Bidders).**

(Refer also to Sub Clause 9.1 of the Conditions of Contract).

Sl. No.	Position	Name	Qualification	Total Professional Experience (Years)	Experience in the proposed position (Years)
1	Project Manager				
2	Plant manager				
3	Site Engineer				
4	Quantity Surveyor				
5	Soil and Material Engineer				
6	Bridge Enginee r				

Note: The detailed and signed CV's of the Key Technical Personnel at S. No. 1 signed by the key personnel himself must be uploaded along with the bid. The name and educational qualification of other personnel should be given.

1.7 Information on litigation history in which the Bidder is involved.

Other Party (ies)	Employer	Cause of Dispute	Amount Involved	Remarks showing Present Status

2. Bidders should upload the scanned copy of the following affidavits/ undertakings as per formats enclosed hereinafter & also send original copy of Affidavit/Undertakings:

(i) Affidavit (it should be on stamp paper attested by Notary Public)

(ii) Undertaking regarding minimum investment of cash towards working capital.

(iii)Undertaking that the Bids shall remain valid for the period specified in Clause 15.1.

SAMPLE FORMAT FOR EVIDENCE OF ACCESS TO OR AVAILABILITY OF CREDIT FACILITIES

(Clause 4.1(i) of ITB)

BANK CERTIFICATE

This is to certify that M/s…….. is a reputed company with a good financial standing.

If the contact for the work, namely ……..is awarded to the above firm, we shall be able to provide overdraft/credit facilities to the extent of Rs….....to meet their working capital requirements for executing the above contract during the contract period.

(Signature)
Name of Bank Senior Bank Manager
Address of the Bank

AFFIDAVIT

1. I, the undersigned, do hereby certify that all the statements made in the enclosed attachments are true and correct.
2. The undersigned also hereby certifies that neither our firm M/s_____ has abandoned any work on MoRTH/NHAI/PWD/NHIDCL nor any contract awarded to us for such works have been rescinded, during last five years prior to the date of this bid.
3. The undersigned hereby authorize(s) and request(s) any bank, person, firm or corporation to furnish pertinent information deemed necessary and requested by MoRTH/NHAI/PWD/NHIDCL to verify this statement or regarding my (our) competence and general reputation.
4. The undersigned understands and agrees that further qualifying information may be requested, and agrees to furnish any such information at the request of the MoRTH/NHAI/PWD/NHIDCL and within the prescribed time.

_____

(Signed by an Authorized Representative of the Firm)

_____

Name of the Representative

_____

Name of Firm

_____

DATE

(To be notarized by Notary)

UNDERTAKING

I, the undersigned do hereby undertake that our firm M/s _____ would invest minimum cash up to 25% of the value of the work during implementation of the Contract towards the working capital.

_____
(Signed by an Authorized Representative of the Firm)

_____
Name of the Representative

_____
Name of Firm

_____
DATE

(To be notarized by Notary)

UNDERTAKING

1 I, the undersigned do hereby undertake that our firm M/s._____ agree to abide by this bid for a period of _____ days after the date fixed for receiving the same and it shall be binding on us and may be accepted at any time before the expiration of that period.

_____

(Signed by an Authorized Representative of the Firm)

_____

Name of the Representative

_____

Name of Firm

_____

DATE

(On the letter head

of the bidder) Appendix 1.7 [Ref. clause 4.4 B (b)

(i)]

Undertaking

I, the undersigned do hereby undertake that our firm M/s……
agree to provide and will deploy required equipment as mentioned in the Appendix to ITB of the work
……
…… further it is certified that the documents submitted as an evidence of availability of the key equipments for this work as stated in the Appendix to ITB, are genuine and correct. If anything, contrary to the details as submitted is found at any stage NHIDCL would be at liberty to debar/blacklist my firm for an appropriate period as decided by NHIDCL.

_____
(Signed by an Authorized Representative of the Firm)

_____
Name of the Representative

_____
Name of Firm

(Seal of the company)

_____
Date

Section IV

General Conditions of Contract – Part I

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SECTION IV

Conditions of Contract

Part I: GENERAL CONDITIONS

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PART I: GENERAL CONDITIONS

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PART I - GENERAL CONDITIONS

Definitions and Interpretation

1.1 Definitions	In the Contract (as hereinafter defined) the following words and expressions shall have the meanings hereby assigned to them, except where the context otherwise requires: (a) (i) "Employer" means the person named as such in Part II of these Conditions and the legal successors in title to such person, but not (except with the consent of the Contractor) any assignee of such person. (ii) "Contractor" means the person whose tender has been accepted by the Employer and the legal successors in title to such person, but not (except with the consent of the Employer) any assignee of such person. (iii) "Subcontractor" means any person named in the Contract as a Subcontractor for a part of the Works or any person to whom a part of the Works has been subcontracted with the consent of the Engineer and the legal successors in title to such person, but not any assignee of any such person. (iv) "Engineer" means the person appointed by the Employer to act as Engineer for the purposes of the Contract and named as such in Part II of these Conditions. (v) "Engineer's Representative" means a person appointed from time to time by the Engineer under Sub-Clause 2.2. (b) (ii) "Contract" means these Conditions (Parts I and II), the Specification, the Drawings, the Bill of Quantities, the Tender, the Letter of Acceptance, the Contract Agreement (if completed) and such further documents as may be expressly incorporated in the Letter of Acceptance or Contract Agreement (if completed). (iii) "Specification" means the specification of the Works included in the Contract and any modification thereof or addition thereto made under Clause 51 or submitted by the Contractor and approved by the Engineer. (iv) "Drawings" means all drawings, calculations and technical information of a like nature provided by the Engineer to the Contractor under the Contract and all drawings, calculations, samples, patterns, models, operation and maintenance manuals and other technical information of a like nature submitted by the Contractor and approved by the Engineer. (v) "Bill of Quantities" means the priced and completed bill of quantities forming part of the Tender.

	(vi) "Tender" means the Contractor's priced offer to the Employer for the execution and completion of the Works and the remedying of any defects therein in accordance with the provisions of the Contract, as accepted by the Letter ofAcceptance. (vii) "Letter of Acceptance" means the formal acceptance by the Employer of the Tender. (viii) "Contract Agreement" means the contract agreement (ifany) referred to in Sub-Clause 9. 1. (ix) "Appendix to Tender" means the appendix comprised inthe form of Tender annexed to these Conditions. (c) (i) "Commencement Date" means the date upon which theContractor receives the notice to commence issued by the Engineer pursuant to Clause 41. (ii) "Time for Completion" means the time for completing the execution of and passing the Tests on Completion of the Works or any Section or part thereof as stated in the Contract (or as extended under Clause 44) calculated from the Commencement Date. (d) (i) "Tests on Completion" means the tests specified in the Contract or otherwise agreed by the Engineer and the Contractor which are to be made by the Contractor before the Works or any Section or part thereof are taken over bythe Employer. (ii) "Taking-Over Certificate" means a certificate issued pursuant to Clause 48. (e) (ii) "Contract Price" means the sum stated in the Letter of Acceptance as payable to the Contractor for the executionand completion of the Works and the remedying of anydefects therein in accordance with the provisions of the Contract. (iii) "Retention Money" means the aggregate of all monies retained by the Employer pursuant to Sub-Clause 60.2(a) (iv) "Interim Payment Certificate" means any certificate of payment issued by the Engineer other than the Final PaymentCertificate (v) "Final Payment Certificate" means the certificate of payment issued by the Engineer pursuant to Sub-Clause 60.8. (f) (ii) "Works" means the Permanent Works and the Temporary Works or either

	of them as appropriate. (iii) "Permanent Works" means the permanent works to be executed (including Plant) in accordance with the Contract. (iv) "Temporary Works" means all temporary works of every kind (other than Contractor' Equipment) required in orabout the execution and completion of the Works and the remedying of any defects therein. (v) "Plant" means machinery, apparatus and the like intended to form or forming part of the Permanent Works. (vi) "Contractor's Equipment" means all appliances and things of whatsoever nature (other than Temporary Works) required for the execution and completion of the Works and the remedying of any defects therein, but does not include Plant, materials or other things intended to form or forming part of the Permanent Works. (vii) "Section" means a part of the Works specifically identified in the Contract as a Section. (viii) "Site" means the places provided by the Employer where the Works are to be executed and any other places as may be specifically designated in the Contract as forming part of the Site. (g) (ii) "cost" means all expenditure properly incurred or to be incurred, whether on or off the Site, including overhead and other charges properly allocable thereto but does not include any allowance for profit. (iii) "day" means calendar day. (iv) "foreign currency" means a currency of a country other than that in which the Works are to be located. (v) "writing" means any hand-written, type-written, or printed communication, including telex, cable and facsimile transmission. (vi) **"Good Industry Practice"** means the practices, methods, techniques, designs, standards, skills, diligence, efficiency, reliability and prudence which are generally and reasonably expected from a reasonably skilled and experienced contractor engaged in the same type of undertaking as envisaged under this Agreement and which would be expected to result in the performance of its obligations by the Contractor in accordance with this Agreement, Applicable Laws and Applicable Permits in reliable, safe, economical and efficient manner; (vii) "Force Majeure" is defined in Clause 73 [Force Majeure].
1.2 Headings andMarginal Notes	The headings and marginal notes in these Conditions shall not be deemed part thereof or be taken into consideration in the interpretation or construction thereof or of the Contract.
1.3 Interpretation	Words importing persons or parties shall include firms and corporations and any organization having legal capacity.

1.4 Singular and Plural	Words importing the singular only also include the plural and vice versa where the context requires
1.5 Notices, Consents, Approvals Certificates and Determinations	Wherever in the Contract provision is made for the giving or issue of any notice, consent, approval, certificate or determination by any person, unless otherwise specified such notice, consent, approval, certificate or determination shall be in writing and the words "notify", "certify" or "determine" shall be construed accordingly. Any such consent, approval, certificate or determination shall not unreasonably be withheld or delayed.
	Engineer and Engineer's Representative
2.1 Engineer's Duties and Authority	(a) The Engineer shall carry out the duties specified in the Contract. (b) The Engineer may exercise the authority specified in or necessarily to be implied from the Contract, provided, however, that if the Engineer is required, under, the terms of his appointmentby the Employer, to obtain the specific approval of the Employer before exercising any such authority, particulars of such requirements shall be set out in Part II of these Conditions. Provided further that any requisite approval shall be deemed to have been given by the Employer for any such authority exercised by the Engineer. (c) Except as expressly stated in the Contract, the Engineer shall have no authority to relieve the Contractor of any of his obligations under the Contract.
2.2 Engineer's Representative	The Engineer's Representative shall be appointed by and be responsible to the Engineer and shall carry out such duties and exercise such authority as may be delegated to him by the Engineerunder Sub-Clause 2.3.
2.3 Engineer's Authority to Delegate	The Engineer may from time to time delegate to the Engineer's Representative any of the duties and authorities vested in the Engineer and he may at any time revoke such delegation. Any suchdelegation or revocation shall be in writing and shall not take effect until a copy thereof has been delivered to the Employer and the Contractor. Any communication given by the Engineer's Representative to the Contractor in accordance with such delegation shall have the same effect as though it had been given by the Engineer. Provided that: (a) any failure of the Engineer's Representative to disapprove any work, materials or Plant shall not prejudice the authority of theEngineer to disapprove such work, materials or Plant and to give instructions for the rectification thereof, and (b) if the Contractor questions any communication of the Engineer's Representative he may refer the matter to the Engineer who shall confirm, reverse or vary the contents of such communication.

2.4 Appointment of Assistants	The Engineer or the Engineer's Representative may appoint any number of persons to assist the Engineer's Representative in the carrying out of his duties under Sub-Clause 2.2. He shall notify to the Contractor the names, duties and scope of authority of such persons. Such assistants shall have no authority to issue any instructions to the Contractor save in so far as such instructions may be necessary to enable them to carry out their duties and to secure their acceptance of materials, Plant or workmanship as being in accordance with the Contract, and any instructions given by any of them for those purposes shall be deemed to have been given by the Engineer's Representative.
2.5 Instructions in Writing	Instructions given by the Engineer shall be in writing, provided that if for any reason the Engineer considers it necessary to give any such instruction orally, the Contractor shall comply with such instruction. Confirmation in writing of such oral instruction given by the Engineer, whether before or after the carrying out of the instruction, shall be deemed to be an instruction within the meaning of this Sub-Clause. Provided further that if the Contractor, within 7 days, confirms in writing to the Engineer any oral instruction of the Engineer and such confirmation is not contradicted in writing within 7 days by the Engineer, it shall be deemed to be an instruction of the Engineer. The provisions of this Sub-Clause shall equally apply to instructions given by the Engineer's Representative and any assistants of the Engineer or the Engineer's Representative appointed pursuant to Sub-Clause 2.4
2.6 Engineer to Act Impartially	Wherever, under the Contract, the Engineer is required to exercise his discretion by: (a) giving his decision, opinion or consent, (b) expressing his satisfaction or approval, (c) determining value, or (d) otherwise taking action which may affect the rights andobligations of the Employer or the Contractor he shall exercise such discretion impartially within the terms of the Contract and having regard to all the circumstances. Any such decision, opinion, consent, expression of satisfaction, or approval, determination of value or action may be opened up, reviewed or revised as provided in Clause 67.
2.7 Determinations	Whenever these Conditions provide that the Engineer shall proceed in accordance with this Sub-Clause 2.7 to agree or determine any matter, the Engineer shall consult with each Party in an endeavor to reach agreement. If agreement is not achieved, the Engineer shall make a fair determination in accordance with the Contract, taking due regard of all relevant circumstances. The Engineer shall give notice to both Parties of each agreement or determination, with supporting particulars within 28 days from the receipt of the corresponding claim or request except when otherwise specified. Each Party shall give effect to each agreement or determination unless and until revised under Clause 53.
	Assignment and Subcontracting
3.1 Assignment of Contract	The Contractor shall not, without the prior consent of the Employer (which

	consent, notwithstanding the provisions of Sub- Clause 1.5, shall be at the sole discretion of the Employer), assign the Contract or any part thereof, or any benefit or interest thereinor thereunder, otherwise than by (a) a charge in favour of the Contractor's bankers of any monies due or to become due under the Contract, or (b) assignment to the Contractor's insurers (in cases where the insurers have discharged the Contractor's loss or liability) of the Contractor's right to obtain relief against any other party liable.
4.1 Subcontracting	The Contractor shall not subcontract the Works except where otherwise provided by the Contract. However, the Contractor shall be allowed for: (a) the provision of labour, (b) the purchase of materials which are in accordance with the standards specified in the Contract, or (c) the subcontracting of any part of the Works for which theSubcontractor is named in the Contract.
4.2 Assignment of Subcontractors' Obligations	In the event of a Subcontractor having undertaken towards the Contractor in respect of the goods, materials, Plant or services supplied by such Subcontractor, any continuing obligation extending for a period exceeding that of the Defects Liability Period under the Contract, the Contractor shall at any time, after the expiration of such Period, assign to the Employer, at the Employer's request and cost, the benefit of such obligation for the unexpired duration thereof.
	Contract Documents
5.1 Language/s and Law	There is stated in Part II of these Conditions: (a) the language or languages in which the Contract documents shall be drawn up, and (b) the country or state the law of which shall apply to the Contract and according to which the Contract shall be construed. If the said documents are written in more than one language, the language according to which the Contract shall be construed and interpreted is also stated in Part II of these Conditions, being therein designated the "Ruling Language".
5.2 Priority of Contract Documents	The several documents forming the Contract are to be taken as mutually explanatory of one another, but in case of ambiguities or discrepancies the same shall be explained and adjusted by the Engineer who shall thereupon issue to the Contractor instructions thereon and in such event, unless otherwise provided in the Contract, the priority of the documents forming the Contract shall be as follows: (1) The Contract Agreement (if completed);

	(2) The Letter of Acceptance; (3) The Tender; (4) Part II of these Conditions; (5) Part I of these Conditions; and (6) Any other document forming part of the Contract.
6.1 Custody and Supply of Drawings and Documents	The Drawings shall remain in the sole custody of the Engineer, but two copies thereof shall be provided to the Contractor free of charge. The Contractor shall make at his own cost any further copies required by him. Unless it is strictly necessary for the purposes of the Contract, the Drawings, Specification and other documents provided by the Employer or the Engineer shall not, without the consent of the Engineer, be used or communicated to a third party by the Contractor. Upon issue of the Defects Liability Certificate, the Contractor shall return to the Engineer all Drawings, Specification and other documents provided under the Contract. The Contractor shall supply to the Engineer four copies of all Drawings, Specification and other documents submitted by the Contractor and approved by the Engineer in accordance with Clause 7, together with a reproducible copy of any material which cannot be reproduced to an equal standard by photocopying. In addition, the Contractor shall supply such further copies of such Drawings, Specification and other documents as the Engineer may request in writing for the use of the Employer, who shall pay the cost thereof.
6.2 One Copy of Drawings to be Kept on Site	One copy of the Drawings, provided to or supplied by the Contractor as aforesaid, shall be kept by the Contractor on the Site and the same shall at all reasonable times be available for inspection and use by the Engineer and by any other person authorised by the Engineer in writing.
6.3 Disruption of Progress	The Contractor shall give notice to the Engineer, with a copy to the Employer, whenever planning or execution of the Works is likely to be delayed or disrupted unless any further drawing or instruction is issued by the Engineer within a reasonable time. The notice shall include details of the drawing or instruction required and of why and by when it is required and of any delay or disruption likely to be suffered if it is late.
6.4 Delays and Cost ofDelay of Drawings	If, by reason of any failure or inability of the Engineer to issue, within a time reasonable in all the circumstances, any drawing or instruction for which notice has been given by the Contractor in accordance with Sub-Clause 63, the Contractor suffers delay and/or incurs costs then the Engineer shall, after due consultation with the Employer and the Contractor, determine: **(a)** any extension of time to which the Contractor is entitled underClause 44, and **(b)** the amount of such costs, which shall be added to the Contract Price, and shall notify the Contractor accordingly, with a copy to the Employer.
6.5 Failure by Contractor to Submit Drawings	If the failure or inability of the Engineer to issue any drawings or instructions is caused in whole or in part by the failure of the Contractor to submit Drawings, Specification or other documents which he is required to submit under the Contract, the Engineer shall take such failure by the Contractor into account when making his determination pursuant to Sub-Clause 6.4.

7.1 Supplementary Drawings and Instructions	The Engineer shall have authority to issue to the Contractor, from time to time, such supplementary Drawings and instructions as shall be necessary for the purpose of the proper and adequateexecution and completion of the Works and the remedying of any defects therein. The Contractor shall carry out and be bound by thesame.
7.2 Permanent Works Designed by Contractor	Where the Contract expressly provides that part of the Permanent Works shall be designed by the Contractor, he shall submit to the Engineer, for approval: (a) such drawings, specifications, calculations and other information as shall be necessary to satisfy the Engineer as to the suitability and adequacy of that design, and (b) operation and maintenance manuals together with drawings of the Permanent Works as completed, in sufficient detail to enable the Employer to operate, maintain, dismantle, reassemble and adjust the Permanent Works incorporating that design. The Works shall not be considered to be completed for the purposes of taking over in accordance with Clause 48 until such operation and maintenance manuals, together with drawings on completion, have been submitted to and approved by the Engineer.
7.3 Responsibility Unaffected by Approval	Approval by the Engineer, in accordance with Sub-Clause 7.2, shall not relieve the Contractor of any of his responsibilities under the Contract.
	General Obligations
8.1 Contractor's General Responsibilities	The Contractor shall, with due care and diligence, design (to the extent provided for by the Contract), execute and complete the Works and remedy any defects therein in accordance with the provisions of the Contract. The Contractor shall provide all superintendence, labour, materials, Plant, Contractor's Equipment and all other things, whether of a temporary or permanent nature, required in and for such design, execution, completion and remedying of any defects, so far as the necessity for providing the same is specified in or is reasonably to be inferred from the Contract. The Contractor shall give prompt notice to the Engineer, with a copy to the Employer, of any error, omission, fault or other defect in the design of or Specification for the Works which he discovers when reviewing the Contract or executing the Works.
8.2 Site Operations and Methods of Construction	The Contractor shall take full responsibility for the adequacy, stability and safety of all Site operations and methods of construction. Provided that the Contractor shall not be responsible (except as stated hereunder or as may be otherwise (agreed) for the design or specification of Permanent Works, or for the design or specification of any Temporary Works not prepared by the Contractor. Where the Contract expressly provides that part of the Permanent Works shall be designed by the Contractor, he shall be fully responsible for that part of such Works, notwithstanding any approval by the Engineer.
9.1 Contract Agreement	The Contractor shall, if called upon so to do, enter into and execute the Contract Agreement, to be prepared and completed at the cost of the Employer, in the form annexed to these Conditions withsuch modification as may be necessary.

10.1 Performance Security	1 Within 07 (Seven) days of receipt of Letter of Acceptance, the Selected Bidder shall furnish to the Authority in the form of Insurance Surety Bond in the format at Section – IX or irrevocable and unconditional Bank Guarantee (e-Bank Guarantee ONLY) from a Bank in the form set forth in Section IX (the "Performance Security") for an amount equal to 5% (five percent) of its Bid Price. In case of bids mentioned below, the Selected Bidder, along with the Performance Security, shall also furnish to the Authority in the form of Insurance Surety Bond (issued by Insurance Company authorized by Insurance Regulatory and Development Authority of India in the format at Section - IX) or irrevocable and unconditional Bank Guarantee (e-Bank Guarantee ONLY) from a Bank in the same form towards an Additional Performance Security (the "Additional Performance Security") for an amount calculated as under: (i) If the Bid Price offered by the Selected Bidder is lower than 20% of the Estimated Project Cost/cost put to tender, the Additional Performance Security shall be calculated @20% of the difference in the (i) Estimated Project Cost (as mentioned in Bid Document)-20% of the Estimated Project Cost and (ii) the Bid Price offered by the selected Bidder. (ii) Maximum limit of additional Performance Security shall be limited to 5% of the Bid price offered by the Selected Bidder. (iii) This Additional Performance Security shall be treated as part of the Performance Security. 2 The Performance Security shall remain valid until a date 60 days after the expiry of the Defects Liability Period. The Additional Performance Security shall be valid until 28 (twenty-eight) days after completion of Works. 3 For avoidance of any doubt, in case of failure of submission of Performance Security and Additional Performance Security, if any, within the additional 15 days' time period, the award shall be deemed to be cancelled/ withdrawn and the Bid Security shall be encashed and the proceeds thereof appropriated by the Authority. Thereupon all rights, privileges, claims and entitlements of the Con-tractor under or arising out of the Award shall be deemed to have been waived by, and to have ceased with the concurrence of the Contractor, and the Award shall be deemed to have been withdrawn by the Authority. 4 The Selected Bidder has the option to provide 50% of the Performance Security and 50% of the Additional Performance Security, if any, within 7 (seven) days of receipt of Letter of Acceptance, in any case before signing of the Contract Agreement and the remaining Performance Security and Additional Performance Security, if any, shall be submitted within 7 days of signing of the agreement. 5 In the event the Selected Bidder fails to provide the remaining Performance Security and Additional Performance Security, if any, as prescribed herein, it may seek extension of time for a further period upto 15 days by paying the Damages upfront along with the request letter seeking the extension. The Damages shall be the sum calculated at the rate of 0.01% (zero point zero one per cent) of the Bid Price offered by the Selected Bidder for each day until the Performance Security and Additional Performance Security, if any, is provided in

	full as pre-scribed herein. The damages at full rate as given above shall be applicable even if a part of the Performance Security and the Additional Performance Security is provided. 6 The agreement will be executed within 3 days of receipt of 50% Performance Security and 50% of Additional Performance Security, if any, as per sub-clause 33 above.
10.2 Period of Validityof Performance Security	The Performance Security shall remain valid until a date 60 days after the expiry of the Defects Liability Period. The Additional Performance Security shall be valid until 28 (twenty-eight) days after completion of the Works and remedied any defects therein in accordance with the Contract. No claim shall be made against such security after the issue of the Defects Liability Certificate in accordance with Sub-Clause 62.1 and such security shall be returned to the Contractor within 14 days of the issue ofthe said Defects Liability Certificate.
10.3 Claims under Performance Security	Prior to making a claim under the performance security the Employer shall, in every case, notify the Contractor stating the nature of the default in respect of which the claim is to be made.
10.4 Submission of Performance Security in Parts	The Selected Bidder has the option to provide 50% of the Performance Security and 50% of the Additional Performance Security, if any, within 30 (thirty) days of receipt of Letter of Acceptance, in any case before signing of the Contract Agreement and the remaining Performance Security and Additional Performance Security, if any, shall be submitted within 30 days of signing of this agreement.
10.5 Damages for Delay	In the event the Selected Bidder fails to provide the remaining Performance Security and Additional Performance Security, if any, as prescribed herein, it may seek extension of time for a further period upto 60 days by paying the Damages upfront along with the request letter seeking the extension. The Damages shall be the sum calculated at the rate of 0.01% (zero point zero one per cent) of the Bid Price offered by the Selected Bidder for each day until the Performance Security and Additional Performance Security, if any, is provided in full as prescribed herein. The damages at full rate as given above shall be applicable even if a part of the Performance Security and the Additional Performance Security is provided.
11.1 Inspection of Site	The Employer, at the request of Contractor, shall have made available to the Contractor, before the submission by the Contractor of the Tender, such data to support the BOQ as have been obtained by or on behalf of the Employer from investigations undertaken relevant to the Works but the Contractor shall be responsible for his own interpretation thereof. The Contractor shall be deemed to have inspected and examined the Site and its surroundings and information available in connection therewith and to have satisfied himself (so far as is practicable, having regard to considerations of cost and time) before submitting his Tender, as to: (a) the form and nature thereof, including the sub-surface conditions, (b) the hydrological and climatic conditions, (c) the extent and nature of work and materials necessary for the execution and completion of the Works and the remedying of any defects therein, and

	(d) the means of access to the Site and the accommodation he may require, and, in general, shall be deemed to have obtained all necessary information, subject as above mentioned, as to risks, contingencies and all other circumstances which may influence or affect his Tender. The Contractor shall be deemed to have based his Tender on the data made available by the Employer and on his own inspection and examination, all as aforementioned.
12.1 Sufficiency of Tender	The Contractor shall be deemed to have satisfied himself as to the correctness and sufficiency of the Tender and of the rates and prices stated in the Bill of Quantities, all of which shall, except insofar as it is otherwise provided in the Contract, cover all his obligations under the Contract (including those in respect of the supply of goods, materials, Plant or services or of contingencies for which there is a Provisional Sum) and all matters and things necessary for the proper execution and completion of the Works and the remedying of any defects therein.
12.2 Not Foreseeable Physical Obstructions or Conditions	If, however, during the execution of the Works the Contractor encounters physical obstructions or physical conditions, other than climatic conditions on the Site, which obstructions or conditions were, in his opinion, not foreseeable by an experienced contractor, the Contractor shall forthwith give notice thereof to the Engineer, with a copy to the Employer. On receipt of such notice, the Engineer shall, if in his opinion such obstructions or conditions could not have been reasonably foreseen by an experienced contractor, after due consultation with the Employer and the Contractor, determine (a) any extension of time to which the Contractor is entitled under Clause 44, and (b) the amount of any costs which may have been incurred by the Contractor by reason of such obstructions or conditions having been encountered, which shall be added to the Contract Price, and shall notify the Contractor accordingly, with a copy to the Employer. Such determination shall take account of any instruction which the Engineer may issue to the Contractor in connection therewith, and any proper and reasonable measures acceptable to the Engineer which the Contractor may take in the absence of specific instructions from the Engineer.
13.1 Work to be in accordance with Contract	Unless it is legally or physically impossible, the Contractor shall execute and complete the Works and remedy any defects therein in strict accordance with the Contract to the satisfaction of the Engineer. The Contractor shall comply with and adhere strictly to the Engineer's instructions on any matter, whether mentioned in the Contract or not, touching or concerning the Works. The Contractor shall take instructions only from the Engineer (or his delegate).
14.1 Programme to be Submitted	The Contractor shall, within the time stated in Part II of these Conditions after the date of the Letter of Acceptance, submit to the Engineer for his consent a programme, in such form and detail as the Engineer shall reasonably prescribe, for

	the execution of the Works. The Contractor shall, whenever required by the Engineer, also provide in writing for his information a general description of the arrangements and methods which the Contractor proposes to adopt for the execution of the Works.
14.2 Revised Programme	If at any time it should appear to the Engineer that the actual progress of the Works does not conform to the programme to which consent has been given under Sub-Clause 14.1, the Contractor shall produce, at the request of the Engineer, a revised programme showing the modifications to such programme necessary to ensure completion of the Works within the Time for Completion.
14.3 Cash Flow Estimate to be Submitted	The Contractor shall, within the time stated in Part II of these Conditions after the date of the Letter of Acceptance, provide to the Engineer for his information a detailed cash flow estimate in quarterly periods, of all payments to which the Contractor will be entitled under the Contract and the Contractor shall subsequently supply revised cash flow estimates at quarterly intervals, if required to do so by the Engineer.
14.4 Contractor not Relieved of Duties or Responsibilities	The submission to and consent by the Engineer of such programmes or the provision of such general descriptions or cash flow estimates shall not relieve the Contractor of any of his duties or responsibilities under the Contract.
15.1 Contractor's Superintendence	The Contractor shall provide all necessary superintendence during the execution of the Works and as long thereafter as the Engineer may consider necessary for the proper fulfilling of the Contractor's obligations under the Contract. The Contractor, or a competent and authorised representative approved of by the Engineer, which approval may at any time be withdrawn, shall give his whole time to the superintendence of the Works. Such authorised representative shall receive, on behalf of the Contractor, instructions from the Engineer. If approval of the representative is withdrawn by the Engineer, the Contractor shall, as soon as is practicable, having regard to the requirement of replacing him as hereinafter mentioned, after receiving notice of such withdrawal, remove the representative from the Works and shall not thereafter employ him again on the Works in any capacity and shall replace him by another representative approved by the Engineer.
16.1 Contractor's Employees	The Contractor shall provide on the Site in connection with the execution and completion of the Works and the remedying of any defects therein. (a) only such technical assistants as are skilled and experienced in their respective callings and such foremen and leading hands as are competent to give proper superintendence of the Works, and (b) such skilled, semi-skilled and unskilled labour as is necessary for the proper and timely fulfilling of the Contractor's obligations under the Contract

16.2 Employer atLiberty to Object	The Employer shall be at liberty to object to and require the Contractor to remove forthwith from the Works any person provided by the Contractor who, in the opinion of the Employer, misconducts himself, or is incompetent or negligent in the proper performance of his duties, or whose presence on Site is otherwise considered by the Employer to be undesirable, and such person shall not be again allowed upon the Works without the consent of the Employer. Any person so removed from the Works shall be replaced as soon as possible.
17.1 Setting-out	The Contractor shall be responsible for: (a) the accurate setting-out of the Works in relation to original points, lines and levels of reference given by the Engineer in writing, (b) the correctness, subject as above mentioned, of the position, levels, dimensions and alignment of all parts of the Works, and (c) the provision of all necessary instruments, appliances and labour in connection with the foregoing responsibilities. If, at any time during the execution of the Works, any error appears in the position, levels, dimensions or alignment of any part of the Works, the Contractor, on being required so to do by the Engineer, shall, at his own cost, rectify such error to the satisfaction of the Engineer, unless such error is based on incorrectdata supplied in writing by the Engineer, in which case the Engineer shall determine an addition to the Contract Price in accordance with Clause 51and shall notify the Contractor accordingly, with a copy to the Employer. The checking of any setting-out or of any line or level by the Engineer shall not in any way relieve the Contractor of his responsibility for the accuracy thereof and the Contractor shall carefully protect and preserve all bench-marks, sight-rails, pegsand other things used in setting-out the Works.
18.1 Boreholes andExploratory Excavation	If, at any time during the execution of the Works, the Engineer requires the Contractor to make boreholes or to carry out exploratory excavation, such requirement shall be the subject of an instruction in accordance with Clause 51, unless an item or aProvisional Sum in respect of such work is included in the Bill of Quantities.
19.1 Safety, Security and Protection of the Environment	The Contractor shall, throughout the execution and completion of the Works and the remedying of any defects therein: (a) have full regard for the safety of all persons entitled to be upon the Site and keep the Site (so far as the same is under his control) and the Works (so far as the same are not completed or occupied by the Employer) in an orderly state appropriate to the avoidance of danger to such persons, (b) provide and maintain at his own cost all lights, guards, fencing, warning signs and watching, when and where necessary or required by the Engineer or by any duly constituted authority, for the protection of the Works or for the safety and convenience of the public or others, and (c) take all reasonable steps to protect the environment on and off the Site and to avoid damage or nuisance to persons or to property of the public

	or others resulting from pollution, noise or other causes arising as a consequence of his methods of operation.
19.2 Employer's Responsibilities	If under Clause 31 the Employer shall carry out work on the Site with his own workmen he shall, in respect of such work: (a) have full regard to the safety of all persons entitled to be upon the Site, and (b) keep the Site in an orderly state appropriate to the avoidance of danger to such persons. If under Clause 31 the Employer shall employ other contractors on the Site he shall require them to have the same regard for safetyand avoidance of danger
20.1 Care of Works	The Contractor shall take full responsibility for the care of the Works and materials and Plant for incorporation therein from the Commencement Date until the date of issue of the Taking-Over Certificate for the whole of the Works, when the responsibility for the said care shall pass to the Employer. Provided that: **(a)** if the Engineer issues a Taking-Over Certificate for any Section or part of the Permanent, Works the Contractor shall cease to be liable for the care of that Section or part from the date of issue of the Taking-Over Certificate, when the responsibility forthe care of that Section or part shall pass to the Employer, and **(b)** the Contractor shall take full responsibility for the care of any outstanding Works and materials and Plant for incorporation therein which he undertakes to finish during the Defects Liability Period until such outstanding Works have been completedpursuant to Clause 49
20.2 Responsibility to Rectify Loss or Damage	If any loss or damage happens to the Works, or any part thereof, ormaterials or Plant for incorporation therein, during the period for which the Contractor is responsible for the care thereof, from any cause whatsoever, other than the risks defined in Sub-Clause 20.4, the Contractor shall, at his own cost, rectify such loss or damage sothat the Permanent Works conform in every respect with the provisions of the Contract to the satisfaction of the Engineer. The Contractor shall also be liable for any loss or damage to the Works occasioned by him in the course of any operations carried out by him for the purpose of complying with his obligations underClauses 49 and 50.
20.3 Loss or DamageDue to Employer's Risks	In the event of any such loss or damage happening from any of the risks defined in Sub-Clause 20.4, or in combination with other risks, the Contractor shall, if and to the extent required by the Engineer, rectify the loss or damage and the Engineer shall determine an addition to the Contract Price in accordance with Clause 52 and shall notify the Contractor accordingly, with a copy to the Employer. In the case of a combination of risks causing loss or damage any such determination shall take into account the proportional responsibility of the Contractor and the Employer.
20.4 Employer's Risks	The Employer's risks are: (a) war, hostilities (whether war be declared or not), invasion, act of foreign

	enemies, (b) rebellion, revolution, insurrection, or military or usurped power, or civil war, (c) ionising radiations, or contamination by radio-activity from any nuclear fuel, or from any nuclear waste from the combustionof nuclear fuel, radio-active toxic explosive or other hazardous properties of any explosive nuclear assembly or nuclear component thereof, (d) pressure waves caused by aircraft or other aerial devices travelling at sonic or supersonic speeds, (e) riot, commotion or disorder, unless solely restricted to employees of the Contractor or of his Subcontractors and arising from the conduct of the Works, (f) loss or damage due to the use or occupation by the Employerof any Section or part of the Permanent Works, except as may be provided for in the Contract, (g) loss or damage to the extent that it is due to the design of the Works, other than any part of the design provided by the Contractor or for which the Contractor is responsible, and (h) any operation of the forces of nature against which an experienced contractor could not reasonably have been expected totake precautions.
21.1 Insurance ofWorks and Contractor's Equipment	The Contractor shall, without limiting his or the Employer's obligations and responsibilities under Clause 20, insure: (a) the Works, together with materials and Plant for incorporation therein, to the full replacement cost (the term "cost" in this context shall include profit), (b) an additional sum of 15 per cent of such replacement cost, or as may be specified in Part II of these Conditions, to cover any additional costs of and incidental to the rectification of loss or damage including professional fees and the cost of demolishing and removing any part of the Works and of removing debris of whatsoever nature, and (c) the Contractor's Equipment and other things brought onto the Site by the Contractor, for a, sum sufficient to provide for their replacement at the Site.
21.2 Scope of Cover	The insurance in paragraphs (a) and (b) of Sub-Clause 21.1 shall be in the joint names of the Contractor and the Employer and shall cover: (a) the Employer and the Contractor against all loss or damage from whatsoever cause arising, other than as provided in Sub- Clause 21.4, from the start of work at the Site until the date of issue of the relevant Taking-Over Certificate in respect of the Works or any Section or part thereof as the case may be, and (b) the Contractor for his liability: (i) during the Defects Liability Period for loss or damage arising from a cause occurring prior to the commencement of the Defects Liability Period, and (ii) for loss or damage occasioned by the Contractor in the course of

	any operations carried out by him for the purpose of complying with his obligations under Clauses 49 and 50.
21.3 Responsibility forAmounts not Recovered	Any amounts not insured or not recovered from the insurers shall be borne by the Employer or the Contractor in accordance with their responsibilities under Clause 20.
21.4 Exclusions	There shall be no obligation for the insurances in Sub-Clause 21.1 to include loss or damage caused by: (a) war, hostilities (whether war be declared or not), invasion, act of foreign enemies, (b) rebellion, revolution, insurrection, or military or usurped power, or civil war, (c) ionising radiations, or contamination by radio-activity from any nuclear fuel, or from any nuclear waste from the combustionof nuclear fuel, radio-active toxic explosive or other hazardous properties of any explosive nuclear assembly or nuclear component thereof, or (d) pressure waves caused by aircraft or other aerial devices travelling at sonic or supersonic speeds.
22.1 Damage to Persons and Property	The Contractor shall, except if and so far as the Contract provides otherwise, indemnify the Employer against all losses and claims inrespect of: (a) death of or injury to any person, or (b) loss of or damage to any property (other than the Works), which may arise out of or in consequence of the execution and completion of the Works and the remedying of any defects therein, and against all claims, proceedings, damages, costs, charges and expenses whatsoever in respect thereof or in relation thereto, subject to the exceptions defined in Sub-Clause 22.2.
22.2 Exceptions	The "exceptions" referred to in Sub-Clause 22.1 are: (a) the permanent use or occupation of land by the Works, or any part thereof, (b) the right of the Employer to execute the Works, or any part thereof, on, over, under, in or through any land, (c) damage to property which is the unavoidable result of the execution and completion of the Works, or the remedying of any defects therein, in accordance with the Contract, and (d) death of or injury to persons or loss of or damage to property resulting from any act or neglect of the Employer, his agents servants or other contractors, not being employed by the Contractor, or in respect of any claims, proceedings, damages, costs, charges and expenses in respect thereof or in relation thereto or, where the injury or damage was contributed to by the Contractor, his servants or agents, such part of the said injury or damage as may be just and equitable having regard to the extent of the responsibility of the Employer, his servants or agents or

	other contractors for the injury or damage.
22.3 Indemnity byEmployer	The Employer shall indemnify the Contractor against all claims, proceedings, damages, costs, charges and expenses in respect ofthe matters referred to in the exceptions defined in Sub-Clause 22.2.
23.1 Third Party Insurance (including Employer's Property)	The Contractor shall, without limiting his or the Employer's obligations and responsibilities under Clause 22, insure, in the joint names of the Contractor and the Employer, against liabilities for death of or injury to any person (other than as provided in Clause 24) or loss of or damage to any property (other than the Works) arising out of the performance of the Contract, other than the exceptions defined in paragraphs (a), (b) and (c) of Sub-Clause 22.2.
23.2 Minimum Amount of insurance	Such insurance shall be for at least the amount stated in the Appendix to Tender.
23.3 Cross Liabilities	The insurance policy shall include a cross liability clause such that the insurance shall apply to the Contractor and to the Employer as separate insured.
24.1 Accident or Injury to Workmen	The Employer shall not be liable for or in respect of any damages or compensation payable to any workman or other person in the employment of the Contractor or any Subcontractor, other than death or injury resulting from any act or default of the Employer, his agents or servants. The Contractor shall indemnify and keep indemnified the Employer against all such damages and compensation, other than those for which the Employer is liable as aforesaid, and against all claims, proceedings, damages, costs, charges, and expenses whatsoever in respect thereof or in relation thereto.
24.2 Insurance Against Accident to Workmen	The Contractor shall insure against such liability and shall continue such insurance during the whole of the time that any persons are employed by him on the Works. Provided that, in respect of any persons employed by any Subcontractor, the Contractor's obligations to insure as aforesaid under this Sub-Clause shall be satisfied if the Subcontractor shall have insured against the liability in respect of such persons in such manner that the Employer is indemnified under the policy, but the Contractor shall require such Subcontractor to produce to the Employer, whenrequired, such policy of insurance and the receipt for the payment of the current premium.
25.1 Evidence and Terms of Insurances	The Contractor shall provide evidence to the Employer prior to the start of work at the Site that the insurances required under the Contract have been effected and shall, within 10 days of the Commencement Date, provide the insurance policies to the Employer. When providing such evidence and such policies to the Employer, the Contractor shall notify the Engineer of so doing. Such insurance policies shall be consistent with the general terms agreed prior to the issue of the Letter of Acceptance. The Contractor shall effect all insurances for which he is responsible with insurers and in terms approved by the Employer.
25.2 Adequacy ofInsurances	The Contractor shall notify the insurers of changes in the nature, extent or programme for the execution of the Works and ensure the adequacy of the insurances at all times in accordance with the terms of the Contract and shall,

	when required, produce to the Employer the insurance policies in force and the receipts for payment of the current premiums.
25.3 Remedy on Contractor's Failure to Insure	If the Contractor fails to effect and keep in force any of the insurances required under the Contract, or fails to provide the policies to the Employer within the period required by Sub-Clause 25.1, then and in any such case the Employer may effect and keep in force any such insurances and pay any premium as may be necessary for that purpose and from time to time deduct the amount so paid from any monies due or to become due to the Contractor, or recover the same as a debt due from the Contractor
25.4 Compliance withPolicy Conditions	In the event that the Contractor or the Employer fails to comply with conditions imposed by the insurance policies effected pursuant to the Contract, each shall indemnify the other against all losses and claims arising from such failure.
26.1 Compliance with Statutes, Regulations	The Contractor shall conform in all respects, including by the giving of all notices and the paying of all fees, with the provisions of: (a) any National or State Statute, Ordinance, or other Law, or any regulation, or bye-law of any local or other duly constituted authority in relation to the execution and completion of the Works and the remedying of any defects therein, and **(b)** the rules and regulations of all public bodies and companies whose property or rights are affected or may be affected in any way by the Works, and the Contractor shall keep the Employer indemnified against all penalties and liability of every kind for breach of any such provisions. Provided always that the Employer shall be responsible for obtaining any planning, zoning or other similar permission required for the Works to proceed and shall indemnify the Contractor in accordance with Sub-Clause 22.3.
27.1 Fossils	All fossils, coins, articles of value or antiquity and structures and other remains or things of geological or archaeological interest discovered on the Site shall, as between the Employer and the Contractor, be deemed to be the absolute property of the Employer. The Contractor shall take reasonable precautions to prevent his workmen or any other persons from removing or damaging any such article or thing and shall, immediately upon discovery thereof and before removal, acquaint the Engineer of such discovery and carry out the Engineer's instructions for dealing with the same. If, by reason of such instructions, the Contractor suffers delay and/or incurs costs then the Engineer shall, after due consultation with the Employer and the Contractor, determine any extension of time to which the Contractor is entitled under Clause 44, and shall notify the Contractor accordingly, with a copy to the Employer.
28.1 Patent Rights	The Contractor shall save harmless and indemnify the Employer from and against all claims and proceedings for or on account of infringement of any patent rights, design trademark or name or other protected rights in respect of any Contractor's Equipment, materials or Plant used for or in connection with or for incorporation in the Works and from and against all damages, costs, charges and expenses whatsoever in respect thereof or in relation thereto, except where such

	infringement results from compliance with the design or Specification provided by the Engineer.
28.2 Royalties	Except where otherwise stated, the Contractor shall pay all tonnage and other royalties, rent and other payments or compensation, if any, for getting stone, sand, gravel, clay or other materials required for the Works.
29.1 Interference with Traffic and Adjoining Properties	All operations necessary for the execution and completion of the Works and the remedying of any defects therein shall, so far as compliance with the requirements of the Contract permits, be carried on so as not to interfere unnecessarily or improperly with: (a) the convenience of the public, or (b) the access to, use and occupation of public or private roads and footpaths to or of properties whether in the possession of the Employer or of any other person. The Contractor may, at its cost, interrupt and divert the traffic if such interruption and diversion is necessary for the efficient progress of Works and conforms to Good Industry Practice. Further, such interruption and diversion shall be undertaken by the Contractor only with the prior written approval of the Engineer which approval shall not be unreasonably withheld. For the avoidance of doubt, all the cost related to the traffic diversion shall be borne by the Contractor and Employer shall not pay any extra cost. The Contractor shall save harmless and indemnify the Employer in respect of all claims, proceedings, damages, costs, charges and expenses whatsoever arising out of, or in relation to, any such matters insofar as the Contractor is responsible therefore.
30.1 Avoidance ofDamage to Roads	The Contractor shall use every reasonable means to prevent any of the roads or bridge communicating with or on the routes to the Site from being damaged or injured by any traffic of the Contractor or any of his Subcontractors and, in particular, shall select routes, choose and use vehicles and restrict and distribute loads so that any such extraordinary traffic as will inevitably arise from the moving of materials, Plant, Contractor's Equipment or Temporary Works from and to the Site shall be limited, as far as reasonably possible, and so that no unnecessary damage or injury may be occasioned to such roads and bridges.
30.2 Transport of Contractor's Equipment or Temporary Works	Save insofar as the Contract otherwise provides, the Contractor shall be responsible for and shall pay the cost of strengthening any bridges or altering or improving any road communicating with or on the routes to the Site to facilitate the movement of Contractor's Equipment or Temporary Works and the Contractor shall indemnify and keep indemnified the Employer against all claims for damage to any such road or bridge caused by such movement, including such claims as may be made directly against the Employer, and shall negotiate and pay all claims arising solely out of such damage.
30.3 Transport ofMaterials or Plant	If, notwithstanding Sub-Clause 30.1, any damage occurs to any bridge or road communicating with or on the routes to the Site arising from the transport of materials or Plant, the Contractor shall notify the Engineer with a copy to the Employer, as soon as he becomes aware of such damage or as soon as he receives any claim from the authority entitled to make such claim. Where under any law or regulation the haulier of such materials or Plant is required to indemnify the road

	authority against damage the Employer shall not be liable for any costs, charges or expenses in respect thereof or in relation thereto. In other cases the Employer shall negotiate the settlement of and pay all sums due in respect of such claim and shall indemnify the Contractor in respect thereof and in respect of all claims, proceedings, damages, costs, charges and expenses in relation thereto. Provided that if and so far as any such claim or part thereof is, in the opinion of the Engineer, due to any failure on the part of the Contractor to observe and perform his obligations under Sub-Clause 30.1, then the amount, determined by the Engineer, after due consultation with the Employer and the Contractor, to be due to such failure shall be recoverable from the Contractor by the Employer and may be deducted by the Employer from any monies due or to become due to the Contractor and the Engineer shall notify the Contractor accordingly, with a copy to the Employer. Provided also that the Employer shall notify the Contractor whenever a settlement is to be negotiated and, where any amount may be due from the Contractor, the Employer shall consult with the Contractor before such settlement is agreed.
30.4 Waterborne Traffic	Where the nature of the Works is such as to require the use by the Contractor of waterborne transport the foregoing provisions of this Clause shall be construed as though "road" included a lock, dock, sea wall or other structure related to a waterway and "vehicle" included craft, and shall have effect accordingly.
31.1 Opportunities for Other Contractors	The Contractor shall, in accordance with the requirements of the Engineer, afford all reasonable opportunities for carrying out their work to: (a) any other contractors employed by the Employer and their workmen (b) the workmen of the Employer, and (c) the workmen of any duly constituted authorities who may be employed in the execution on or near the Site of any work not included in the Contract or of any contract which the Employer may enter into in connection with or ancillary to the Works.
31.2 Facilities forOther Contractors	If however, pursuant to Sub-Clause 31.1 the Contractor shall, on the written request of the Engineer: (a) make available to any such other contractor, or to the Employer or any such authority, any roads or ways for the maintenance of which the Contractor is responsible, (b) permit the use, by any such, of Temporary Works or Contractor's Equipment on the Site, or (c) provide any other service of whatsoever nature for any such, the Engineer shall determine an addition to the Contract Price in accordance with Clause 52 and shall notify the Contractor accordingly, with a copy to the Employer
32.1 Contractor toKeep Site Clear	During the execution of the Works the Contractor shall keep the Site reasonably free from all unnecessary obstruction and shall store or dispose of any Contractor's Equipment and surplus materials and clear away and remove from the

	Site any wreckage, rubbish or Temporary Works no longer required.
33.1 Clearance of Siteon Completion	Upon the issue of any Taking-Over Certificate the Contractor shall clear away and remove from that part of the Site to which such Taking-Over Certificate relates all Contractor's Equipment, surplus material, rubbish and Temporary Works of every kind, and leave such part of the Site and Works clean and in a workmanlike condition to the satisfaction of the Engineer. Provided that the Contractor shall be entitled to retain on Site, until the end of the Defects Liability Period, such materials, Contractor's Equipment and Temporary Works as are required by him for the purpose of fulfilling his obligations during the Defects Liability Period.
34.1 Engagement of Staff and Labour	The Contractor shall, unless otherwise provided in the Contract, make his own arrangements for the engagement of all staff and labour, local or other, and for their payment, housing, feeding and transport.
35.1 Returns of Labour and Contractor's Equipment	The Contractor shall, if required by the Engineer, deliver to the Engineer a return in detail, in such form and at such intervals as the Engineer may prescribe, showing the staff and the numbers of the several classes of labour from time to time employed by the Contractor on the Site and such information respecting Contractor's Equipment as the Engineer may require.
	Materials, Plant and Workmanship
36.1 Quality of Materials, Plant and Workmanship	All materials, Plant and workmanship shall be: (a) of the respective kinds described in the Contract and in accordance with the Engineer's instructions, and (b) subjected from time to time to such tests as the Engineer may require at the place of manufacture, fabrication or preparation, oron the Site or at such other place or places as may be specified in the Contract, or at all or any of such places. The Contractor shall provide such assistance, labour, electricity, fuels, stores, apparatus and instruments as are normally required for examining, measuring and testing any materials or Plant and shall supply samples of materials, before incorporation in the Works, for testing as may be selected and required by the Engineer. The Contractor shall be responsible for the provision of all power, water and other services he may require for his construction activities and to the extent defined in the Specifications, for the tests. The Contractor shall be entitled to use for the purposes of the Works such supplies of electricity, water, gas and other services as may be available on the Site and of which details and prices are given in the Specification. The Contractor shall, at his risk and cost, provide any apparatus necessary for his use of these services and for measuring the quantities consumed. The quantities consumed and the amounts due (at these prices) for such services shall be agreed or determined by the Engineer in accordance with Sub-Clause 53.6 and Sub- Clause 2.7. The Contractor shall pay these amounts to the Employer.
36.2 Cost of Samples	All samples shall be supplied by the Contractor at his own cost if the supply thereof is clearly intended by or provided for in the Contract.

36.3 Cost of Tests	The cost of making any test shall be borne by the Contractor if such test is: (a) clearly intended by or provided for in the Contract, or (b) particularised in the Contract (in cases only of a test under load or of a test to ascertain whether the design of any finished or partially finished work is appropriate for the purposes which it wasintended to fulfil) in sufficient detail to enable the Contractor to price or allow for the same in his Tender.
36.4 Cost of Tests not Provided for	If any test required by the Engineer which is: (a) not so intended by or provided for, (b) (in the cases above mentioned) not so particularised, or (c) (though so intended or provided for) required by the Engineer to be carried out at any place other than the Site or the place of manufacture, fabrication or preparation of the materials or Plant tested, shows the materials, Plant or workmanship not to be in accordance with the provisions of the Contract to the satisfactionof the Engineer, then the cost of such test shall be borne by the Contractor, but in any other case Sub-Clause 36.5 shall apply
36.5 Engineer's Determination where Tests not Provided for	Where, pursuant to Sub-Clause 36.4, this Sub-Clause applies the Engineer shall, after due consultation with the Employer and the Contractor, determine: (a) any extension of time to which the Contractor is entitled under Clause 44, and (b) the amount of such costs, which shall be added to the Contract Price, and shall notify the Contractor accordingly, with a copy to the Employer.
37.1 Inspection ofOperations	The Engineer, and any person authorised by him, shall at all reasonable times have access to the Site and to all workshops and places where materials or Plant are being manufactured, fabricated or prepared for the Works and the Contractor shall afford every facility for and every assistance in obtaining the right to such access.
37.2 Inspection and Testing	The Engineer shall be entitled, during manufacture, fabrication or preparation to inspect and test the materials and Plant to be supplied under the Contract. If materials or Plant are being manufactured, fabricated or prepared in workshops or places other than those of the Contractor, the Contractor shall obtain permissionfor the Engineer to carry out such inspection and testing in those workshops or places. Such inspection or testing shall not release the Contractor from any obligation under the Contract.
37.3 Dates for Inspection And Testing	The Contractor shall agree with the Engineer on the time and place for the inspection or testing of any materials or Plant as provided in the Contract. The Engineer shall give the Contractor not less than 24 hours notice of his intention to carry out the inspection or to attend the tests. If the Engineer, or his duly authorised representative, does not attend on the date agreed, the Contractor may, unless otherwise instructed by the Engineer, proceed with the tests, which shall be deemed to have been made in the presence of the Engineer. The Contractor shall forthwith forward to the Engineer duly certified copies of the test readings. If the Engineer has not attended the tests, he shall accept the said readings as accurate.
37.4 Rejection	If, at the time and place agreed in accordance with Sub-Clause 37.3, the

	materials or Plant are not ready for inspection or testing or if, as a result of the inspection testing referred to in this Clause, the Engineer determines that the materials or Plant are defective or otherwise not in accordance with the Contract, he may reject the materials or Plant and shall notify the Contractor thereof immediately. The notice shall state the Engineer's objections with reasons. The Contractor shall then promptly make good the defect or ensure that rejected materials or Plant comply with the Contract.If the Engineer so requests, the tests of rejected materials or Plant shall be made or repeated under the same terms and conditions. All costs incurred by the Employer by the repetition of the tests shall, after due consultation with the Employer and the Contractor, be determined by the Engineer and shall be recoverable from theContractor by the Employer and may be deducted from any moniesdue or to become due to the Contractor and the Engineer shall notify the Contractor accordingly, with a copy to the Employer.
37.5 Independent Inspection	The Engineer may delegate inspection and testing of materials or Plant to an independent inspector. Any such delegation shall be effected in accordance with Sub-Clause 2.4 and for this purpose such independent inspector shall be considered as an assistant of the Engineer. Notice of such appointment (not being less than 14 days) shall be given by the Engineer to the Contractor.
38.1 Examination of Work before Covering up	No part of the Works shall be covered up or put out of view without the approval of the Engineer and the Contractor shall afford full opportunity for the Engineer to examine and measure any such part of the Works which is about to be covered up or put out of view and to examine foundations before any part of the Works is placed thereon. The Contractor shall give notice to the Engineer whenever any such part of the Works or foundations is or are ready or about to be ready for examination and the Engineer shall, without unreasonable delay, unless he considers it unnecessary and advises the Contractor accordingly, attend for the purpose of examining and measuring such part of the Works or of examining such foundations
38.2 Uncovering andMaking Openings	The Contractor shall uncover any part of the Works or make openings in or through the same as the Engineer may from time to time instruct and shall reinstate and make good such part. If any such part has been covered up or put out of view after compliance with the requirement of Sub-Clause 38.1 and is found to be executed in accordance with the Contract, the Engineer shall, after due consultation with the Employer and the Contractor, determine the amount of the Contractor's costs in respect of such of uncovering, making openings in or through, reinstating and making good the same, which shall be added to the Contract Price, and shall notify the Contractor accordingly, with a copy to the Employer. In any other case all costs shall be borne by the Contractor.
39.1 Removal of Improper Work, Materials or Plant	The Engineer shall have authority to issue instructions from time to time, for: (a) the removal from the Site, within such time or times as may be specified in the instruction, of any materials or Plant which, in the opinion of the Engineer, are not in accordance with the Contract, (b) the substitution of proper and suitable materials or Plant, and (c) the removal and proper re-execution, notwithstanding any previous test thereof

	or interim payment therefor, of any work which, in respect of **(i)** materials, Plant or workmanship, or **(ii)** design by the Contractor or for which he is responsible, is not, in the opinion of the Engineer, in accordance with the Contract.
39.2 Default of Contractor in Compliance	In case of default on the part of the Contractor in carrying out such instruction within the time specified therein or, if none, within a reasonable time, the Employer shall be entitled to employ and pay other persons to carry out the same and all costs consequent thereon or incidental thereto shall, after due consultation with the Employer and the Contractor, be determined by the Engineer and shall be recoverable from the Contractor by the Employer, and maybe deducted by the Employer from any monies due or to become due to the Contractor and the Engineer shall notify the Contractor accordingly, with a copy to the Employer.
	Suspension
40.1 Suspension of Work	The Contractor shall, on the instructions of the Engineer, suspend the progress of the Works or any part thereof for such time and in such manner as the Engineer may consider necessary and shall, during such suspension, properly protect and secure the Works or such part thereof so far as is necessary in the opinion of the Engineer. Unless such suspension is: (a) otherwise provided for in the Contract, (b) necessary by reason of some default of or breach of contract by the Contractor or for which he is responsible, (c) necessary by reason of climatic conditions on the Site, or (d) necessary for the proper execution of the Works or for the safety of the Works or any part thereof (save to the extent that suchnecessity arises from any act or default by the Engineer or the Employer or from any of the risks defined in Sub-Clause 20.4), Sub-Clause 40.2 shall apply.
40.2 Engineer's Determination following Suspension	Where, pursuant to Sub-Clause 40.1, this Sub-Clause applies the Engineer shall after due consultation with the Employer and the Contractor, determine (a) any extension of time to which the Contractor is entitled under Clause 44, and (b) the amount, which shall be added to the Contract Price, in respect of the cost incurred by the Contractor by reason of such suspension, and shall notify the Contractor accordingly, with a copy to the Employer
40.3 Suspension lastingmore than 84 Days	If the progress of the Works or any part thereof is suspended on the instructions of the Engineer and if permission to resume work is not given by the Engineer within a period of 84 days from the date of suspension then, unless such suspension is within paragraph (a), (b), (c) or (d) of Sub-Clause 40.1, the Contractor may give notice to the Engineer requiring permission, within 28 days from the receipt thereof, to proceed with the Works or that part thereof in regard to which progress is suspended. If, within the said time, such permission is not granted, the

	Contractor may, but is not bound to, elect to treat the suspension, where it affects part only of the Works, as an omission of such part under Clause 51 by giving a further notice to the Engineer to that effect, or, where it affects the whole of the Works, treat the suspension as an event of default by the Employer and terminate his employment under the Contract in accordance with the provisions of Sub-Clause 69.1, whereupon the provisions of Sub-Clauses 69.2 and 69.3 shall apply.
	Commencement and Delays
41.1 Commencement of Works	The Contractor shall commence the Works as soon as is reasonably possible after the receipt by him of a notice to this effect from the Engineer, which notice shall be issued within the time stated in the Appendix to tender after the date of the Letter of Acceptance. Thereafter, the Contractor shall proceed with the Works with due expedition and without delay.
42.1 Possession of Site and Access Thereto	Save insofar as the Contract may prescribe: **(a)** the extent of portions of the Site of which the Contractor is to be given possession from time to time **(b)** the order in which such portions shall be made available to the Contractor, and, subject to any requirement in the Contract as to the order in which the Works shall be executed, the Employer will, with the Engineer's notice to commence the Works, give to the Contractor possession of **(c)** so much of the Site, and **(d)** such access as, in accordance with the Contract, is to be provided by the Employer as may be required to enable the Contractor to commence and proceed with the execution of the Works in accordance with the programme referred to in Clause 14, if any, and otherwise in accordance with such reasonable proposals as the Contractor ' shall, by notice to the Engineer with a copy to the Employer, make. The Employer will, from time to time as the Works proceed, give to the Contractor possession of such further portions of the Site as may be required to enable the Contractor to proceed with the execution of the Works with due dispatch in accordance with such programme or proposals, as the case may be.
42.2 Failure to Give Possession	If the Contractor suffers delay and/or incurs costs from failure on the part of the Employer to give possession in accordance with the terms of Sub-Clause 42. 1, the Engineer shall, after due consultation with the Employer and the Contractor, determine: (a) any extension of time to which the Contractor is entitled under Clause 44, and (b) the amount of such costs, which shall be added to the Contract Price, and shall notify the Contractor accordingly, with a copy to the Employer
42.3 Rights of Way and Facilities	The Contractor shall bear all costs and charges for special or temporary rights of way required by him in connection with access to the Site. The Contractor shall also provide at his own cost any additional facilities outside the Site required by him for the purposes of the Works.
43.1 Time for	The whole of the Works and, if applicable, any Section required to be completed

Completion	within a particular time as stated in the Appendix to Tender, shall be completed in accordance with the provisions of Clause 48, within the time stated in the Appendix to Tender for the whole of the Works or the Section (as the case may be), calculated from the Commencement Date, or such extended time as may be allowed under Clause 44.
44.1 Extension of Time for Completion	In the event of: (a) the amount or nature of extra or additional work (unless an adjustment to the Time for Completion has been agreed) or other substantial change in the quantity of an item of work included in the Contract, (b) any cause of delay referred to in these Conditions, (c) exceptionally adverse climatic conditions, (d) any delay, impediment or prevention caused by or attributable to the Employer, the Employer's Personnel, or the Employer's other Contractors or (e) other special circumstances or Force Majeure which may occur, other than through a default of or breach of contract by the Contractor or for which he is responsible, being such as fairly to entitle the Contractor to an extension of the Time for Completion of the Works, or any Section or part thereof, the Engineer shall, after due consultation with the Employer and the Contractor, determine the amount of such extension and shall notify the Contractor accordingly, with a copy to the Employer.
44.2 Contractor to Provide Notification and Detailed Particulars	Provided that the Engineer is not bound to make any determination unless the Contractor has (a) within 28 days after such event has first arisen notified the Engineer with a copy to the Employer, and (b) within 28 days, or such other reasonable time as may be agreed by the Engineer, after such notification submitted to the Engineer detailed particulars of any extension of time to which he mayconsider himself entitled in order that such submission may be investigated at the time.
44.3 Interim Determination of Extension	Provided also that where an event has a continuing effect such that it is not practicable for the Contractor to submit detailed particulars within the period of 28 days referred to in Sub-Clause 44.2(b), he shall nevertheless be entitled to an extension of time provided that he has submitted to the Engineer interim particulars at intervals of not more than 28 days and final particulars within 28 days of the end of the effects resulting from the event. On receipt of such interim particulars, the Engineer shall, without undue delay, make an interim determination of extension of time and, on receipt of the final particulars, the Engineer shall review all the circumstances and shall determine an overall extension of time in regard to the event. In both such cases the Engineer shall make his determination after due consultation with the Employer and the Contractor and shall notify the Contractor of the determination, with a copy to the Employer. No final review shall result in a decrease of any extension of time

	already determined by the Engineer.
45.1 Restriction on Working Hours	Subject to any provision to the contrary contained in the Contract, none of the Works shall, save as hereinafter provided, be carried on during the night or on locally recognised days of rest without the consent of the Engineer, except when work is unavoidable or absolutely necessary for the saving of life or property or for the safety of the Works, in which case the Contractor shall immediately advise the Engineer. Provided that the provisions of this Clause shall not be applicable in the case of any work which it is customary to carry out by multiple shifts.
46.1 Rate of Progress	If for any reason, which does not entitle the Contractor to an extension of time, the rate of progress of the Works or any Section is at any time, in the opinion of the Engineer, too slow to comply with the Time for Completion, the Engineer shall so notify the Contractor who shall thereupon take such steps as are necessary, subject to the consent of the Engineer, to expedite progress so as to comply with the Time for Completion. The Contractor shall not be entitled to any additional payment for taking such steps. If, as a result of any notice given by the Engineer under this Clause, the Contractor considers that it is necessary to do any work at night or on locally recognised days of rest, he shall be entitled to seek the consent of the Engineer so to do. Provided that if any steps, taken by the Contractor in meeting his obligations under this Clause, involve the Employer in additional supervision costs, such costs shall, after due consultation with the Employer and the Contractor, be determined by the Engineer and shall be recoverable from the Contractor by the Employer, and may be deducted by the Employer from any monies due or to become due to the Contractor and the Engineer shall notify the Contractor accordingly, with a copy to the Employer.
47.1 Liquidated Damages for Delay	If the Contractor fails to comply with the Time for Completion in accordance with Clause 48, for the whole of the Works or, if applicable, any Section within the relevant time prescribed by Clause 43, then the Contractor shall pay to the Employer the relevant sum stated in the Appendix to Tender as liquidated damages for such default and not as a penalty (which sum shall be the only monies due from the Contractor for such default) for every day or part of a day which shall elapse between the relevant Time for Completion and the date stated in a Taking-Over Certificate of the whole of the Works or the relevant Section, subject to the applicable limit stated in the Appendix to Tender. The Employer may, without prejudice to any other method of recovery, deduct the amount of such damages from any monies due or to become due to the Contractor. The payment or deduction of such damages shall not relieve the Contractor from his obligation to complete the Works, or from any other of his obligations and liabilities under the Contract.
47.2 Reduction of Liquidated Damages	If, before the Time for Completion of the whole of the Works or, if applicable, any Section, a Taking-Over Certificate has been issued for any part of the Works or of a Section, the liquidated damages for delay in completion of the remainder of the Works or of that Section shall, for any period of delay after the date stated in such Taking-Over Certificate, and in the absence of alternative provisions in the Contract, be reduced in the proportion which the value of the part so certified bears to the value of the whole of the Works or Section, as applicable. The provisions of

	this Sub-Clause shall only apply to the rate of liquidated damages and shall not affect the limit thereof.
48.1 Taking-OverCertificate	When the whole of the Works have been substantially completed and have satisfactorily passed any Tests on Completion prescribed by the Contract, the Contractor may give a notice to that effect to the Engineer, with a copy to the Employer, accompanied by a written undertaking to finish with due expedition any outstanding work during the Defects Liability Period. Such notice and undertaking shall be deemed to be a request by the Contractor for the Engineer to issue a Taking-Over Certificate in respect of the Works. The Engineer shall, within 21 days of the date of delivery of such notice, either issue to the Contractor, with a copy to the Employer, a Taking-Over Certificate, stating the date on which, in his opinion, the Works were substantially completed in accordance with the Contract, or give instructions in writing to the Contractor specifying all the work which, in the Engineer's opinion, is required to be done by the Contractor before the issue of such Certificate. The Engineer shall also notify the Contractor of any defects in the Works affecting substantial completion that may appear after such instructions and before completion of -Over Certificate within 21 days of completion, to the satisfaction of the Engineer, of the Works so specified and remedying any defects so notified.
48.2 Taking Over of Sections or Parts	Similarly, in accordance with the procedure set out in Sub-Clause 48.1, the Contractor may request and the Engineer shall issue a Taking-Over Certificate in respect of: (a) any Section in respect of which a separate Time for Completion is provided in the Appendix to Tender, (b) any substantial part of the Permanent Works which has been both completed to the satisfaction of the Engineer and, otherwise than as provided for in the Contract, occupied or used by theEmployer, or (c) any part of the Permanent Works which the Employer has elected to occupy or use prior to completion (where such prior occupation or use is not provided for in the Contract or has not been agreed by the Contractor as a temporary measure)
48.3 Substantial Completion of Parts	If any part of the Permanent Works has been substantially completed and has satisfactorily passed any Tests on Completion prescribed by the Contract, the Engineer may issue a Taking-Over Certificate in respect of that part of the Permanent Works before completion of the whole of the Works and, upon the issue of such Certificate, the Contractor shall be deemed to have undertaken to complete with due expedition any outstanding work in that part of the Permanent Works during the Defects Liability Period.
48.4 Surfaces Requiring Reinstatement	Provided that a Taking-Over Certificate given in respect of any Section or part of the Permanent Works before completion of the whole of the Works shall not be deemed to certify completion of any ground or surfaces requiring reinstatement, unless such Taking-Over Certificate shall expressly so state
49.1 Defects Liability Period	In these Conditions the expression "Defects Liability Period" shall mean the defects liability period named in the Appendix to Tender,calculated from: (a) the date of completion of the Works certified by the Engineerin accordance

	with Clause 48, or (b) in the event of more than one certificate having been issued by the Engineer under Clause 48, the respective dates so certified, and in relation to the Defects Liability Period the expression "the Works" shall be construed accordingly.
49.2 Completion of Outstanding Work and Remedying Defects	To the intent that the Works shall, at or as soon as practicable after the expiration of the Defects Liability Period, be delivered to the Employer in the condition required by the Contract, fair wear and tear excepted, to the satisfaction of the Engineer, the Contractor shall: (a) complete the work, if any, outstanding on the date stated in the Taking-Over Certificate as soon as practicable after such date, and (b) execute all such work of amendment, reconstruction, and remedying defects, shrinkages or other faults as the Engineer may, during the Defects Liability Period or within 14 days after its expiration, as a result of an inspection made by or on behalf of the Engineer prior to its expiration, instruct the Contractor to execute.
49.3 Cost of Remedying Defects	All work referred to in Sub-Clause 49.2 (b) shall be executed by the Contractor at his own cost if the necessity thereof is, in the opinion of the Engineer, due to: (a) the use of materials, Plant or workmanship not in accordance with the Contract, (b) where the Contractor is responsible for the design of part of the Permanent works**,** any fault in such design, or (c) he neglect or failure on the part of the Contractor to comply with any obligation, expressed or implied, on the Contractor's part under the Contract. If, in the opinion of the Engineer, such necessity is due to any other cause, he shall determine an addition to the Contract Price in accordance with Clause 52 and shall notify the Contractor accordingly, with a copy to the Employer
49.4 Contractor's Failure to Carry Out Instructions	In case of default on the part of the Contractor in carrying out such instruction within a reasonable time, the Employer shall be entitled to employ and pay other persons to carry out the same and if such work is work which, in the opinion of the Engineer, the Contractor was liable to do at his own cost under the Contract, then all costs consequent thereon or incidental thereto shall, after due consultation with the Employer and the Contractor, be determined by the Engineer and shall be recoverable from the Contractor by the Employer, and may be deducted by the Employer from any monies due or to become due to the Contractor and the Engineer shall notify the Contractor accordingly, with a copy to the Employer.
50.1 Contractor to Search	If any defect, shrinkage or other fault in the Works appears at any time prior to the end of the Defects Liability Period, the Engineer may instruct the Contractor, with copy to the Employer, to search under the directions of the Engineer for the cause thereof. Unless such defect, shrinkage or other fault is one for which the Contractor is liable under the Contract, the Engineer shall, after due consultation with the Employer and the Contractor, determine the amount in respect of the costs of such search incurred by the Contractor, which shall be added to the Contract Price and shall notify the Contractor accordingly, with a copy to the Employer. If

	such defect, shrinkage or other fault is one for which the Contractor is liable, the cost of the work carried out in searching as aforesaid shall be borne by the Contractor and he shall in such caseremedy such defect, shrinkage or other fault at his own cost in accordance with the provisions of Clause 49.
	Alterations, Additions and Omissions
51.1 Variations	The Engineer shall make any variation of the form, quality or quantity of the Works or any part thereof that may, in his opinion, be necessary and for that purpose, or if for any other reason it shall, in his opinion, be appropriate, he, with due approval of the Employer shall instruct the Contractor to do and the Contractor shall do any of the following: (a) increase or decrease the quantity of any work included in the Contract, (b) omit any such work (but not if the omitted work is to be carried out by the Employer or by another contractor), (c) change the character or quality or kind of any such work, (d) change the levels, lines, position and dimensions of any part ofthe Works, (e) execute additional work of any kind necessary for thecompletion of the Works, or (f) change any specified sequence or timing of construction ofany part of the Works. No such variation shall in any way vitiate or invalidate the Contract, but the effect, if any, of all such variations shall be valued in accordance with Clause 52. Provided that where the issue of an instruction to vary the Works is necessitated by some default of or breach of contract by the Contractor or for which he is responsible, any additional cost attributable to such default shall beborne by the Contractor.
51.2 Instructions for Variations	The Contractor shall not make any such variation without an instruction of the Engineer. Provided that no instruction shall be required for increase or decrease in the quantity of any work wheresuch increase or decrease is not the result of an instruction given under this Clause, but is the result of the quantities exceeding or being less than those stated in the Bill of Quantities.
52.1 Valuation ofVariations	All variations referred to in Clause 51 and any additions to the Contract Price which are required to be determined in accordance with Clause 52 (for the purposes of this Clause referred to as "varied work"), shall be valued at the rates and prices set out in the Contract if, in the opinion of the Engineer, the same shall be applicable. If the Contract does not contain any rates or prices applicable to the varied work, the rates and prices in the Contract shall be used as the basis for valuation so far as may be reasonable, failing which, after due consultation by the Engineer with the Employer and the Contractor, suitable rates or prices shall be agreed upon between the Engineer and the Contractor. In the event of disagreement, the Engineer shall fix such rates or prices as are, in his opinion, appropriate and shall notify the Contractor accordingly, with a copy to the

	Employer. Until such time as rates or prices are agreed or fixed, the Engineer shall determine provisional rates or prices to enable on-account payments to be included in certificates issued in accordance with Clause 60.
52.2 Power of Engineer to Fix Rates	Provided that if the nature or amount of any varied work relative to the nature or amount of the whole of the Works or to any part thereof, is such that, in the opinion of the Engineer, the rate or price contained in the Contract for any item of the Works is, by reason of such varied work, rendered inappropriate or inapplicable, then, after due consultation by the Engineer with the Employer and the Contractor, a suitable rate or price shall be agreed upon between the Engineer and the Contractor. In the event of disagreement, the Engineer shall fix such other rate or price as is, in his opinion, appropriate and shall notify the Contractor accordingly, with a copy to the Employer. Until such time as rates or prices are agreed or fixed, the Engineer shall determine provisional rates or prices to enable on-account payments to be included in certificates issued in accordance with Clause 60. Provided also that no varied work instructed to be done by the Engineer pursuant to Clause 51 shall be valued under Sub-Clause 52.1 or under this Sub-Clause unless, within 14 days of the date of such instruction and, other than in the case of omitted work, before the commencement of the varied work, notice shall have been given either: (a) by the Contractor to the Engineer of his intention to claim extra payment or a varied rate or price, or (b) by the Engineer to the Contractor of his intention to vary a rate or price.
52.3 Variation exceeding 15 Percent	**Deleted**
52.4 Daywork	The Engineer may, if in his opinion it is necessary or desirable, issue an instruction that any varied work shall be executed on a daywork basis. The Contractor shall then be paid for such varied work under the terms set out in the daywork schedule included in the Contract and at the rates and prices affixed thereto by him in the Tender. The Contractor shall furnish to the Engineer such receipts or other vouchers as may be necessary to prove the amounts paid and, before ordering materials, shall submit to the Engineer quotations for the same for his approval. In respect of such of the Works executed on a daywork basis, the Contractor shall, during the continuance of such work, deliver each day to the Engineer an exact list in duplicate of the names, occupation and time of all workmen employed on such work and a statement, also in duplicate, showing the description and quantity of all materials and Contractor's Equipment used thereon or therefor other than Contractor's Equipment which is included in the percentage addition in accordance with such day work schedule. One copy of each list and statement will, if correct, or when agreed, be signed by the Engineer and returned to the Contractor. At the end of each month the Contractor shall deliver to the Engineer a priced

	statement of the labour, materials and Contractor's Equipment, except as aforesaid, used and the Contractor shall not be entitled to any payment unless such lists and statements have been fully and punctually rendered. Provided always that if the Engineer considers that for any reason the sending of such lists or statements by the Contractor, in accordance with the foregoing provision, was impracticable he shall nevertheless be entitled to authorise payment for such work, either as daywork, on being satisfied as to the time employed and the labour, materials and Contractor's Equipment used on such work, or at such value therefor as shall, in his opinion, be fair and reasonable.
	Procedure for Claims
53.1 Notice of Claims	Notwithstanding any other provision of the Contract, if the Contractor intends to claim for any extension of Time for Completion and/ or any additional payment pursuant to any Clause of these Conditions or otherwise, he shall give notice of his intention to the Engineer describing the event or circumstance giving rise to the claim, with a copy to the Employer, within 28 days after the Contractor became aware, or should have become aware, of the event or circumstance.. If the Contractor fails to give notice of a claim within such period of 28 days, the Time for Completion shall not be extended, the Contractor shall not be entitled to additional payment, and the Employer shall be discharged from all liability in connection with the claim. Otherwise, the following provisions of this Sub-Clause shall apply. The Contractor shall also submit any other notices which are required by the Contract, and supporting particulars for the claim, all as relevant to such event or circumstance.
53.2 Contemporary Records	Upon the happening of the event referred to in Sub-Clause 53.1,the Contractor shall keep such contemporary records as may reasonably be necessary to support any claim he may subsequently wish to make. Without necessarily admitting the Employer's liability, the Engineer shall, on receipt of a notice under Sub-Clause 53.1, inspect such contemporary records and may instruct the Contractor to keep any further contemporary records as are reasonable and may be material to the claim of which notice has been given. The Contractor shall permit the Engineer to inspect all records kept pursuant to this Sub-Clause and shall supply him with copies thereof as and when the Engineer so instructs.
53.3 Substantiation of Claims	Within 42 days after the Contractor became aware (or should have become aware) of the event or circumstance giving rise to the claim, or within such other period as may be proposed by the Contractor and approved by the Engineer, the Contractor shall send to the Engineer a fully detailed claim which includes full supporting particulars of the basis of the claim and of the extension of time and/or additional payment claimed. If the event or circumstance giving rise to the claim has a continuing effect: (a) this fully detailed claim shall be considered as interim; (b) the Contractor shall send further interim claims at monthly intervals, giving the accumulated delay and/or amount claimed, and such further particulars as the Engineer may reasonably require; and

	(c) the Contractor shall send a final claim within 28 days after the end of the effects resulting from the event or circumstance, or within such other period as may be proposed by the Contractor and approved by the Engineer. Within 42 days after receiving a claim or any further particulars supporting a previous claim, or within such other period as may be proposed by the Engineer and approved by the Contractor, the Engineer shall respond with approval, or with disapproval and detailed comments. He may also request any necessary further particulars, but shall nevertheless give his response on the principles of the claim within the above defined time period. Within the above defined period of 42 days, the Engineer shall proceed in accordance with Sub-Clause 2.7 to agree or determine (i) the extension (if any) of the Time for Completion (before or after its expiry), and/or (ii) the additional payment (if any) to which the Contractor is entitled under the Contract.
53.4 Failure to Comply	If the Contractor fails to comply with any of the provisions of this Clause in respect of any claim which he seeks to make, his entitlement to payment in respect thereof shall not exceed such amount as the Engineer or any arbitrator or arbitrators appointed pursuant to Sub-Clause 67.3 assessing the claim considers to be verified by contemporary records (whether or not such records were brought to the Engineer's notice as required under Sub- Clauses 53.2 and 53.3).
53.5 Payment of Claims	Each Payment Certificate shall include such additional payment for any claim as have been reasonably substantiated as due under the relevant provision of the Contract. Unless and until the particulars supplied are sufficient to substantiate the whole of the claim, the Contractor shall only be entitled to payment for such part of the claim as he has been able to substantiate. The Contractor shall be entitled to have included in any interim payment certified by the Engineer pursuant to Clause 60 such amount in respect of any claim as the Engineer, after due consultation with the Employer and the Contractor, may consider due to the Contractor provided that the Contractor has supplied sufficient particulars to enable the Engineer to determine the amount due. If such particulars are insufficient to substantiate the whole of the claim, the Contractor shall be entitled to payment in respect of such part of the claim as such particulars may substantiate to the satisfaction of the Engineer. The Engineer shall notify the Contractor of any determination made under this Sub- Clause, with a copy to the Employer.
53.6 Employer's Claims	If the Employer considers himself to be entitled to any payment under any Clause of these Conditions or otherwise in connection with the Contract, and/or to any extension of the Defects Liability Period, the Employer or the Engineer shall give notice and particulars to the Contractor. However, notice is not required for payments due for electricity, water and gas, Employer's equipment and free-issue material, or for other services requested by the Contractor. The notice shall be given as soon as practicable and no longer than 28 days after the Employer became aware, or should have become aware, of the event or circumstances giving rise to the claim. A notice relating to any extension of the Defects Liability Period shall be given before the expiry of such period. The particulars shall specify the Clause or other basis of the claim, and shall include substantiation of the amount and/or extension to which the Employer considers himself to be entitled in connection with the Contract. The Engineer shall then proceed in accordance with Sub-Clause

	2.7 to agree or determine (i) the amount (if any) which the Employer is entitled to be paid by the Contractor, and/or (ii) the extension (if any) of the Defects Liability Period. This amount may be included as a deduction in the Contract Price and Payment Certificates. The Employer shall only be entitled to set off against or make any deduction from an amount certified in a Payment Certificate, or to otherwise claim against the Contractor, in accordance with this Sub-Clause.
	Contractor's Equipment, Temporary Works and Materials
54.1 Contractor's Equipment, Temporary Works and Materials; Exclusive Use for the Works	All Contractor's Equipment, Temporary Works and materials provided by the Contractor shall, when brought on to the Site, be deemed to be exclusively intended for the execution of the Works and the Contractor shall not remove the same or any part thereof, except for the purpose of moving it from one part of the Site to another, without the consent of the Engineer. Provided that consent shall not be required for vehicles engaged in transporting any staff, labour, Contractor's Equipment, Temporary Works, Plant or materials to or from the Site.
54.2 Employer notLiable for Damage	The Employer shall not at any time be liable, save as mentioned in Clauses 20 and 65, for the loss of or damage to any of the said Contractor's Equipment, Temporary Works or materials
54.3 Customs Clearance	The Employer will use his best endeavours in assisting the Contractor, where required, in obtaining clearance through the Customs of Contractor's Equipment, materials and other things required for the Works.
54.4 Re-export ofContractor's Equipment	In respect of any Contractor's Equipment which the Contractor has imported for the purposes of the Works, the Employer will use his best endeavours to assist the Contractor, where required, in procuring any necessary Government consent to the re-export of such Contractor's Equipment by the Contractor upon the removal thereof pursuant to the terms of the Contract.
54.5 Conditions of Hire of Contractor's Equipment	With a view to securing, in the event of termination under Clause 63, the continued availability, for the purpose of executing the Works, of any hired Contractor's Equipment, the Contractor shall not bring on to the Site any hired Contractor's Equipment unless there is an agreement for the hire thereof (which agreement shall be deemed not to include an agreement for hire purchase) which contains a provision that the owner thereof will, on request in writing made by the Employer within 7 days after the date on which any termination has become effective, and on the Employer undertaking to pay all hire charges in respect thereof from such date, hire such Contractor's Equipment to the Employer on the same terms in all respects as the same was hired to the Contractor save that the Employer shall be entitled to permit the use thereof by any other contractor employed by him for the purpose of executing and completing the Works and remedying any defects therein, under the terms of the said Clause 63.
54.6 Costs for the Purpose of Clause 63	In the event of the Employer entering into any agreement for the hire of Contractor's Equipment pursuant to Sub-Clause 54.5, all sums properly paid by the Employer under the provisions of any such agreement and all costs incurred by him (including stamp duties) in entering into such agreement shall be deemed, for

	the purpose of Clause 63, to be part of the cost of executing and completing the Works and the remedying of any defects therein.
54.7 Incorporation of Clause in Subcontracts	The Contractor shall, where entering into any subcontract for the execution of any part of the Works, incorporate in such subcontract (by reference or otherwise) the provisions of this Clause in relation to Contractor's Equipment, Temporary Works or materials brought on to the Site by the Subcontractor.
54.8 Approval of Materials not Implied	The operation of this Clause shall not be deemed to imply any approval by the Engineer of the materials or other matters referred to therein nor shall it prevent the rejection of any such materials at any time by the Engineer.
	Measurement
55.1 Quantities	The quantities set out in the Bill of Quantities are the estimated quantities for the Works, and they are not to be taken as the actual and correct quantities of the Works to be executed by the Contractor in fulfilment of his obligations under the Contract.
56.1 Work to be Measured	The Engineer, shall except as otherwise stated, ascertain and determine by measurement the value of the Works in accordance with the Contract and the Contractor shall be paid that value in accordance with Clause 60. The Engineer shall, when he requires any part of the Works to be measured, give reasonable notice to theContractor's authorised agent, who shall: (a) forthwith attend or send a qualified representative to assist the Engineer in making such measurement, and (b) supply all particulars required by the Engineer. Should the Contractor not attend, or neglect or omit to send such representative, then the measurement made by the Engineer orapproved by him shall be taken to be the correct measurement of such part of the Works. For the purpose of measuring such Permanent Works as are to be measured by records and drawings, the Engineer shall prepare records and drawings as the work proceeds and the Contractor, as and when called upon to do so in writing, shall, within 14 days, attend to examine and agree such records and drawings with the Engineer and shall sign the same when so agreed. If the Contractor does not attend to examine and agree such records and drawings, they shall be taken to be correct. If, after examination of such records and drawings, the Contractor does not agree the same or does not sign the same as agreed, they shall nevertheless be taken to be correct, unless the Contractor, within 14 days of such examination, lodges with the Engineer notice of the respects in which such records and drawings are claimed by him to be incorrect. On receipt of such notice, the Engineer shall review the records and drawings and either confirm or vary them.
57.1 Method of Measurement	The Works shall be measured net, notwithstanding any general or local custom, except where otherwise provided for in the Contract.
57.2 Breakdown	For the purposes of statements submitted in accordance with Sub- Clause 60.1, the

of Lump Sum Items	Contractor shall submit to the Engineer, within 28 days after the receipt of the Letter of Acceptance, a breakdown for each of the lump sum items contained in the Tender. Such breakdowns shall be subject to the approval of the Engineer.
	Provisional Sums
58.1 Definition of"Provisional Sum"	"Provisional Sum" means a sum included in the Contract and so designated in the Bill of Quantities for the execution of any part of the Works or for the supply of goods, materials, Plant or services or for contingencies, which sum may be used, in whole or in part, or not at all, on the instructions of the Engineer. The Contractor shall be entitled to only such amounts in respect of the work, supply or contingencies to which such Provisional Sums relate as the Engineer shall determine in accordance with this Clause. The Engineer shall notify the Contractor of any determination made under this Sub-Clause, with a copy to the Employer.
58.2 Use of Provisional Sums	In respect of every Provisional Sum the Engineer shall have authority to issue instructions for the execution of work or for the supply of goods, materials, Plant or services by: (a) the Contractor, in which case the Contractor shall be entitled to an amount equal to the value thereof determined in accordancewith Clause 52, and (b) a nominated Subcontractor, as hereinafter defined, in whichcase the sum to be paid to the Contractor therefor shall be determined and paid in accordance with Sub-Clause 59.4.
58.3 Production of Vouchers	The Contractor shall produce to the Engineer all quotations, invoices, vouchers and accounts or receipts in connection with expenditure in respect of Provisional Sums, except where work is valued in accordance with rates or prices set out in the Tender.
	Nominated Subcontractors
59.1 Definition of"Nominated Subcontractors"	All specialists, merchants, tradesmen and others executing any work or supplying any goods, materials, Plant or services for which Provisional Sums are included in the Contract, who may have been or be nominated or selected or approved by the Employer or the Engineer, and all persons to whom by virtue of the provisions of the Contract the Contractor is required to subcontract shall, in the execution of such work or the supply of such goods, materials, Plant or services, be deemed to be subcontractors to the Contractor and are referred to in this Contract as "nominated Subcontractors".
59.2 Nominated Subcontractors; Objection to Nomination	The Contractor shall not be required by the Employer or the Engineer, or be deemed to be under any obligation, to employ any nominated Subcontractor against whom the Contractor may raise reasonable objection, or who declines to enter into a subcontract with the Contractor containing provisions: (a) that in respect of the work, goods, materials, Plant or services the subject of the subcontract, the nominated Subcontractor will undertake towards the Contractor such obligations and liabilities as will enable the Contractor to discharge his own obligations and liabilities towards the Employer under the terms of the Contractand will save harmless and indemnify the Contractor from and against the same and from all claims, proceedings, damages, costs, charges and expenses

	whatsoever arising out of or in connection therewith, or arising out of or in connection with any failure to perform such obligations or to fulfil such liabilities, and (b) that the nominated Subcontractor will save harmless and indemnify the Contractor from and against any negligence by the nominated Subcontractor, his agents, workmen and servants and from and against any misuse by him or them of any Temporary Works provided by the Contractor for the purposes of the Contract and from all claims as aforesaid.
59.3 Design Requirements to be Expressly Stated	If in connection with any Provisional Sum the services to be provided include any matter of design or specification of any part of the Permanent Works or of any Plant to be incorporated therein, such requirement shall be expressly stated in the Contract and shall be included in any nominated Subcontract. The nominated Subcontract shall specify that the nominated Subcontractor providing such services will save harmless and indemnify the Contractor from and against the same and from all claims, proceedings, damages, costs, charges and expenses whatsoever arising out of or in connection with any failure to perform such obligations or to fulfil such liabilities.
59.4 Payments toNominated Subcontractors	For all work executed or goods, materials, Plant or services supplied by any nominated Subcontractor, the Contractor shall be entitled to: (a) the actual price paid or due to be paid by the Contractor, on theinstructions of the Engineer, and in accordance with the subcontract; (b) in respect of labour supplied by the Contractor, the sum, if any, entered in the Bill of Quantities or, if instructed by the Engineer pursuant to paragraph (a) of Sub-Clause 58.2, as may be determined in accordance with Clause 52; and in respect of all other charges and profit, a sum being a percentage rate of the actual price paid or due to be paid calculated, where provision has been made in the Bill of Quantitiesfor a rate to be set against the relevant Provisional Sum, at the rate inserted by the Contractor against that item or, where no such provision has been made, at the rate inserted by the Contractor in the Appendix to Tender and repeated where provision for such is made in a special item provided in the Bill of Quantities for such purpose
59.5 Certification of Payments to Nominated Subcontractors	Before issuing, under Clause 60, any certificate, which includes any payment in respect of work done or goods, materials, Plant or services supplied by any nominated Subcontractor, the Engineer shall be entitled to demand from the Contractor reasonable proof that all payments, less retentions, included in previous certificates in respect of the work or goods, materials, Plant or services of such nominated Subcontractor have been paid or discharged by the Contractor. If the Contractor fails to supply such proof then, unlessthe Contractor: (a) satisfies the Engineer in writing that he has reasonable cause for withholding or refusing to make such payments, and (b) produces to the Engineer reasonable proof that he has so informed such nominated Subcontractor in writing, the Employer shall be entitled to pay to such nominated Subcontractor direct, upon the certificate of the Engineer, all payments, less retentions, provided for in the nominated Subcontract, which the Contractor has

	failed to make to such nominated Subcontractor and to deduct by way of set-off the amount so paid by the Employer from any sums due or to become due from the Employer to the Contractor. Provided that, where the Engineer has certified and the Employer has paid direct as aforesaid, the Engineer shall, in issuing any further certificate in favour of the Contractor, deduct from the amount thereof the amount so paid, direct as aforesaid, but shall not withhold or delay the issue of the certificate itself when due to be issued under the terms of the Contract.
	Certificates and Payment
60.1 Monthly Statements	The Contractor shall submit to the Engineer after the end of each month six copies, each signed by the Contractor's representative approved by the Engineer in accordance with Sub-Clause 15.1, of astatement, in such form as the Engineer may from time to time prescribe, showing the amounts to which the Contractor considers himself to be entitled up to the end of the month in respect of: (a) the value of the Permanent Works executed, (b) any other items in the Bill of Quantities including those for Contractor's Equipment, Temporary Works, dayworks and the like, (c) the percentage of the invoice value of listed materials, all as stated in the Appendix to Tender, and Plant delivered by the Contractor on the Site for incorporation in the Permanent Works but not incorporated in such Works, (d) adjustments under Clause 70, and (e) any other sum to which the Contractor may be entitled under the Contract or otherwise
60.2 Monthly Payments	The Engineer shall, within 28 days of receiving such statement, deliver to the Employer an Interim Payment Certificate stating the amount of payment to the Contractor which the Engineer considers due and payable in respect of such statement, subject: (a) firstly, to the retention of the amount calculated by applying the Percentage of Retention stated in the Appendix to Tender, to the amount to which the Contractor is entitled under paragraphs (a), (b), (c) and (e) of Sub-Clause 60.1 until the amount so retained reaches the Limit of Retention Money stated in the Appendix to Tender, and (b) secondly, to the deduction, other than pursuant to Clause 47, of any sums which may have become due and payable by the Contractor to the Employer. Provided that the Engineer shall not be bound to certify any payment under this Sub-Clause if the net amount thereof, after all retentions and deductions, would be less than the Minimum Amount of Interim Payment Certificates stated in the Appendix to Tender. Notwithstanding the terms of this Clause or any other Clause of the Contract no amount will be certified by the Engineer for payment until the performance security, if required under the Contract, has been provided by the Contractor and approved by the Employer.

60.3 Payment of Retention Money	(a) Upon the issue of the Taking-Over Certificate with respect to the whole of the Works, one half of the Retention Money, or upon the issue of a Taking-Over Certificate with respect to a Section or part of the Permanent Works only such proportion thereof as the Engineer determines having regard to the relative value of such Section or part of the Permanent Works, shall be certified by the Engineer for payment to the Contractor. (b) Upon the expiration of the Defects Liability Period for the Works the other half of the Retention Money shall be certified by the Engineer for payment to the Contractor. Provided that, in the event of different Defects Liability Periods having become applicable to different Sections or parts of the Permanent Works pursuant to Clause 48, the expression "expiration of the Defects Liability Period" shall, for the purposes of this Sub-Clause, be deemed to mean the expiration of the latest of such periods. Provided also that if at such time there shall remain to be executed by the Contractor any work instructed, pursuant to Clauses 49 and 50, in respect of the Works, the Engineer shall be entitled to withhold certification until completion of such work of so much of the balance of the Retention Money as shall, in the opinion of the Engineer, represent the cost of the work remaining to be executed.
60.4 Correction of Certificates	The Engineer may by any Interim Payment Certificate make any correction or modification in any previous Interim Payment Certificate which shall have been issued by him and shall have authority, if any work is not being carried out to his satisfaction, to omit or reduce the value of such work in any Interim Payment Certificate.
60.5 Statement at Completion	Not later than 84 days after the issue of the Taking-Over Certificate in respect of the whole of the Works, the Contractor shall submit to the Engineer six copies of Statement at Completion with supporting documents showing in detail, in the form approved by the Engineer: (a) the final value of all work done in accordance with the Contract up to the date stated in such Taking-Over Certificate, (b) any further sums which the Contractor considers to be due, and (c) an estimate of amounts which the Contractor considers will become due to him under the Contract. The estimated amounts shall be shown separately in such Statement at Completion. The Engineer shall certify payment in accordance with Sub-Clause 60.2.
60.6 Final Statement	Not later than 56 days after the issue of the Defects Liability Certificate pursuant to Sub-Clause 62. 1, the Contractor shall submit to the Engineer for consideration six copies of a draft final statement with supporting documents showing in detail, in the form approved by the Engineer: (a) the value of all work done in accordance with the Contract, and (b) any further sums which the Contractor considers to be due to him under the Contract or otherwise. If the Engineer disagrees with or cannot verify any part of the draft final statement, the Contractor shall submit such further information as the

	Engineer may reasonably require and shall make such changes in the draft as may be agreed between them. The Contractor shall then prepare and submit to the Engineer the final statement as agreed (for the purposes of these Conditions referred to as the "Final Statement"). If, following discussions between the Engineer and the Contractor and any changes to the draft final statement which may be agreed between them, it becomes evident that a dispute exists, the Engineer shall deliver to the Employer an Interim Payment Certificate for those parts of the draft final statement, if any, which arenot in dispute. The dispute may then be settled in accordance with Clause 67.
60.7 Discharge	Upon submission of the Final Statement, the Contractor shall give to the Employer, with a copy to the Engineer, a written discharge confirming that the total of the Final Statement represents full and final settlement of all monies due to the Contractor arising out of or in respect of the Contract. Provided that such discharge shall become effective only after payment due under the Final Payment Certificate issued pursuant to Sub-Clause 60.8 has been made and the performance security referred to in Sub-Clause 10.1, if any, hasbeen returned to the Contractor.
60.8 Final Payment Certificate	Within 28 days after receipt of the Final Statement, and the written discharge, the Engineer shall issue to the Employer (with a copy to the Contractor) a Final Payment Certificate stating: (a) the amount which, in the opinion of the Engineer, is finally due under the Contract or otherwise, and (b) after giving credit to the Employer for all amounts previously paid by the Employer and for all sums to which the Employer is entitled other than under Clause 47, the balance, if any, due from the Employer to the Contractor or from the Contractor to the Employer as the case may be
60.9 Cessation ofEmployer's Liability	The Employer shall not be liable to the Contractor for any matteror thing arising out of or in connection with the Contract or execution of the Works, unless the Contractor shall have included aclaim in respect thereof in his Final Statement and (except in respect of matters or things arising after the issue of the Taking- Over Certificate in respect of the whole of the Works) in the Statement at Completion referred to in Sub-Clause 60.5.
60.10 Time for Payment	The amount due to the Contractor under any Interim Payment Certificate issued by the Engineer pursuant to this Clause, or to anyother term of the Contract, shall, subject to Clause 47, be paid by the Employer to the Contractor within 15 days after such Interim Payment Certificate has been delivered to the Employer, or, in the case of the Final Payment Certificate referred to in Sub-Clause 60.8,within 45 days, after such Final Payment Certificate has been deliveredto the Employer. In the event of the failure of the Employer to make payment within the times stated, the Employer shall pay to the Contractor interest at the rate stated in the Appendix to Tenderupon all sums unpaid from the date by which the same should havebeen paid. The provisions of this Sub-Clause are without prejudice to the Contractor's entitlement under Clause 69 or otherwise.
61.1 Approval	Only the Defects Liability Certificate, referred to in Clause 62, shall be

only byDefects Liability Certificate	deemed to constitute approval of the Works.
62.1 Defects Liability Certificate	The Contract shall not be considered as completed until a Defects Liability Certificate shall have been signed by the Engineer and delivered to the Employer, with a copy to, the Contractor, stating the date on which the Contractor shall have completed his obligations to execute and complete the Works and remedy any defects therein to the Engineer's satisfaction. The Defects Liability Certificate shall be given by the Engineer within 28 days after the expiration of the Defects Liability Period, or, if different defects liability periods shall become applicable to different Sections or parts of the Permanent Works, the expiration of the latest such period, or as soon thereafter as any works instructed, pursuant to Clauses 49 and 50, have been completed to the satisfaction of the Engineer. Provided that the issue of the Defects Liability Certificate shall not be a condition precedent to payment to the Contractor of the second portion of the Retention Money in accordance with the conditions set out in Sub-Clause 60.3.
62.2 Unfulfilled Obligations	Notwithstanding the issue of the Defects Liability Certificate the Contractor and the Employer shall remain liable for the fulfilment of any obligation incurred under the provisions of the Contract prior to the issue of the Defects Liability Certificate which remains unperformed at the time such Defects Liability Certificate is issued and, for the purposes of determining the nature and extent of any such obligation, the Contract shall be deemed to remain in force between the parties to the Contract.
63.1 Default of Contractor	If the Contractor is deemed by law unable to pay his debts as they fall due, or enters into voluntary or involuntary bankruptcy, liquidation or dissolution (other than a voluntary liquidation for the purposes of amalgamation or reconstruction), or becomes insolvent, or makes an arrangement with. or assignment in favour of, his creditors, or agrees to carry out the Contract under a committee of inspection of his creditors, or if a receiver, administrator, trustee or liquidator is appointed over any substantial part of his assets, or if, under any law or regulation relating to reorganization, arrangement or readjustment of debts, proceedings are commenced against the Contractor or resolutions passed in connection with dissolution or liquidation or if any steps are taken to enforce any security interest over a substantial part of the assets of the Contractor, or if any act is done or event occurs with respect to the Contractor or his assets which, under any applicable law has a substantially similar effect to any of the foregoing acts or events, or if the Contractor has contravened Sub-Clause 3. 1, or has an execution levied on his goods, or if the Engineer certifies to the Employer, with a copy to the Contractor, that, in his opinion, the Contractor: (a) has repudiated the Contract, (b) without reasonable excuse has failed (i) to commence the Works in accordance with Sub-Clause 4 1.1 or (ii) to proceed with the Works, or any Section thereof, within 28 days after receiving notice pursuant to Sub-Clause 46. 1, (c) has failed to comply with a notice issued pursuant to Sub- Clause 37.4 or an instruction issued pursuant to Sub-Clause 39.1 within 28 days after having

	received it, (d) despite previous warning from the Engineer, in writing, isotherwise persistently or flagrantly neglecting to comply with any of his obligations under the Contract, or (e) has contravened Sub-Clause 4.1, then the Employer may, after giving 14 days' notice to the Contractor, enter upon the Site and the Works and terminate the employment of the Contractor without thereby releasing the Contractor from any of his obligations or liabilities under the Contract, or affecting the rights and authorities conferred on the Employer or the Engineer by the Contract, and may himself complete the Works or may employ any other contractor to complete the Works. The Employer or such other contractor may use for such completion so much of the Contractor's Equipment, Temporary Works and materials as he or they may think proper.
63.2 Valuation at Dateof Termination	The Engineer shall, as soon as may be practicable after any such entry and termination by the Employer, fix and determine ex parte, or by or after reference to the parties or after such investigation or enquiries as he may think fit to make or institute, and shall certify: a) What amount (if any) had, at the time of such entry and termination, been reasonably earned by or would reasonably accrue to the Contractor in respect of work then actually done by him under the Contract, and (b) the value of any of the said unused or partially used materials, any Contractor's Equipment and any Temporary Works.
63.3 Payment after Termination	If the Employer terminates the Contractor's employment under thisClause, he shall not be liable to pay to the Contractor any further amount (including damages) in respect of the Contract until the expiration of the Defects Liability Period and there after until the costs of execution, completion and remedying of any defects, damages for delay in completion (if any) and all other expenses incurred by the Employer have been ascertained and the amount thereof certified by the Engineer. The Contractor shall then be entitled to receive only such sum (if any) as the Engineer may certify would have been payable to him upon due completion by him after deducting the said amount. If such amount exceeds the sum which would have been payable to the Contractor on due completion by him, then the Contractor shall, upon demand, pay to the Employer the amount of such excess and it shall be deemed a debt due by the Contractor to the Employer and shall be recoverable accordingly.
63.4 Assignment of Benefit of Agreement	Unless prohibited by law, the Contractor shall, if so instructed by the Engineer within 14 days of such entry and termination referred to in Sub-Clause 63. 1, assign to the Employer the benefit of any agreement for the supply of any goods materials or services and/or for the execution of any work for the purposes of the Contract, which the Contractor may have entered into.
64.1 Urgent	If, by reason of any accident, or failure, or other event occurring to, in, or in

Remedial Work	connection with the Works, or any part thereof, either during the execution of the Works, or during the Defects Liability Period, any remedial or other work is, in the opinion of the Engineer, urgently necessary for the safety of the Works and the Contractor is unable or unwilling at once to do such work, the Employer shall be entitled to employ and pay other persons to carry out such work as the Engineer may consider necessary. If the work or repair so done by the Employer is work which, in the opinion of the Engineer, the Contractor was liable to do at his own cost under the Contract, then all costs consequent thereon or incidental thereto shall, after due consultation with the Employer and the Contractor, be determined by the Engineer and shall be recoverable from the Contractor by the Employer, and may be deducted by the Employer from any monies due or to become due to the Contractor and the Engineer shall notify the Contractor accordingly, with a copy to the Employer. Provided that the Engineer shall, as soon after the occurrence of any such emergency as may be reasonably practicable, notify the Contractor thereof.
65.1 No Liability for Special Risks	The Contractor shall be under no liability whatsoever in consequence of any of the special risks referred to in Sub-Clause 65.2, whether by way of indemnity or otherwise, for or in respect of: (a) destruction of or damage to the Works, save to work condemned under the provisions of Clause 39 prior to the occurrence of any o the said special risks, (b) destruction of or damage to property, whether of the Employeor third parties, or injury or loss of life
65.2 Special Risks	The special risks are: **(a)** the risks defined under paragraphs (a), (c), (d) and (e) of Sub Clause 20.4, and **(b)** the risks defined under paragraph (b) of Sub-Clause 20.4 insofar as these relate to the country in which the Works are to be executed
65.3 Damage to Worksby Special Risks	If the Works or any materials or Plant on or near or in transit to the Site, or any of the Contractor's Equipment, sustain destruction or damage by reason of any of the said special risks, the Contractor shall be entitled to payment in accordance with the Contract for any Permanent Works duly executed and for any materials or Plantso destroyed or damaged and, so far as may be required by the Engineer or as may be necessary for the completion of the Works,to payment for: (a) rectifying any such destruction or damage to the Works, and (b) replacing or rectifying such materials or Contractor's Equipment, and the Engineer shall determine an addition to the Contract Price in accordance with Clause 52 (which shall in the case of the cost of replacement of Contractor's Equipment include the fair market value thereof as determined by the Engineer) and shall notify the Contractor accordingly, with a copy to the Employer.
65.4 Projectile, Missile	Destruction, damage, injury or loss of life caused by the explosion or impact, whenever and wherever occurring, of any mine, bomb, shell, grenade, or other projectile, missile, munitions, or explosive of war, shall be deemed to be a consequence of the said special risks.

65.5 Increased Costs arising from Special Risks	Save to the extent that the Contractor is entitled to payment under any other provision of the Contract, the Employer shall repay to the Contractor any costs of the execution of the Works (other than such as may be attributable to the cost of reconstructing work condemned under the provisions of Clause 39 prior to the occurrence of any special risk) which are howsoever attributable to or consequent on or the result of or in any way whatsoever connected with the said special risks, subject however to the provisions in this Clause hereinafter contained in regard to outbreak of war, but the Contractor shall, as soon as any such cost comes to his knowledge, forthwith notify the Engineer thereof. The Engineer shall, after due consultation with the Employer and the Contractor, determine the amount of the Contractor's costs in respect thereof which shall be added to the Contract Price and shallnotify the Contractor accordingly, with a copy to the Employer.
65.6 Outbreak of War	If, during the currency of the Contract, there is an outbreak of war, whether war is declared or not, in any part of the world which, whether financially or otherwise, materially affects the execution of the Works, the Contractor shall, unless and until the Contract is terminated under the provisions of this Clause, continue to use his best endeavours to complete the execution of the Works. Provided that the Employer shall be entitled, at any time after such outbreak of war, to terminate the Contract by giving notice to the Contractor and, upon such notice being given, the Contract shall, except as to the rights of the parties under this Clause and Clause 67, terminate, but without prejudice to the rights of either party in respect of any antecedent breach thereof.
65.7 Removal of Contractor's Equipment on Termination	If the Contract is terminated under the provisions of Sub-Clause 65.6, the Contractor shall, with all reasonable dispatch, remove from the Site all Contractor's Equipment and shall give similar facilities to his Subcontractors to do so.
65.8 Payment if Contract Terminated	If the Contract is terminated as aforesaid, the Contractor shall be paid by the Employer, insofar as such amounts or items have not already been covered by payments on account made to the Contractor, for all work executed prior to the date of termination atthe rates and prices provided in the Contract and in addition: (a) the amounts payable in respect of any preliminary items referredto in the Bill of Quantities, so far as the work or service comprised therein has been carried out or performed, and a proper proportion of any such items which have been partially carried out or performed; (b) the cost of materials, Plant or goods reasonably ordered for the Works which have been delivered to the Contractor or of which the Contractor is legally liable to accept delivery, such materials, Plant or goods becoming the property of the Employer upon such payments being made by him; (c) a sum being the amount of any expenditure reasonably incurred by the Contractor in the expectation of completing the whole of the Works insofar as such expenditure has not been covered by any other payments referred to in this Sub-Clause; (d) any additional sum payable under the provisions of Sub-Clauses 65.3 and 65.5; (e) such proportion of the cost as may be reasonable, taking into account payments made or to be made for work executed, of removal of Contractor's Equipment

	under Sub-Clause 65.7 and, if required by the Contractor, return thereof to the Contractor's main plant yard in his country of registration or to other destination, at no greater cost; and (f) the reasonable cost of repatriation of all the Contractor's staff and workmen employed on or in connection with the Works at the time of such termination. Provided that against any payment due from the Employer under this Sub-Clause, the Employer shall be entitled to be credited with any outstanding balances due from the Contractor for advances in respect of Contractor's Equipment, materials and Plant and any other sums which, at the date of termination, were recoverable by the Employer from the Contractor under the terms of the Contract. Any sums payable under this Sub-Clause shall, after due consultation with the Employer and the Contractor, be determined by the Engineer who shall notify the Contractor accordingly, with acopy to the Employer.
	Release from Performance
66.1 Payment in Eventof Release from Performance	If any circumstance outside the control of both parties arises after the issue of the Letter of Acceptance which renders it impossible or unlawful for either or both parties to fulfill his or their contractual obligations, or under the law governing the Contract the parties are released from further performance, then the parties shall be discharged from the Contract, except as to their rights under this Clause and Clause 67 and without prejudice to the rights of either party in respect of any antecedent breach of the Contract, and the sum payable by the Employer to the Contractor in respect of the work executed shall be the same as that which would have been payable under Clause 65 if the Contract had been terminated under the provisions of Clause 65.
67.1 Engineer's Decision	If a dispute of any kind whatsoever arises between the Employer and the Contractor in connection with, or arising out of, the Contract or the execution of the Works, whether during the execution of the Works or after their completion and whether before or after repudiation or other termination of the Contract, including any dispute as to any opinion, instruction, determination, certificate or valuation of the Engineer, the matter in dispute shall in the first place, be referred in writing to the Engineer, with a copyto the other party. Such reference shall state that it is made pursuant to this Clause. No later than the eighty-fourth day afterthe day on which he received such reference the Engineer shall give notice of his decision to the Employer and the Contractor. Such decision shall state that it is made pursuant to this Clause. Unless the Contract has already been repudiated or terminated, the Contractor shall, in every case, continue to proceed with the Works with all due diligence and the Contractor and the Employer shall give effect forthwith to every such decision of the Engineer unless and until the same shall be revised, as hereinafter provided, in an amicable settlement or an arbitral award. If either the Employer or the Contractor be dissatisfied with any decision of

	the Engineer, or if the Engineer fails to give notice of his decision on or before the Eighty-fourth day after the day on which he received the reference, then either the Employer or the Contractor may, on or before the seventieth day after the day on which he received notice of such decision, or on or before the seventieth day after the day on which the said period of 84 days expired, as the case may be, give notice to the other party, with a copy for information to the Engineer, of his intention to commence arbitration, as hereinafter provided, as to the matter in dispute. Such notice shall establish the entitlement of the party giving the same to commence arbitration, as hereinafter provided, as to such dispute and, subject to Sub-Clause 67.4, no arbitration in respect thereof may be commenced unless such notice is given. If the Engineer has given notice of his decision as to a matter in dispute to the Employer and the Contractor and no notice of intention to commence arbitration as to such dispute has been given by either the Employer or the Contractor on or before the seventieth day after the day on which the parties received notice as to such decision from the Engineer, the said decision shall become final and binding upon the Employer and the Contractor.
67.2 Amicable Settlement	Where notice of intention to commence arbitration as to a dispute has been given in accordance with Sub-Clause 67.1, the parties shall attempt to settle such dispute amicably before the commencement of arbitration. Provided that, unless the partiesotherwise agree, arbitration may be commenced on or after the fifty-sixth day after the day on which notice of intention to commence arbitration of such dispute was given, even if no attempt at amicable settlement thereof has been made.
67.3 Arbitration	Any dispute in respect of which: (a) the decision, if any, of the Engineer has not become final and binding pursuant to Sub-Clause 67. 1, and (b) amicable settlement has not been reached within the period stated in Sub-Clause 67.2, shall be finally settled, unless otherwise specified in the Contract, under the Rules of Conciliation and Arbitration of the International Chamber of Commerce by one or more arbitrators appointed undersuch Rules. The said arbitrator/s shall have full power to open up, review and revise any decision, opinion, instruction, determination, certificate or valuation of the Engineer related to the dispute. Neither party shall be limited in the proceedings before such arbitrator/s to the evidence or arguments put before the Engineer for the purpose of obtaining his said decision pursuant to Sub- Clause 67.1. No such decision shall disqualify the Engineer from being called as a witness and giving evidence before the arbitrator/s on any matter whatsoever relevant to the dispute.

	Arbitration may be commenced prior to or after completion of the Works, provided that the obligations of the Employer, the Engineer and the Contractor shall not be altered by reason of the arbitration being conducted during the progress of the Works
67.4 Failure to Complywith Engineer's Decision	Where neither the Employer nor the Contractor has given notice of intention to commence arbitration of a dispute within the period stated in Sub-Clause 67.1 and the related decision has become final and binding, either party may, if the other party fails to comply with such decision, and without prejudice to any other rights it may have, refer the failure to arbitration in accordance with Sub-Clause 67.3. The provisions of Sub-Clauses 67.1 and 67.2 shall not apply to any such reference.
	Notices
68.1 Notice to Contractor	All certificates, notices or instructions to be given to the Contractor by the Employer or the Engineer under the terms of the Contract shall be sent by post, cable, telex or facsimile transmission to or left at the Contractor's principal place of business or such other address as the Contractor shall nominate for that purpose.
68.2 Notice to Employer and Engineer	Any notice to be given to the Employer or to the Engineer under the terms of the Contract shall be sent by post, cable, telex or facsimile transmission to or left at the respective addresses nominated for that purpose in Part II of these Conditions.
68.3 Change of Address	Either party may change a nominated address to another address in the country where the Works are being executed by prior notice to the other party, with a copy to the Engineer, or the Engineer may do so by prior notice to both parties.
	Default of Employer
69.1 Default of Employer	In the event of the Employer: (a) failing to pay to the Contractor the amount due under any certificate of the Engineer within 28 days after the expiry of the time stated in Sub-Clause 60.10, within which payment is to be made, subject to any deduction that the Employer is entitled to make under the Contract, (b) interfering with or obstructing or refusing any required approval to the issue of any such certificate, (c) becoming bankrupt or, being a company, going into liquidation, other than for the purpose of a scheme of reconstruction or amalgamation, or (d) giving notice to the Contractor that for unforeseen economic reasons it is impossible for him to continue to meet his contractual obligations, the Contractor shall be entitled to terminate his employment under the Contract by giving notice to the Employer, with a copy to the Engineer. Such termination shall take effect 14 days after the giving of the notice.
69.2 Removal of	Upon the expiry of the 14 days' notice referred to in Sub-Clause 69.1, the

Contractor's Equipment	Contractor shall, notwithstanding the provisions of Sub- Clause 54.1, with all reasonable despatch, remove from the Site all Contractor's Equipment brought by him thereon.
69.3 Payment on Termination	In the event of such termination the Employer shall be under the same obligations to the Contractor in regard to payment as if the Contract had been terminated under the provisions of Clause 65, but, in addition to the payments specified in Sub-Clause 65.8, the Employer shall pay to the Contractor the amount of any loss or damage to the Contractor arising out of or in connection with or byconsequence of such termination.
69.4 Contractor's Entitlement to Suspend Work	Without prejudice to the Contractor's entitlement to interest under Sub-Clause 60.10 and to terminate under Sub-Clause 69.1, the Contractor may, if the Employer fails to pay the Contractor the amount due under any certificate of the Engineer within 28 days after the expiry of the time stated in Sub-Clause 60.10 within which payment is to be made, subject to any deduction that the Employer is entitled to make under the Contract, after giving 28 days' prior notice to the Employer, with a copy to the Engineer, suspend work or reduce the rate of work. If the Contractor suspends work or reduces the rate of work in accordance with the provisions of this Sub-Clause and thereby suffers delay or incurs costs the Engineer shall, after due consultation with the Employer and the Contractor, determine: (a) any extension of time to which the Contractor is entitled underClause 44, and (b) the amount of such costs, which shall be added to the Contract Price, and shall notify the Contractor accordingly, with a copy to the Employer
69.5 Resumption of Work	Where the Contractor suspends work or reduces the rate of work, having given notice in accordance with Sub-Clause 69.4, and the Employer subsequently pays the amount due, including interest pursuant to Sub-Clause 60.10, the Contractor's entitlement under Sub-Clause 69.1 shall, if notice of termination has not been given, lapse and the Contractor shall resume normal working as soon as is reasonably possible.
	Changes in Cost and Legislation
70.1 Increase or Decrease of Cost	There shall be added to or deducted from the Contract Price such sums in respect of rise or fall in the cost of labour and/or materials or any other matters affecting the cost of the execution of the Works as may be determined in accordance with Part II of these Conditions.
70.2 Subsequent Legislation	If, after the date 28 days prior to the latest date for submission of tenders for the Contract there occur in the country in which the Works are being or are to be executed changes to any National or State Statute, Ordinance, Decree or other Law or any regulation or bye-law of any local or other duly constituted authority, or the introduction of any such State Statute, Ordinance, Decree, Law, regulation or bye-law which causes additional or reduced cost to the Contractor, other than under Sub-Clause 70.1, in the execution of the Contract, such additional or reduced cost shall, after due consultation with the Employer and the Contractor, be determined by the Engineer and shall be added to or deducted from the Contract Price-and the Engineer shall notify the Contractor accordingly, with a copy to the Employer.

	Currency and Rates of Exchange
71.1 Currency Restrictions	If, after the date 28 days prior to the latest date for submission of tenders for the Contract, the Government or authorised agency of the Government of the country in which the Works are being or are to be executed imposes currency restrictions and/or transfer of currency restrictions in relation to the currency or currencies in which the Contract Price is to be paid, the Employer shall reimburse any loss or damage to the Contractor arising therefrom, without prejudice to the right of the Contractor to exercise any other rights or remedies to which he is entitled in such event.
72.1 Rates of Exchange	Where the Contract provides for payment in whole or in part to be made to the Contractor in foreign currency or currencies, such payment shall not be subject to variations in the rate or rates of exchange between such specified foreign currency or currencies and the currency of the country in which the Works are to be executed.
72.2 Currency Proportions	Where the Employer has required the Tender to be expressed in a single currency but with payment to be made in more than one currency and the Contractor has stated the proportions or amounts of other currency or currencies in which he requires payment to be made, the rate or rates of exchange applicable for calculating the payment of such proportions or amounts shall, unless otherwise stated in Part II of these Conditions, be those prevailing, as determined by the Central Bank of the country in which the Works are to be executed, on the date 28 days prior to the latest date for the submission of tenders for the Contract, as has been notified to the Contractor by the Employer prior to the submission of tenders or as provided for in the Tender.
72.3 Currencies ofPayment for Provisional Sums	Where the Contract provides for payment in more than one currency, the proportions or amounts to be paid in foreign currencies in respect of Provisional Sums shall be determined in accordance with the principles set forth in Sub-Clauses 72.1 and 72.2 as and when these sums are utilised in whole or in part in accordance with the provisions of Clauses 58 and 59.
	Force Majeure
73.1 Definition of Force Majeure	In this Clause, ―Force Majeure means an exceptional event or circumstance: (a) which is beyond a Party's control, (b) which such Party could not reasonably have provided against before entering into the Contract, (c) which, having arisen, such Party could not reasonably have avoided or overcome, and (d) which is not substantially attributable to the other Party. Force Majeure may include, but is not limited to, exceptional events or circumstances of the kind listed below, so long as conditions (a) to (d) above are satisfied: (i) war, hostilities (whether war be declared or not), invasion, act of foreign enemies,

	(ii) rebellion, terrorism, sabotage by persons other than the Contractor's Personnel, revolution, insurrection, military or usurped power, or civil war, (iii) riot, commotion, disorder, strike or lockout by persons other than the Contractor's Personnel, (iv) munitions of war, explosive materials, ionising radiation or contamination by radio-activity, except as may be attributable to the Contractor's use of such munitions, explosives, radiation or radio-activity, and (v) natural catastrophes such as earthquake, hurricane, typhoon or volcanic activity.
73.2 Notice of Force Majeure	If a Party is or will be prevented from performing its substantial obligations under the Contract by Force Majeure, then it shall give notice to the other Party of the event or circumstances constituting the Force Majeure and shall specify the obligations, the performance of which is or will be prevented. The notice shall be given within 14 days after the Party became aware, or should have become aware, of the relevant event or circumstance constituting Force Majeure. The Party shall, having given notice, be excused performance of its obligations for so long as such Force Majeure prevents it from performing them. Notwithstanding any other provision of this Clause, Force Majeure shall not apply to obligations of either Party to make payments to the other Party under the Contract.
73.3 Duty to Minimise Delay	Each Party shall at all times use all reasonable endeavours to minimise any delay in the performance of the Contract as a result of Force Majeure. A Party shall give notice to the other Party when it ceases to be affected by the Force Majeure.
73.4 Consequences of Force Majeure	If the Contractor is prevented from performing its substantial obligations under the Contract by Force Majeure of which notice has been given under Sub-Clause 73.2, and suffers delay and/or incurs Cost by reason of such Force Majeure, the Contractor shall be entitled subject to Sub- Clause 53.1 to: (a) an extension of time for any such delay, if completion is or will be delayed, under Sub-Clause 44.1, and (b) if the event or circumstance is of the kind described in sub- paragraphs (i) to (iv) of Sub-Clause 73.1 and, in the case of sub-paragraphs (ii) to (iv), occurs in the Country, payment of any such Cost, including the costs of rectifying or replacing the Works and/or Goods damaged or destroyed by Force Majeure, to the extent they are not indemnified through the insurance policy referred to in Sub- Clause 21.1. After receiving this notice, the Engineer shall proceed in accordance with Sub-Clause 2.7 to agree or determine these matters.
73.5 Force Majeure Affecting Sub-	If any Sub-Contractor is entitled under any contract or agreement relating to the Works to relief from force majeure on terms additional to or broader than those specified in this Clause, such additional or broader force majeure events or

Contractor	circumstances shall not excuse the Contractor's non-performance or entitle him to relief under this Clause.
73.6 Optional Termination, Payment and Release	If the execution of substantially all the Works in progress is prevented for a continuous period of 84 days by reason of Force Majeure of which notice has been given under Sub-Clause 73.2, or for multiple periods which total more than 140 days due to the same notified Force Majeure, then either Party may give to the other Party a notice of termination of the Contract. In this event, the termination shall take effect 7 days after the notice is given, and the Contractor shall proceed in accordance with Sub-Clause 65.7 Upon such termination, the Engineer shall determine the value of the work done and issue a Payment Certificate which shall include: (a) the amounts payable for any work carried out for which a price is stated in the Contract; (b) the Cost of Plant and Materials ordered for the Works which have been delivered to the Contractor, or of which the Contractor is liable to accept delivery: this Plant and Materials shall become the property of (and be at the risk of) the Employer when paid for by the Employer, and the Contractor shall place the same at the Employer's disposal; (c) other Costs or liabilities which in the circumstances were reasonably and necessarily incurred by the Contractor in the expectation of completing the Works; (d) the Cost of removal of Temporary Works and Contractor's Equipment from the Site and the return of these items to the Contractor's works in his country (or to any other destination at no greater cost); and (e) the Cost of repatriation of the Contractor's staff and labour employed wholly in connection with the Works at the date of termination.
73.7 Release from Performance	Notwithstanding any other provision of this Clause, if any event or circumstance outside the control of the Parties (including, but not limited to, Force Majeure) arises which makes it impossible or unlawful for either or both Parties to fulfil its or their contractual obligations or which, under the law governing the Contract, entitles the Parties to be released from further performance of the Contract, then upon notice by either Party to the other Party of such event or circumstance: (a) the Parties shall be discharged from further performance, without prejudice to the rights of either Party in respect of any previous breach of the Contract, and (b) the sum payable by the Employer to the Contractor shall be the same as would have been payable under Sub-Clause 73.6 if the Contract had been terminated under Sub-Clause 73.6.

Section V

Conditions of Particular Application – Part II

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SECTION V

PART II: CONDITIONS OF PARTICULAR APPLICATION

The Clause numbers mentioned hereinafter refer to the corresponding Clauses of the General Conditions of Contract – Part I (Section IV) to which a Condition of Particular Application relates:

Sub-Clause 1.1 **Definitions**	(a) (i) The Employer is the National Highways & Infrastructure Development Corporation Ltd., Government of India. (a) (iv) The 'Engineer' is M/s URS-Krivam (JV) Add the following words at the end of sub-para (b) (v): The word "Tender" is synonymous with "Bid" and the words "Appendix to Tender" with "Appendix to Bid" and the words "Tender Documents" with "Bid Documents" or "Bidding Documents". Substitute the words "Sub-Clause 60.2 (a)" at the end of sub para (e) (ii) by the words "Sub-Clause 60.4". Substitute the words "Sub-Clause 60.8" at the end of sub para (e) (iv) by the words "Sub-Clause 60.11" "
Sub-Clause 2.1 **Engineer's Duties andAuthority**	Delete from Sub-Clause 2.1(b) the last sentence" Provided further that any requisite approval shall be deemed to have been given by the employer for any such authority exercised by the Engineer " With reference to Sub-Clause 2.1(b), the following provisions shall also apply: The Engineer shall obtain prior permission from and specific approval of the Employer before taking any of the following actions specified in Part I: (i) consenting to the subcontracting of any part of the Works under Clause 4; (ii) certifying additional cost determined under Clause 12; (iii) ordering suspension of work under Clause 40. (iv) issuing the Notice to commence the work under Clause 41.

	(v) determining an extension of time under Clause 44; (vi) issuing a variation under Clause 51 for the following: - (i) Variation in individual BOQ Items: (ii) New items (Non-BOQ items): Before issuing orders to execute new items of work (non BOQ items), 'Engineer' shall obtain technical approval from Employer. (iii) The overall variation shall be exclusive of applicable price adjustment, if any. (iv) All variation (individual items and overall variations) shall be approved by the Employer. (vii) fixing new rates or prices under Clause 52. Notwithstanding the obligation, as set out above, to obtain approval, if, in the opinion of the Engineer, an emergency occurs affecting the safety of life or of the Works or of adjoining property, he may, without relieving the Contractor of any of his duties and responsibilities under the Contract, instruct the Contractor to execute all such work or to do all such things as may, in the opinion of the Engineer, be necessary to abate or reduce the risk. The Contractor shall forthwith comply, despite the absence of approval of the Employer, with any such instruction of the Engineer. The Engineer shall determine an addition to the Contract Price, in respect of such instruction, in accordance with Clause 52 and shall notify the Contractor accordingly, with a copy to the Employer".
Sub-Clause 5.1 Language and Law	(a) The Contract Documents shall be drawn up in English language and all correspondence, drawings and documents and any written matter relating to the contract shall be in English only. (b) This Contract shall be governed and construed in accordance with the law in force in India.
Sub-Clause 5.2 **Priority of Contract Documents**	Delete the documents listed as (1) to (6) and substitute as below: (1) the Contract Agreement (2) the Letter of Acceptance; (3) the Tender (4) the Conditions of Particular Application; (5) the General Conditions of Contract; (6) the Technical Specifications; (7) the Drawings; (8) the priced Bill of quantities (9) any other document forming part of the Contract.
Sub-Clause 6.6	Add the following as Sub-Clause 6.6: The Contractor shall carry out design to the extent as specified in the

Drawings	Contract. The typical drawings have been provided in the Contract for reference. The Contractor shall provide design calculations and fabrication drawings for temporary works (such as form work, staging, centering, scaffolding, specialized construction, handling and launching facilities and the like), material list for structural fabrication as well as detailed drawings for anchorage and temporary support details for pre-stressing cables as well as bar bending and cutting schedules for reinforcement etc. shall be prepared by the Contractor at his own cost and forwarded in triplicate to the Engineer at least four weeks in advance of actual constructional requirements. The Engineer will scrutinize and return one copy of the same for the Contractor's use with amendments, if any, noted in red ink within two weeks of submission. Such approval shall not relieve the Contractor of any of his responsibilities in connection with temporary works. The Contractor will supply four copies of the approved drawings for the Engineer's use. The cost of preparing all such items of work shall be deemed to have been included in the respective rates/prices quoted by the Contractor in the Bill of Quantities.
Sub-Clause 6.7 As built Drawings	Add the following as Sub-Clause 6.7: On the completion of works, the Contractor shall arrange to furnish to the Employer two (2) bound sets of all "As Built" drawings for every component of the Works at his own cost, all such copies being on Polyester film of quality to be approved by the Engineer or his Representative. The Taking-Over Certificate of the Works, as per the provisions of Clause 48 hereof, shall not be issued by the Engineer in the event of the Contractor's failure to furnish the aforesaid "As Built" drawings for the entire Works.
Sub-Clause 8.3 Obligations relating to Local Content	Add the following as Sub-Clause 8.3: The Contractor [Class I Local Supplier/ Class II Local Supplier/ Non Local Supplier] undertakes to ensure minimum Local Content in the Project Highway of at least [50%/20%] duly complying with the provisions of Department for Promotion of Industry and Internal Trade, Ministry of Commerce and Industry, Government of India Order No. P-45021/2/2017-PP (BE- II) dated September 16, 2020, as amended or modified till Bid Due Date and the provisions under Rule 144(xi) of GFR, 2017.
Sub-Clause 11.2 Accessto Data	Add the following as Sub-Clause 11.2: "Data made available by the Employer in accordance with Sub-Clause 11.1 shall be deemed to include data listed elsewhere in the Contract as open for inspection at the address stipulated in the Appendix to Bid.

Sub-Clause 14.1 Programto be Submitted	Substitute Sub-Clause 14.1 by the following: The Contractor shall within **07 (seven) days** of the date of receipt of the Letter of Acceptance, submit to the Engineer for his consent six copies of a programme, for the execution of the work. The programme shall conform and satisfy the requirement of Technical Specifications given at Section VI. Unless otherwise agreed, the programme shall generally be based on the programme submitted with the Bid and shall include: (i) A detailed method statement defining the Contractor's methodology for construction backed with his proposals for construction equipment planning and deployment duly supported with broad output calculations and details of the quality control procedures proposed to be adopted, justifying his capability of achieving the completion of work in accordance with the stipulated period of completion. The method statement shall conform and satisfy the requirement of Technical Specifications given at Section VI. (ii) A bar chart showing the quantities of principal work items to be performed each month together with the mechanical equipment, materials and labour which shall be deployed on such activities. The programme shall not be unbalanced and shall be based on the achievement outputs calculated and demonstrated in the method statement submitted vide sub-para (i) above. An 'S' curve illustrating anticipated cumulative turnover and the anticipated cumulative progress shall be superimposed upon the bar chart. (iii) A CPM/PERT analysis of all major activities from commencement of works to completion. (iv) A separate time based monthly programme indicating the Contractor's proposals for the purchase, long term lease, or hire of equipment throughout the duration of the Contract. (v) A quality assurance plan (QAP) covering all aspects of the work to be adopted for this work to ensure the desired quality. Quality Assurance Plan (QAP) for this project shall be prepared and formulated as a summary of the quality related activities required meeting the terms of the Agreement and in accordance with IRCSP:112-201 The procedure shall conform to and satisfy the requirement of Clause 105 of Technical Specifications given at Section VI. QAP shall be submitted to the Engineer for his consent. If the work programme submitted by the Contractor is deemed in any way incomplete or unacceptable by the Engineer/Employer, the Contractor shall be given **07 days** to revise and resubmit it to the Engineer's satisfaction
Sub-Clause 14.3	"The time within which the detailed cash flow estimate shall be

CashFlow Estimate to be Submitted	submitted shall be **07 days**."
Sub-Clause 15.2 **Language Ability ofContractor's Representative**	Add the following as Sub-Clause 15.2: "If the Contractor's authorized representative is not, in the opinion of the Engineer, fluent in the language specified in the Appendix to Bid, the Contractor shall have available on Site at all times a competent interpreter to ensure the proper transmission of instructions and information."
Sub-Clause 15.3 **Review Meetings and Contractor's Representative**	Add the following as Sub-Clause 15.3: "The Contractor shall ensure that his Project Manager or Senior Site Representative attends all the periodic review meetings notified by the Engineer/Employer/Employer's representative".
Sub-Clause 16.3 **Language Ability of Superintendence Staff**	Add the following as Sub-Clause 16.3: "A reasonable proportion of the Contractor's superintendence staff including his authorized representative shall have a working knowledge of English or the Contractor shall have available on Site at all times a sufficient number of competent interpreters to ensure the proper transmission of instructions and information."
Sub-Clause 16.4 Employment of Local Personnel	Add the following as Sub-Clause 16.4: "The Contractor is encouraged to employ staff and labour with appropriate qualifications and experience from sources within India."
Sub-Clause 17.2 **Notice to Engineer**	Add the following as Sub-Clause 17.2: "The Contractor shall give to the Engineer not less than 48 (forty eight) hours' notice of his intention to set out or give levels for any part of the Works so that timely arrangement may be made for checking or issuing instructions. He shall indicate therein by which date the information, if any is required by him."
Sub-Clause 18.1 **Boreholes & Exploratory Excavations**	Substitute Sub-Clause 18.1 by the following: "If, at any time during the execution of the Works, the Engineer requires the Contractor to make boreholes or to carry out exploratory excavations in excess of the requirements specified elsewhere in the contract then such requirement shall be the subject of an instruction In accordance with Clause 51, unless an item or a provisional sum in respect of such work is included in the Bill of Quantities.

Sub-Clause 19.1 **Safety, Security and Protection of Environment**	Add the following as sub-paras (d), (e) and (f) to Sub-Clause 19.1. (d) Ensure that all lights provided by the Contractor shall be screened so as not to interfere with any signal light on the railways or with any traffic or signal lights of any local or other authority. (e) Ensure that during continuance of the contract, the Contractor and his Sub-contractors shall abide at all times by all existing enactments on environmental protection and rules made thereunder, regulations, notifications and bye- laws of the State or Central Government, or local authorities and any other law, bye-law, regulations that may be passed or notification that may be issued in this respect in future by the State or Central Government or the local authority. He shall ensure that air emissions, surface discharges and effluents from the Site shall not exceed the values, if any, indicated in the Technical Specifications given at Section VI and shall in no case exceed the values prescribed by Applicable Law. Salient features of some of the major laws that are applicable are given below: The Water (Prevention and Control of Pollution) Act, 1974 This provides for the prevention and control of water pollution and the maintaining and restoring ofwholesomeness of water. Pollution means such contamination of water or such alteration of the physical, chemical or biological properties of water or such discharge of any sewage or trade effluent or of any other liquid, gaseous or solid substance into water (whether directly or indirectly) as may, or is likely to, create a nuisance or rendersuch water harmful or injurious to public health or safety, or to domestic, commercial, industrial, agricultural or other legitimate uses, or to the life and health of animals or plants or of aquatic organisms. The Air (Prevention and Control of Pollution) Act, 1981 This provides for prevention, control and abatement of air pollution. 'Air Pollution' means the presence in the atmosphere of any 'air pollutant', which means any solid, liquid or gaseous substance (including noise) present in the atmosphere in such concentration as may be or tend to be injurious to human beings or other living creatures or plants or property or environment. The Environment (Protection) Act, 1986 This provides for the protection and improvement of environment and for matters connected therewith, and the prevention of hazards

	to human beings, other living creatures, plants and property. 'Environment' includes water, air and land and the inter-relationship which exists among and between water, air and land, and human beings, other living creatures, plants, micro-organism and property. The Public Liability Insurance Act, 1991. This provides for public liability insurance for the purpose of providing immediate relief to the persons affected by accident occurring while handling hazardous substances and for matters connected herewith or incidental thereto. Hazardous substance means any substance or preparation which is defined as hazardous substance under the Environment (Protection) Act 1986, and exceeding such quantity as may be specified by notification by the Central Government. Take all reasonable steps to implement the environmental mitigation measures provided for in the 'Environmental Management Plan' [Part 1(b) of Contract Agreement] in accordance with objective, procedures, and other provisions set forth therein and shall not take any action which would prevent or interfere with such implementation. Further, he shall adhere to all environmental requirements of the contract.
Sub-Clause 20.4 Employer's Risks.	Amend Sub-Clause 20.4 to read as follows: The Employer's risks are (a) insofar as they directly affect the execution of the works in the country where the Permanent Works are to be executed: (i) war and hostilities (whether war be declared or not), invasion, act of foreign enemies; (ii) rebellion, revolution, insurrection, or military or usurped power, or civil war; (iii) ionizing radiations, or contamination by radioactivity from any nuclear fuel, or from any nuclear waste from the combustion of nuclear fuel, radioactive toxic explosive or other hazardous properties of any explosive nuclear assembly or nuclear component thereof; (iv) pressure waves caused by aircraft or other aerial devices traveling at sonic or supersonic speeds; riot, commotion or disorder, unless solely restricted to the employees of the contractor or of his sub contractors and arising from the conduct of the works; (b) loss or damage due to the use or occupation by the Employer of any

	Section or part of the Permanent Works, except as may be provided for in the Contract. (c) loss or damage to the extent that it is due to the design of the Works, other than any part of the design provided by the Contractor or for which the Contractor is responsible; and (d) any operation of the forces of nature (insofar as it occurs on the Site) which an experienced contractor: (i) could not have reasonably foreseen, or (ii) could reasonably have foreseen, but against which he could not reasonably have taken at least one of the following measures: (A) prevent loss or damage to physical property from occurring by taking appropriate measures, or (B) Insure against such loss or damage.
Sub-Clause 21.1 **Insurance of Works and Contractor's Equipment**	Add the following as sub para (d) to Sub-Clause 21.1: (d) The insurance shall be issued by an insurance company which has been determined by the Contractor to be acceptable to the Employer.
Sub-Clause 21.2 **Scope ofCover**	Amend sub para (a) of Sub-Clause 21.2 by substituting the words "from the start of work at the Site" by the words "from the first working day after the Commencement Date". Add the following as sub-para (c) to Sub-Clause 21.2 : It shall be the responsibility of the Contractor to notify the insurance company of any change in the nature and extent ofthe Works and to ensure the adequacy of the insurance coverage at all times during the period of the Contract.
Sub-Clause 21.4 **Exclusions**	Amend the text of Sub-Clause 21.4 to read as follows: There shall be no obligation for the insurances in Sub-Clause 21.1 to include loss or damage caused by the risks listed under Sub-Clause 20.4 sub-para (a) (i) to (iv).
Sub-Clause 21.5 **War Risk Insurance**	Add the following as Sub-Clause 21.5: If the Contractor receives instructions from the Employer to insure against War Risk, such insurance, if available, shall be effected, at the cost of the Employer, with an insurance company acceptable to the Employer and shall be in the joint names of the Contractor and the Employer.
Sub-Clause 25.1 **Evidence and**	Amend Sub-Clause 25.1 by inserting the words "as soon as practicable after the respective insurances have been taken out but in any case" before the

Terms of Insurances	words "prior to the start of work at the Site"
Sub-Clause 25.5 **Source of Insurance**	"The Contractor shall be entitled to place all insurance relating to the Contract (including, but not limited to, the insurance referred to in Clause 21, 23 and 24) with insurers from India, which have been determined to be acceptable to the Employer.
Sub-Clause 26.2 **Inspections and Audit by Employer**	Add the following as Sub-Clause 26.2: The Contractor shall permit Employer or its representative to inspect the Contractor's accounts and records relating to the performance of the Contract and to have them audited by auditors appointed by Employer.
Sub-Clause 29.1 **Interference with Trafficand Adjoining Properties**	In sub-para (b) of Sub-Clause 29.1 add the words "railway and any other right of way" after the words "private roads". Add the following as sub-paras (c), (d) and (e) after sub-para (b) of Sub-Clause 29.1 : (c) "If any equipment (floating or otherwise) belonging to or hired by the Contractor or any Sub-contractor or any person employed by the Contractor or by any Sub-contractor or any materials or things therein or therefrom sink from any cause whatsoever, it shall immediately be reported by the Contractor to the competent authorities and the Engineer or his Representative, and Contractor shall forthwith, at his cost raise and remove any such equipment, materials or things or otherwise deal with the same as the Engineer may direct. The fact that such sunken equipment, materials or things are insured or have been declared a total loss or do not represent any further value shall not absolve the Contractor from his obligations under this Clause to raise and remove the same. Until such sunken equipment or materials or things have been raised and removed, the Contractor shall set such buoys and display at night such lights and do all such things for the safety as may be required by the competent authorities or by the Engineer's Representative. In the event of the Contractor not carrying out the obligations imposed on him by this Clause, the Employer may cause to set buoys and display at night, lights on such equipment and raise and remove the same without prejudice to the right of the Employer to hold the Contractor liable and all expenses and consequences thereon and incidental thereto shall be borne by the Contractor and shall be recoverable from him as a debt by the Employer or may be deducted by the Employer from any moneys due or which may become due to the Contractor."

	(d) "In case, any operation connected with traffic necessitated diversion, obstruction or closure of any road, railway or any other Right of Way, the approval of the Engineer or the Engineer's Representative and the concerned authorities shall be obtained well in advance by the Contractor." (e) The Contractor shall so conduct his operations as to have under construction no greater length or amount of work than he can carry out efficiently with due regard to the convenience of the public. The Contractor shall maintain the existing road in its normal condition suitable for the season of the year, from the time he commences the work on Site until the completion of the works. Within **07 days** of the date of receipt of the Letter of Acceptance, the Contractor shall submit a programme for the approval of the Engineer describing in detail how he intends to pass traffic through the Works in general, and at bridge Sites in particular.
Sub-Clause 30.2 **Transport of Contractor's Equipmentor Temporary Works**	Add the following paragraph at the end of Sub-Clause 30.2: "If it is found necessary for the Contractor to move one or more loads of heavy constructional plant and equipment, materials or pre- constructed units or parts of units of work over roads, highways, bridges on which such oversized and overweight items are not normally allowed to be moved, the Contractor shall obtain prior permission from the concerned authorities. Payments for complying with the requirements, if any, for protection of or strengthening of the roads, highways or bridges shall be made by the Contractor and such expenses shall be deemed to be included in his Contract Price".
Sub-Clause 34.2 **Compliance with LabourRegulations**	Add the following as Sub-Clause 34.2 "During continuance of the contract, the Contractor and his Sub-contractors shall abide at all times by all existing labour enactments and rules made thereunder, regulations, notifications and bye laws of State or Central Government or local authority and any other labour law (including rules), regulations, bye laws that may be passed or notification that may be issued under any labour law in future either by the State or the Central Government or the local authority. Salient features of some of the major labour laws that are applicable to construction industry are given below. The Contractor shall keep the Employer indemnified in case any action is taken against the Employer by the competent authority on account of contravention of any of the provisions of any Act or rules made thereunder, regulations or notifications including amendments. If the Employer is caused to pay or reimburse, such amounts as may be necessary to cause or observe, or for non-observance of the provisions stipulated in the notifications / bye-laws / acts / rules / regulations including

	amendments, if any, on the part of the Contractor, the Employer shall also have right to recover from the Contractor any sum required or estimated to be required for making good the loss or damage suffered by the Employer. The employees of the Contractor and the Sub-contractor shall in no case shall be treated as the employees of the Employer at any point of time. Salient features of some major Labour Laws applicable to establishments engaged in Construction of Civil Works are given in Annexure A-1 for reference purpose. The contractor and sub contractor shall comply with the safety and welfare provisions as detailed in **Annexure A-II**.
Sub-Clause 35.1 **Returns of Labour and Contractors Equipment.**	Add the following at the end of Sub-Clause 35.1 For Contractors Labour Regulations, refer to Sub-Clause 34.2.
Sub-Clause 36.6 Methodology	Add the following as Sub-Clause 36.6 At least 14 days in advance of his programmed commencement of each item of work, the Contractor shall furnish for the Engineer's consent and under intimation to the Employer, the methodology he intends to adopt for executing the item, providing full details of the method of working, equipment to be deployed and measures to be adopted for ensuring quality of construction and safety.
Sub-Clause 37.4 **Rejection**	Add the following after Sub-Clause 37.4: "If the contractor persistently causes testing referred to in this Clause to be repeated, it will be considered to be a failure on behalf of the contractor to comply with a notice issued pursuant to this clause by the Engineer."
Sub-Clause 41.1 **Commencement of work.**	Substitute Sub-Clause 41.1 by the following : "The Contractor shall commence the Works on Site within the period stated in the Appendix to Bid after receipt by him of a Notice to this effect from the Engineer/Employer, to be issued within 90 days after singing of the agreement. Thereafter, the Contractor shall proceed with the Works with due expedition and without delay.

	The requirement to 'commence the works at Site' shall be fulfilled if:- a) a programme has been submitted in accordance with Sub-Clause 14.1 Conditions of Particular Application; b) the Contractor's authorised Representative vide Sub-Clause 15.1 with full supporting staff are in position at Site; Equipment, Plant, material and labour for the work programmed for execution in the first two months, have been mobilised at the Site."
Sub-Clause 45.1 **Restriction on WorkingHours**	Delete Sub-Clause 45.1 and substitute: "Subject to any provision to the contrary contained in the Contract, the Contractor shall have the option to work continuously by day and by night and on locally recognized holidays, days of rest, provided that the contractors makes suitable arrangements for the same and inform the Engineer well in advance. Provided further that the rates and prices entered by the contractors in the Priced Bill of Quantities shall include all costs and charges whatsoever involved in working out side normal hours or holidays and on rest days. For working by night suitable light arrangement for sufficient illumination shall be made.
Sub-Clause 48.5 **Prevention from Testing**	Add the following as Sub-Clause 48.5 : If the Contractor is prevented from carrying out the Tests on Completion by a cause for which the Employer or the Engineer or other Contractors employed by the Employer are responsible, the Employer shall be deemed to have taken over the Works on the date when the Tests on Completion would have been completed but for such prevention. The Engineer shall issue a Taking-Over Certificate accordingly. Provided always that the Works shall not be deemed to have been taken over if they are not substantially completed inaccordance with the Contract. If the Works are taken over under this Sub-Clause, the Contractor shall nevertheless carry out the Tests on Completion during the Defects Liability Period. The Engineer shall require the Tests to be carried out by giving 14 days' notice. Any additional costs to which the Contractor may be put, in making the Tests on Completion during the Defects Liability Period, shall beadded to the Contract Price.
Sub-Clause 49.5 **Extension of DefectsLiability Period**	Add the following as Sub-Clause 49.5 : The Employer shall be entitled subject to Sub-Clause 53.6 (Employer's Claims) to an extension of the Defects Liability Period for the Works or a Section if and to the extent that the Works, Section or a major item of Plant (as the case may be, and after taking over) cannot be used for the purposes for which they are intended by reason of a defect or damage. However, a Defects Liability Period

	shall not be extended by more than twelve months.
Sub-Clause 51.2 **Instructions for Variations**	Delete the following sentence from Sub Clause 51.2 "Provided that no instruction shall be required for increase or decrease in the quantity of any work where such increase or decrease is not the result of an instruction given under this Clause, but is the result of the quantities exceeding or being less than those stated in the Bill of Quantities".
Sub-Clause 52.1 **Valuation of Variation**	Substitute the words "if, in the opinion of the Engineer, the same shall be applicable" in the fourth and fifth line by the following: "Subject to provisions of Sub Clause 52.2". Substitute the words "the rates and prices in the Contract shall be used as the basis for valuation so far as may be reasonable," in the seventh and eighth line by the following: "the rates and prices in the Contract, after application of tender premium/discount, shall be used as the basis for valuation so far as may be reasonable,"
Sub-Clause 52.2 **Power of Engineer to Fix Rates**	Add the following paragraphs at the end of Sub-Clause 52.2: Provided further that no change in the rate or price for any item contained in the BOQ shall be considered unless the actual quantity of work executed under the item exceeds due to any reason the quantity set out in the BOQ by more than 25% and if the cost of additional quantity at the BOQ rate exceeds by 1 per cent of initial Contract Price, the Engineer shall fix the new rate to allow for the change in the quantity subject to restrictions under Sub- Clause 2.1,duly applying tender premium/discount while fixing such rates. The new rate fixed by the Engineer shall be applicable only to the quantity exceeding 1.25 times the BOQ quantity. Provided further that no change in the rate for any item contained in the BOQ shall be considered in case of any decrease in the actual quantity of work executed. Note: Rate or price of any item contained in the BOQ is the rate given in the priced bill of quantities duly applying percentage
Sub-Clause 54.5 **Conditions of Hire of Contractor's Equipment**	Delete Sub-Clause 54.5

Sub-Clause 54.6 **Cost for the purpose ofClause 63**	Delete Sub-Clause 54.6
Sub Clause 54.7 Incorporation of Clausein Subcontracts	Delete Sub-Clause 54.7
Sub-Clause 54.9 Contractor request formaterial & equipment.	Add the following as Sub-Clause 54.9 : No material, plant or equipment would be supplied by Employer.The Contractor would be fully responsible for all materials, plants and equipment required for the construction.
Sub-Clause 55.2 **Omissions of Quantities**	Add the following as Sub-Clause 55.2 : Items of the Works provided in the Bill of Quantities for which no rate or price has been entered in the Contract shall be considered as included in other rates and prices in the Contract and will not be paid for separately by the Employer.
Sub-Clause 57.1 **Method of Measurement of Works**	Add the following paragraph at the end of Sub-Clause 57.1 : "The Engineer/Engineer's Representative shall be responsible for ensuring that all measurements are taken as per specifications and drawings for the Works and are recorded in the measurement book of the Employer. The Engineer/Engineer's Representative (Team Leader) should ensure that he has verified the measurements of not less than **100%** of value in each bill and countersign the measurement books accordingly."
Clause 60 **Certificates and Payment**	Delete Sub-Clauses 60.1 to 60.10 and substitute by the following Sub-Clauses 60.1 to 60.13:
Sub-Clause 60.1 **Monthly Statements**	"The Contractor shall submit a statement in 3 copies to the Engineer by the 7th day of each month, signed by the authorized representative of the Contractor, for the work executed up to the end of the previous month in a tabulated form, approved by the Engineer, showing the amounts to which the Contractor considers himself to be entitled. The statement shall include the following items, as applicable, which shall be taken into account in the sequence listed:

	(a) the estimated value of permanent Works executed up to the end of the month in question determined in accordance with Sub-Clause 56.1, at base unit rates or prices of priced bill of quantities duly applying percentage above/below quoted in the Financial bid on the total estimated amount; (b) the actual value certified for payment for the permanent Works executed up to the end of the previous month, (c) the estimated value of the permanent Works for the month in question, obtained by deducting (b) from (a); (d) the value of any variations executed upto the end of the month in question, less the amount certified in the previous Interim Payment Certificate, pursuant to Clause 52 and 2.1; (e) any credit or debit for the month in question in respect of materials and Plant for permanent Works under the conditions set forth in Sub-Clause 60.3; (f) amounts reflecting changes in cost and legislation, pursuant to Clause 70; (g) any amount to be withheld under the retention provisions of Sub-Clause 60.4; (h) any amount to be deducted as repayment of the Advance under the provisions of Sub-Clause 60.6; (i) amounts to be deducted for all taxes in accordance with Clause 73 thereof
Sub-Clause 60.2 **Monthly Payments**	Within 5 days of receipt of the monthly statement from the Contractor in pursuant to Sub-Clause 60.1, the Engineer shall broadly determine the amount due to the Contractor and shall, accordingly, recommend to the Employer for release to the Contractor up to a maximum of 75% of net payment as part payment against the monthly statement, pending certificate of IPC by the Engineer. Within 2 days of the receipt of recommendation of the Engineer, the Employer shall make payment to the Contractor. The said statement shall be approved or amended by the Engineer in such a way that, in his opinion, it reflects the amount due to the Contractor in accordance with the Contract, after deduction, other than pursuant to Clause 47, of any sums which may have become due and payable by the Contractor to the Employer. In cases where there is a difference of opinion as to the value of any item, the Engineer's view shall prevail. Within 21 days' of the receipt of the monthly statement referred to in Sub-Clause 60.1, the Engineer shall determine the amount due to the Contractor and shall deliver to the Employer and the Contractor, an Interim Payment Certificate, certifying the amounts due to the Contractor after adjusting the payment already released to the Contractor against the said statement. Notwithstanding the terms of this Sub-Clause or any other clause of the Contract, no amount will be certified by the Engineer for payment until the

	performance security has been provided by the Contractor and approved by the Employer.
Sub-Clause 60.3 **Materials and Plant for the Permanent Works**	Deleted
Sub-Clause 60.4 **Retention Money**	A retention amounting to 5 (five) per cent of the amount due, determined in accordance with the procedure set out in Sub-Clause 60.1 shall be made by the Engineer in the first and following Interim Payment Certificates, until the amount so retained reaches a limit of retention money as stated in the Appendix to Bid. The Contractor may, at his option, replace the retention amount with an unconditional bank guarantee from the bank or Insurance Surety Bond from Insurance Company acceptable to the Employer at the following stages: (a) After the amount reaches half the value of the limit of Retention Money as stated in the appendix to bid. (b) After the amount reaches the maximum limit of the retention money as stated in the appendix to bid.
Sub-Clause 60.5 **Payment of Retention Money**	Upon the issue of the Taking-Over Certificate with respect to the whole of the Works, one half of the Retention Money (or Bank Guarantee/ Insurance Surety Bond, which replaced Retention Money) or upon the issue of a Taking-Over Certificate with respect to a Section or part of the Permanent Works, only such proportion thereof as the Engineer determines having regard to the relative value of such Section or part of the Permanent Works shall be certified by the Engineer for payment (or release of Bank Guarantee/ Insurance Surety Bond) to the Contractor. The Contractor may substitute the remaining retention money with an on-demand bank guarantee/ Insurance Surety Bond in a form and from a source, acceptable to the Employer. Upon expiration of 365 days after the Defects Liability Period of the Works or final payment by the employer pursuant to Sub-Clause 60.12, whichever is earlier, the other half of the Retention Money (or Bank Guarantee/ Insurance Surety Bond which replaced Retention Money) shall be certified by the Engineer for payment or release of bank guarantee to the Contractor. Provided that, in the event of different Defects Liability Periods being applicable to the different Sections or parts of the Permanent Works pursuant to Clause 48, the expression "expiration of the Defects Liability Period" shall, for the purpose of this Sub-Clause, be deemed to mean the expiration of the latest of such periods.

Sub-Clause 60.6 **Advance Payment**	(a) The Employer will make an interest bearing advance payment (rate of interest given in Appendix to Bid) to the Contractor exclusively for the costs of mobilization in respect of the Works upto an amount equivalent to 10 (Ten) percent of the Contract Price named in the Letter of Acceptance in two stages as provided in Appendix to Bid. Payment of such advance amount will be due under separate certification by the Engineer after (i) execution of the Form of Agreement by the parties hereto; (ii) submission by the Contractor of the performance security in accordance with Sub-Clause 10.1; and (iii) submission by the Contractor of an unconditional bank guarantee in a form and by a bank or Insurance Surety Bond from Insurance Company acceptable to the Employer in amount equal to the advance payment. The Bank guarantee/ Insurance Surety Bond may be split into not more than four separate Bank Guarantees/ Insurance Surety Bond and each having minimum value of 2.5% of the Contract Price. Such Bank Guarantee/ Insurance Surety Bond shall remain effective till date of completion of work, until the advance payment has been repaid pursuant to sub para (c) below, but the amount thereof shall be progressively reduced in accordance with the value of bank guarantees furnished by the Contractor and the amount repaid by him as indicated in Interim Payment Certificates issued in accordance with this Clause. (b) In addition to the advance mentioned in sub-para (a) above, the Employer will pay another interest bearing advance as provided in Appendix to Bid against key construction equipment required for the Works as per agreed construction programme and brought to Site, if so requested by the Contractor subject to the same terms and conditions specified in paragraph (a) above. The maximum of such advance shall be five percent of the Contract Price. This advance shall be further subject to the condition that (i) such equipment are considered by the Engineer to be necessary for the Works and (ii) these equipment have been verified to have been broughtto site. (c) The advance payment under sub para (a) and (b) above shall be repaid through percentage deductions from the interim payments certified by the Engineer in accordance with this Clause. Deductions shall commence in the next Interim Payment Certificate either following that in which the total of all interim payments certified to the Contractor has reached 20 (Twenty) percent of the Contract Price less Provisional Sums or after 12 months from the date of commencement whichever period concludes earlier and shall be made at the rate of 25 (Twenty Five) percent of the amount of all Interim Payment Certificates until such time as the advance payment including interest has been repaid; always provided that the advance payment including interest shall be completely repaid prior to the time when 80 percent of the Contract Price has been certified for payment. Provided further that repayment of advance can be made prior to the above schedule at the option of the Contractor.

	(d) The advance shall be used by the Contractor exclusively for mobilization expenditures, including the acquisition of new Construction equipments, in connection with the Works. All withdrawals under Mobilization advance and equipment advance should be effected before the period stipulated in this regard in the Appendix to Bid. Should the Contractor misappropriate any portion of the advance, it shall become due and payable immediately, and no further advance will be made to the Contractor thereafter. The term "misappropriate" in the above context would mean include, renewal of or transfer of any of the mobilization advance so drawn for investment outside the project account. The contractor will submit a utilization certificate specifying the usage of the sums so drawn have been put to, supported by complete documentary evidence within 6 months from the date of release of such advances.
Sub-Clause 60.7 **Correction of Certificates**	The Engineer may by any Interim Payment Certificate make any correction or modification in any previous Interim Payment Certificate which has been issued by him. Further, he shall have authority, if any work is not being carried out to his satisfaction, to omit or reduce the value of such work in any Interim Payment Certificate.
Sub-Clause 60.8 **Statement at Completion**	Not later than 84 days after the issue of the Taking-Over Certificate in respect of the whole of the Works, the Contractor shall submit to the Engineer six copies of a Statement at Completion with supporting documents showing in detail, in the form approved by the Engineer**:-** (a) the final value of all work done in accordance with the Contract up to the date stated in such Taking-Over Certificate; (b) any further sums which the Contractor considers to be due to him; and (c) an estimate of amounts which the Contractor considers will become due to him under the Contract. Estimated amounts shall be shown separately in such Statement at Completion. The Engineer shall certify payment in accordance with Sub-Clause 60.2.
Sub-Clause 60.9 **Final Statement**	Not later than 56 days after the issue of the Defects Liability Certificate pursuant to Sub-Clause 62.1, the Contractor shall submit to the Engineer for consideration six copies of a Draft Final Statement with supporting documents showing in detail, in the form approved by the Engineer, (a) the value of all work done in accordance with the Contract; and

	(b) any further sums which the Contractor considers to be due to him under the Contract or otherwise. If the Engineer disagrees with or cannot verify any part of the Draft Final Statement, the Contractor shall submit such further information as the Engineer may reasonably require and shall make such changes in the Draft Final Statement as may be agreed between them. The Contractor shall then prepare and submit to the Engineer the final statement as agreed (for the purposes of these Conditions referred to as the "Final Statement"). If following the discussions between the Engineer and the Contractor and any changes to the Draft Final Statement which may be agreed between them, it becomes evident that a dispute exists, the Engineer shall deliver to the Employer an Interim Payment Certificate for those parts of the Draft Final Statement, if any, which are not in dispute. The dispute shall then be settled in accordance with Clause 67. The Final Statement shall be the agreed upon settlement of the dispute.
Sub-Clause 60.10 **Discharge**	Upon submission of the Final Statement, the Contractor shall give to the Employer, with a copy to the Engineer, a written discharge confirming that the total of the Final Statement represents full and final settlement of all monies due to the Contractor arising out of or in respect of the Contract. Provided that such discharge shall become effective only after payment due under the Final Payment Certificate issued pursuant to Sub-Clause 60.11 has been made and the performance security referred to in Sub-Clause 10.1 has been returned to the Contractor.
Sub-Clause 60.11 **Final Payment Certificate**	Within 28 days after receipt of the Final Statement, and the written discharge, the Engineer shall deliver to the Employer (with a copy to the Contractor) a Final Payment Certificate stating: (a) the amount which, in the opinion of the Engineer, is finally due under the Contract or otherwise, and (b) after giving credit to the Employer for all amounts previously paid by the Employer and for all sums to which the Employer is entitled, other than under Clause 47, the balance, if any, due from the Employer to the Contractor or from the Contractor to the Employer as the case may be.
Sub-Clause 60.12 **Time of Payment and Interest**	(a) The amount due to the Contractor under any Interim Payment Certificate issued by the Engineer pursuant to this Clause, orto any other term of the Contract, shall, subject to Clause 47, be paid by the Employer to the Contractor as follows:

	(i) in the case of Interim Payment Certificates, within 42 days after the Contractor's monthly statement has been submitted to the Engineer for certification, pursuant to Sub-Clause 60.1. Provided that if the Engineer's Interim Payment Certificate has not yet been issued within said 42 days, the Employer shall pay the amount shown in the Contractor's monthly statement and that any discrepancy shall be added to, or deducted from, the next payment to the Contractor; (ii) in the case of the Final Payment Certificate pursuant to Sub-Clause 60.11, within 84 days after the Final Statement and written discharge have been submitted to the Engineer for certification; (b) In the event of the failure of the Employer to make payment within the time stated, the Employer shall pay to the Contractor interest at the rate stated in the Appendix to Bid upon all sums unpaid from the date by which the same should have been paid. The provisions of this Sub-Clause are without prejudice to the Contractor's entitlement under Clause 69 or otherwise.
Sub-Clause 60.13 **Cessation of Employer's Liability**	The Employer shall not be liable to the Contractor for any matter or thing arising out of or in connection with the Contract or execution of the Works, unless the Contractor shall have included a claim in respect thereof in his Final Statement and (except in respect of matters or things arising after the issue of the Taking-Over Certificate in respect of the whole of the Works) in the Statement at Completion referred to in Sub-Clause 60.8.
Sub-Clause 62.1 **Defects Liability Certificate**	Delete the following sentence from Sub-Clause 62.1 Provided that the issue of the Defects Liability Certificate shall not be a condition precedent to payment to the contractor of the second portion of the Retention Money in accordance with the conditions set out in Sub-Clause 60.3.
Sub-Clause 63.1 **Defaultof Contractor**	Delete Sub-Clause 63.1 and substitute by the following:- The Employer shall be entitled to terminate the contract if the contractor: (a) fails to carry out any obligation under the contract. (b) without reasonable excuse fails - (i) to commence the works in accordance with Sub-Clause 41.1 or (ii) to proceed with the works, or any section thereof, within 28 days after received notice pursuant to Sub-Clause 46.1. (c) has failed to comply with a notice issued pursuant to Sub- Clause 37.4 or an instruction issued pursuant to Sub-Clause 39.1 within 28 days after having received.

	(d) abandons the works or otherwise plainly demonstrates the intention not to continue performance of his obligation under the contract. (e) sub-contracts the works or assigns the contract without thespecific prior written permission of the Engineer. (f) despite previous warning from the Engineer, in writing, is otherwise persistently or fragrantly neglecting to comply with any of his obligations under the contract, (g) deleted. (h) has failed to furnish the required securities or extension thereof in terms of the contract. (i) becomes bankrupt or insolvent, goes into liquidation, has a receiving or administration order made against him, compounds with his creditors, or carries on business under receiver, trustee or manager for the benefit of his creditors, or if any act is done or event occurs which (under applicable Laws) has a similar effect to any of these acts or events, In any of these events or circumstances, the Employer may, upon giving 14 days notice to the contractor, terminate the contract and expel the contractor from the site. However, in the case of sub-paragraphs (i), the Employer may by notice terminate the contract immediately. The Employer's election to terminate the contract shall not prejudice any other rights of the Employer, under the contract or otherwise. The contractor shall then leave the site and deliver any required goods, all contractor's documents, and other design documents made by or for him, to the Engineer. However, the contractor shall use his best efforts to comply immediately with any reasonable instructions included in the notice (i) for the assignment of any sub-contract, and (ii) for the protection of life or property or for the safety of the works. After termination, the Employer may complete the Works and/or arrange for any other entities to do so. The Employer and these entities may then use any goods, contractor's documents and other design documents made by or on behalf of the contractor. The Employer shall then give notice that the contractor's equipment and temporary works will be released to the contractor at or near the site. The contractor shall promptly arrange their removal at the risk and cost of the contractor. However, if by this time the contractor has failed to make a payment due to the Employer, these items may be sold by the Employer in order to recover this payment. Any balance of the proceeds shall then be paid to the contractor.

Sub-Clause 63.3 **Payment after Termination**	Substitute Sub-Clause 63.3 with the following : If the Employer terminates the Contractor's employment under this Clause, he shall not be liable to pay to the Contractor any further amount in respect of the Contract until the Engineer shall determine the value of the work done up to the date of termination of contract, less payments received, less other recoveries due in terms of the Contract, less payment due, if any, under Clause 47, less taxes due to be deducted at source as per applicable laws, less the percentage indicated in the Appendix to Bid to apply to the value work not completed at BOQ rates plus the variations already approved by the Engineer and less cost of remedying of any defects in the works executed by the Contractor. If the Engineer determines that a sum is payable to the Contractor, he will then be entitled to receive such sum from the Employer. If the Engineer determines that a sum is due from the Contractor and payable to the Employer, it shall be deemed a debt due by the Contractor to the Employer and shall be recoverable accordingly.
Sub-Clause 63.5 **Invocation of the Bank Guarantee/ Insurance Surety Bond**	Add the following as Sub-Clause 63.5 Without prejudice to the generality of the provisions of the Agreements, if the contractor unsuccessfully challenges any action of the Employer before a Court of Law regarding invocation of the Bank Guarantee/ Insurance Surety Bond furnished under the Agreement or termination of the Agreement and any interim directions are obtained against the Employer, which are subsequently vacated by the Court, then the contractor shall be liable to pay: (a) in case of a Bank Guarantee/ Insurance Surety Bond interest @ 12% of the Bank Guarantee/ Insurance Surety Bond amount; or (b) in case of termination of the Agreement an amount equivalent to 1/2000 per day of the contract value. for the intervening period starting from the date of the interim directions till the final disposal of the case by the Court. Both the parties agree that the damages in Clause (b) is a genuine pre-estimate of the loss suffered by the Employer.
Sub-Clause 63.6 **Corrupt or Fraudulent Practices**	Add the following as Sub-Clause 63.6 : If in the judgment of the Employer, the Contractor has engaged in corrupt or fraudulent practices, in competing for or in executing the Contract, then the Employer may, after having given 14 days notice to the Contractor, terminate the Contractor's employment under the Contract and expel him from the Site, and the provisions of Clause 63 shall apply as if such

	termination had been made under Sub- Clause 63.1 For the purpose of this Sub-Clause : "Corrupt practice" means the offering, giving, receiving or soliciting of any thing of value to influence the action of a public official in the procurement process or in contract execution. "fraudulent practice" means a misrepresentation of facts in order to influence a procurement process or the execution of a contract to the detriment of the Employer, and includes collusive practice among bidders (prior to or after bid submission) designed to establish bid prices at artificial non-competitive levels and to deprive the Employer of the benefits of free and open competition.
Sub-Clause 63.7 **Integrity Pact**	Contractor shall comply with the provisions of Integrity Pact (IP), which shall be part of the Contract Agreement.
Sub-Clause 65.2 **SpecialRisks**	Substitute Sub-Clause 65.2 with the following : The Special Risks are the risks defined under para (a), sub-paras (i) to (iv) of Sub-Clause 20.4.
Sub-Clause 67.1 **Disputes Review Board**	Substitute Clause 67.1 by the following: (i) In the event of any dispute, difference or controversy of whatever nature howsoever arising under or out of or in relation to this Agreement (including its interpretation) between the Parties, and so notified in writing by either Party to the other Party (the "Dispute") either Party may call upon the Authority Engineer, to mediate and assist the Parties in arriving at an amicable settlement thereof. (i) The Parties agree to use their best efforts for resolving all Disputes arising under or in respect of this Agreement promptly, equitably and in good faith, and further agree to provide each other with reasonable access during normal business hours to all non-privileged records, information and data pertaining to any Dispute. (ii) ~~Dispute Resolution Board (DRB):~~ ~~Failing mediation by the Authority Engineer or without the intervention of the Authority Engineer, either Party may require such Dispute to be referred to the Dispute Resolution Board ("DRB") in accordance with the procedure setforth in Schedule-S to the Contract Agreement. The decision(s) of the Dispute Resolution Board shall be binding on both parties who shall promptly give effect to unless and until the same is revised/modified, as hereinafter provided, in a Conciliation/Arbitral Tribunal.~~
Sub-Clause 67.2	Substitute Clause 67.2 by the following:

Conciliation	If either the Authority or the Contractor is dissatisfied with any decision of Authority's Engineer ~~and/ or if the DRB is unable to resolve the dispute~~, either Party may refer the Dispute to arbitration in accordance with the provisions of Clause 67.3 but before resorting to such arbitration, the parties agree to explore conciliation by the Conciliation Committees of Independent Experts set up by the Authority in accordance with the procedure decided by the panel of such experts and notified by the Authority on its website including its subsequent amendments. In the event of the conciliation proceedings being successful, the parties to the dispute would sign the written settlement agreement and the conciliators would authenticate the same. Such settlement agreement would then be binding on the parties in terms of Section 73 of the Arbitration Act. In case of failure of the conciliation process even at the level of the Conciliation Committee, either party may refer the Dispute to arbitration in accordance with the provisions of Clause 67.3.
Sub-Clause 67.3 **Arbitration**	Substitute Sub-Clause 67.3 with the following: Any Dispute which is not resolved amicably by conciliation as provided in Clause 67.2 shall be finally settled by arbitration as set forth below: i. The Dispute shall be finally referred to Society for Affordable Resolution of disputes (hereinafter called as SAROD), a Society registered under Society's ACT 1860 vide Registration no. S/RŠ/SW1049/2013 duly represented by Authority and National Highways Builders Federation (NHBF). The dispute shall be dealt with in terms of Rules of SAROD. The detailed procedure for conducting Arbitration shall be governed by the Rules of SAROD and Provisions of Arbitration & Conciliation Act, 1996, as amended from time to time. The Dispute shall be governed by Substantive Law of India. ii. The appointment of Tribunal, Code of conduct for Arbitrators and fees and expenses of SAROD and Arbitral Tribunal shall also be governed by the Rules of SAROD as amended from time to time. iii. Subject to the provisions of THE LIMITATION ACT, 1963, as amended from time to time, Arbitration may be commenced during or after the Contract Period, provided that the obligations of Authority and the Contractor shall not be altered by reason of the Arbitration being conducted during the Contract Period. iv. The venue of Arbitration shall be New Delhi or a place selected by governing body of SAROD and the language for all documents and communications between the parties shall be English. v. The expenses incurred by each party in connection with the preparation, presentation, etc., of arbitral proceedings shall be shared by each party itself. 67.3.2 The arbitrators shall make a reasoned award (the "Award"). Any Award made in any arbitration held pursuant to this Clause 67 shall be final and binding on the Parties as from the date it is made, and the Contractor and the Authority agree and undertake to carry out such Award without

	delay. 67.3.3 The Contractor and the Authority agree that an Award may be enforced against the Contractor and/or the Authority, as the case may be, and their respective assets wherever situated. 67.3.4 This Agreement and the rights and obligations of the Parties shall remain in full force and effect, pending the Award in any arbitration proceedings hereunder. Further, the parties unconditionally acknowledge and agree that notwithstanding any dispute between them, each party shall proceed with the performance of its respective obligations, pending resolution of Dispute in accordance with this Article.
Sub-Clause 67.4 Failure to Comply with Recommendation	Deleted
Sub-Clause 67.5 **Adjudication by Regulatory Authority, Tribunal or Commission**	Added Sub-Clause 67.5 by the following: In the event of constitution of a statutory regulatory authority, tribunal or commission, as the case may be, with powers to adjudicate upon disputes between the Contractor and the Authority, all Disputes arising after such constitution shall, instead of reference to arbitration under Clause 67.3, be adjudicated upon by such regulatory authority, tribunal or commission in accordance with the Applicable Law and all references to Dispute Resolution Procedure shall be construed accordingly. For the avoidance of doubt, the Parties hereto agree that the adjudication hereunder shall not be final and binding until an appeal against such adjudication has been decided by an appellate tribunal or court of competent jurisdiction, as the case may be, or no such appeal has been preferred within the time specified in the Applicable Law.
Sub-Clause 68.2 **Notice to Employer and Engineer**	For the purposes of this Sub-clause, the addresses are those specified in the Appendix to Bid.
Clause 69 **Default of Employer**	In Sub-Clause 69.1, 69.4, and 69.5, substitute "Sub-Clause 60.10" for "Sub-Clause 60.12.
Sub-Clause 69.1 **Default of Employer**	In Sub-Clause 69.1 (a), substitute the words "28 days" with "56 days". In the last para, substitute the words "14 days" with "28 days".
Sub-Clause 69.2 **Removal of Contractor's Equipments**	In Sub-Clause 69.2, substitute the words "14 days" with "28 days".

Sub-Clause 69.3 **Payment on Termination**	In Sub-Clause 69.3, delete the text from ", but in addition to the payments specified." to the end of the Sub-Clause.
Clause 70 **Changes in Cost andLegislation**	Delete
Sub-Clause 70.1 **Price Adjustment**	Sub-Clauses 70.1 substitute with the following: The amounts payable to the Contractor and valued at base rates and prices in the Interim Payment Certificates issued by the Engineer, pursuant to Sub-Clause 60.1, shall be adjusted in respect of the rise or fall in the index cost for labour, Contractor's Equipment, Plant, materials, and other inputs to the Works, by the addition or subtraction of the amounts determined by the formulae prescribed in this Clause. **Provided no price adjustment on any account will be admissible, if original Contract duration is 18 months or less.**
Sub-Clause 70.2 **Other Changes in Cost**	Sub-Clauses 70.2 and substitute with the following: To the extent that full compensation for any rise or fall in costs to the Contractor is not covered by the provisions of this or other Clauses in the Contract, the unit rates and prices included in the Contract shall be deemed to include amounts to cover the contingency of such other rise or fall of costs.
Sub-Clause 70.3 **Price Adjustment Formulae**	~~Contract Price shall be adjusted for increase or decrease in rates and price of labour, materials, fuels and lubricants in accordance withthe following principles and procedures as per formula given below. The amount certified in each payment certificate is adjusted by applying the respective price adjustment factor to the payment amounts due:~~ ~~(a) Price adjustment shall apply only for work carried out within the stipulated time or extensions granted by the Employer and shall not apply to work carried out beyond the stipulated time; price adjustment for extensions for reasons attributable to theContractor, shall be paid in accordance with Sub-Clause 70.5;~~ ~~Price adjustment shall be calculated as per the formula given below:~~ ~~(b) Following expressions and meanings are assigned to the value of the work done during each month:~~ ~~R = Total value of work done during the month. It would include the value of materials on which secured advance~~

has been granted, if any during the month less the value of materials in respect of which the secured advance has been recovered, if any during the month. This will exclude cost of work on items for which rates were fixed under variations Clause 51 and 52 for which the escalation will be regulated as mutually agreed at the time of fixation of rate.

(i) Adjustment for Labour Component

Price adjustment for increase or decrease in the cost due to labour shall be paid in accordance with the following formula:

$V_L = 0.85 \times P_l/100 \times R \times (L_i - L_o)/L_o$

V_L = increase or decrease in the cost of work during themonth under consideration due to changes in rates for local labour.

L_o = the average consumer price index for industrial workers for the place as defined in the Appendix to Bid, in the previous month prior to the closing date of submission of bids as published by Labour Bureau, Ministry of Labour*, Government of India.

L_i = The average consumer price index for industrial workers for the place as defined in the Appendix to Bid, in the previous month prior to the last day of the period to which a particular Interim Payment Certificate is related as published by Labour Bureau, Ministry of Labour*, Government of India.

P_l = Percentage of labour component of the work.

Note: For the application of this Clause, index of Industrial Workers has been chosen to represent the labour component.

(j) Adjustment for Cement Component

Price adjustment for increase or decrease in the cost of cement procured by the Contractor shall be paid in accordance with the following formula.

$V_c = 0.85 \times P_c/100 \times R \times (C_i - C_o)/C_o$

V_c =Increase or decrease in the cost of work during the month under consideration due to changes in the rates for cement

C_o = The all India average wholesale price index for Grey cement in the previous month prior to the closing date of submission of bids as published by the Ministry of Commerce & Industry, Government of India.

Ci = The all India average wholesale price index for Grey cement in the previous month prior to the last day of the period to which a

	particular Interim Payment Certificate is related, as published by Ministry of Commerce &Industry, Government of India. P_c = Percentage of cement component of the work (i) Adjustment for steel component Price adjustment for increase or decrease in the cost of steel procured by the Contractor shall be paid in accordance with the following formula: $V_s = 0.85 \times P_s/100 \times R \times (S_i - S_o)/S_o$ V_s = Increase or decrease in the cost of work during the month under consideration due to changes in the rates for steel. S_o = The all India average wholesale price index for steel (Rebars) in the previous month prior to the closing date of submission of bids as published by the Ministry of Commerce & Industry, Government of India. S_i = The all India average wholesale price index for steel (Rebars) in the previous month prior to the last day of the period to which a particular Interim Payment Certificate is related as published by the Ministry of Commerce & Industry, Government of India. P_s = Percentage of steel component of the work Note: For the application of this Clause, index of Rebars has been chosen to represent steel component. (iv) Adjustment for Plant and machinery and spares component Price adjustment for increase or decrease in the cost of Plant and machinery spares procured by the Contractor shall be paid in accordance with the following formula: $V_p = 0.85 \times P_p/100 \times R \times (P_i - P_o)/P_o$ V_p = Increase or decrease in the cost of work during the monthunder consideration due to changes in the rates for Plant and machinery spares P_o = The all India average wholesale price index for Construction machinery in the previous month prior to the closing date of submission of bids as published by the Ministry of Commerce & Industry, Government of India. P_i = The all India average wholesale price index for Construction machinery in the previous month prior to the last day of the period to which a particular Interim Payment Certificate is related as published by the Ministry of Commerce & Industry, Government of India. P_p = Percentage of Plant and machinery spares component ofthe work Note: For the application of this Clause, index of Construction

	machinery has been chosen to represent the Plant and Machinery spares component. (v) Adjustment for Bitumen Component Price adjustment for increase or decrease in the cost of bitumen shall be paid in accordance with the following formula: Vb = 0.85 × Pb/100 × R× (Bi – BO)/Bo Vb = increase or decrease in the cost of work during the month under consideration due to changes in the rates for bitumen: BO = the average official retail price of bitumen at the nearest refinery for the place as defined in Appendix to Bid, in the previous month prior to the date of submission of Bids. Bi = the average official retail price of bitumen at nearest refinery for the place as defined in Appendix to Bid, in the previous month prior to the last day of the period to which a particular Interim Payment Certificate isrelated. Pb = Percentage of bitumen component of the work. (iv) Adjustment for Fuel and Lubricants (POL) Price adjustment for increase or decrease in the cost of POL (fuel and lubricant) shall be paid in accordance with the following formula: $V_f = 0.85 \times P_f/100 \times R \times (F_i - F_o)/F_o$ V_f = Increase or decrease in the cost of work during the month under consideration due to changes in rates for fuel and lubricants. F_o = The average official retail price of High Speed Diesel (HSD) oil at the existing consumer pumps of IOC for the place defined in the Appendix to Bid in the previous month prior to date of submission of bids. F_i = The average official retail price of HSD at the existing consumer pumps of IOC for the place defined in the Appendix to Bid in the previous month prior to the last day of the period to which a particular Interim Payment Certificate is related P_f = Percentage of fuel and lubricants component ofthe work. Note: For the application of this clause, the price of High Speed Diesel oil at the IOC pumps has been chosen to represent fuel and lubricants component. ** Based price index for Industrial Workers to be published by Labour Bureau, Ministry of Labour, Govt. of India be checked.* (iv) Adjustment for Other Local Materials Price adjustment for increase or decrease in cost of local materials other than cement, steel, bitumen, plant spares and POL procured by

	~~the Contractor shall be paid in accordance with the following formula:~~ ~~$V_m = 0.85 \times P_m/100 \times Rx (M_i - M_o)/M_o$~~ ~~$V_m$ = Increase or decrease in the cost of work during the month under consideration due to changes in rates for local materials other than cement, steel, bitumen, plant spares and POL.~~ ~~M_o = The all India average wholesale price index (all commodities) in the previous month prior to date of submission of bids, as published by the Ministry of Commerce & Industry, Government of India.~~ ~~M_i = The all India average wholesale price index (all commodities) in the previous month prior to the last day of the period to which a particular Interim Payment Certificate is related as published by the Ministry of Commerce & Industry, Government of India.~~ ~~P_m = Percentage of local material component (other than cement, steel, bitumen, plant spares and POL) of thework.~~ ~~(viii) The following percentages will govern the priceadjustment of the contract:~~ ~~1. Labour P_l 20 %~~ ~~2. Plant and Machinery and Spares - P_p 20 %~~ ~~3. POL - P_f 10 %~~ ~~4. Bitumen Pb x %~~ ~~5. Cement - P_c y %~~ ~~6. Steel Ps z %~~ ~~7. Other materials - P_m 50 (x+y+z)%~~ ~~**Total 100 %**~~ ~~*(Note: x, y, z are the actual percentage of material of bitumen, cement and steel respectively used for execution of work as per the Interim Payment Certificate for the month.)*~~
Sub-Clause 70.4 **Base, Current and Provisional Indices**	The base cost indices or prices shall be those prevailing in the previous month prior to the closing date for submission of bids. Current indices or prices shall be those prevailing in the previous month to which a particular Interim Payment Certificate is related. If at any time the current indices are not available, provisional indices as determined by the Engineer will be used, subject to subsequent correction of the amounts paid to the Contractor when the applicable indices become available.
Sub-Clause 70.5	Provided that, in determining all such price adjustment in accordance

Limit of Price Adjustment	with the aforesaid Sub-Clauses: (a) No account will be taken of any amount by which any cost incurred by the Contractor has been increased by default or negligence of the contractor. (b) If the contractor fails to complete the work within time for completion prescribed under Clause 43.1, the adjustment of prices thereafter until the completion of the works shall be made using either the indices or prices relating to prescribed time for completion, or the current indices or prices, whichever is more favourable to the Employer, provided that if an extension of time is granted pursuant to Sub-Clause 44.1, the above position shall apply to the adjustments made after expiry of such extension of time.
Sub-Clause 70.6 **Subsequent Legislation**	If, after the date 28 days prior to the latest date for submission of tenders for the Contract, there occur changes to any National or State Statute, Ordinance, Decree or other Law or any regulation or bye-law of any local or other duly constituted authority, or the introduction of any such State Statute, Ordinance, Decree, Law, regulation or bye-law which causes additional or reduced cost to the Contractor, other than under the preceding Sub-Clauses of this Clause, in the execution of the Contract, such additional or reduced cost shall, after due consultation with the Employer and the Contractor, be determined by the Engineer and shall be added to or deducted from the Contract Price and the Engineer shall notify the Contractor accordingly, with a copy to the Employer. Notwithstanding the foregoing, such additional or reduced cost, shall not be separately paid or credited if the same shall already have taken into account in the indexing of any inputs to the Price Adjustment Formulae in accordance with the provisions of Sub-Clause (1) to (5) of this Clause.
Sub-Clause 71.1 **Currency Restrictions**	Delete Sub-Clause 71.1
Sub-Clause 72.1 **Rates of Exchange**	Delete Sub-Clause 72.1
Sub-Clause 72.2 **Currency Proportions**	Delete Sub-Clause 72.2

Sub-Clause 72.3 **Currencies of Paymentfor Provisional Sums**	Delete Sub-Clause 72.3
Sub-Clause 73.1 **Foreign Taxation**	**Additional Clauses** The prices bid by the Contractor shall include all taxes, duties,and other charges imposed outside the Employer's country on the production, manufacture, sale, and transport of the Contractor's Equipment, Plant, materials, and supplies to be used on or furnished under the Contract, and on the services performed underthe Contract.
Sub-Clause 73.2 **Local Taxation**	The prices bid by the Contractor shall include all customs duties, import duties, business taxes, and income and other taxes local/state govt., octroi, royalty etc., that may be levied in accordance with the laws and regulations being in force on the date 28 days prior to the latest date for submission of bids in the Employer's country on the Contractor's Equipment, Plant, materials, and supplies (permanent, temporary, and consumable) acquired for the purpose of the Contract and on the services performed under the Contract. Nothing in the Contract shall relieve the Contractor from his responsibility to pay any tax that may be levied in the Employer's country on profits made by him in respect of the Contract. All taxes shall be deducted from Contractor's payment as per relevant legislation.
Sub-Clause 73.3 **Personal Income Tax**	The Contractor's staff and labour will be liable to pay personal income tax in the Employer's country in respect of such of their salaries and wages as are chargeable under the laws and regulations for the time being in force, and the Contractor shall perform such duties in regard to such deductions thereof as may be imposed on him by such laws and regulations.
Sub-Clause 73.4 **Advance Deduction of Taxes**	Advance deduction of taxes shall be made from each Interim Payment Certificate in accordance with the relevant provisions of all prevailing Acts and Regulations.
Sub-Clause 73.5 **Customs and Security Requirements**	The Contractor shall comply with all regulations for the time being imposed by the Customs and Port Security Authorities in respect of the passage of plant, vehicles, materials, and personnel through Customs barriers.

Clause 74 Joint Venture	a) Deleted.
Sub-Clause 75.1 **Termination of Contractfor Employer's Convenience**	The Employer shall be entitled to terminate this Contract at any time for the Employer's convenience after giving 56 days' prior notice to the Contractor, with a copy to the Engineer. In the event of such termination, the Contractor a) shall proceed as provided in Sub-Clause 65.7; and b) shall be paid by the Employer as provided in Sub-Clause65.8.
Sub-Clause 76.1 **Details to be Confidential**	The Contractor shall treat the details of the Contract as privateand confidential, save insofar as may be necessary for the purposes thereof, and shall not publish or disclose the same or any particulars thereof in any trade or technical paper or elsewhere without the previous consent in writing of the Employer. If any dispute arises as to the necessity of any publication or disclosure for the purpose of the Contract, the same shall be referred to the Employer whose determination shall be final.
Sub-Clause 77.1 **Contractor's Temporary Moorings**	Should the Contractor for the purpose of the Contract desire to provide temporary mooring for his craft and floating plant, he will be allowed to do so in positions and manners approved by the Engineer. The Contractor shall not lay such moorings so as to interfere with traffic in the waterways and such moorings shall be removed if and when required by the Engineer and/or the Employer.
Sub-Clause 78.1 **Life-saving Appliances and First-aid equipment**	The Contractor shall provide and maintain upon the Works andthe Site, sufficient, proper and efficient life-saving appliances and first-aid equipment to the approval of the Engineer. The appliances and equipment shall be available for use at all timesduring the Contract Period.
Sub-Clause 79.1 **Drawings and Photographs of the Works**	The Contractor shall not disclose details of drawings furnished to him without the prior approval of the Engineer in writing. No photograph of the Works or any part thereof or equipment employed thereon shall be taken or permitted by the Contractor to be taken by any of his employees or any employees of his Sub- contractors without the prior approval of the Engineer in writing and no such photographs shall be published or otherwise circulated without the approval of the Engineer in writing.

Sub-Clause 80.1 **The Apprentices Act,1961**	The Contractor shall duly comply with the provisions of the Apprentices Act, 1961, the rules made there under and the orders that may be issued from time to time under the said Act and the said Rules and on his failure or neglect to do so, he shall be subject to all liabilities and penalties provided by the said Act and the said Rules.
Sub-Clause 81.1 **Inspection of work and Review of progress by Employer.**	The Employer or his representative may inspect and review the progress of works and may issue appropriate directions to the Engineer for taking necessary action. The Employer or his representative may also test check the quality and quantity of the materials brought to the site for incorporating in the permanent works and may also test check the quantity, quality and workmanship of the Work executed in the presence of the representatives of the Engineer and the Contractor.
Sub-Clause 81.2 **Performance Appraisal.**	The Employer or his representative shall carry out the performance appraisal of the Contractor through the Engineer in the format prescribed by the Employer.
Sub-Clause 82.1 **Use of explosives**	The Contractor shall not use explosives unless the use of explosives is so provided or ordered or authorized. The use of controlled blasting with blasting nets shall be permitted wherever so required in the opinion of the Engineer. The blasting nets shall be strong enough to withstand the impact of the blasted material and shall be got approved by the Engineer. The Contractor shall comply with the requirements of the following Sub-Clauses besides the law of the land as applicable.
Sub-Clause 82.2 **Precautions for the use ofexplosives.**	The Contractor shall at all times take every possible precaution and shall comply with appropriate laws and regulations relating to the importation, handling, transportation, storage and use of explosives and shall, at all times when engaged in blasting operations, post sufficient warning flagmen, to the full satisfaction of the Engineer.
Sub-Clause 82.3 **Permission for use of explosives.**	The Contractor shall at all times make full liaison with and inform well in advance and obtain such permission as is required from all Government Authorities, public bodies and private parties whatsoever concerned or affected or likely to be concerned or affected by blasting operations.
Sub-Clause 82.4 **Storage of**	The Contractor shall pay all license fees and charges, which may be, required for storage of explosives or in respect of any other matter

explosives	whatsoever.
Sub-Clause 82.5 **Road closure duringBlasting Operations**	The road shall be closed for traffic during blasting and clearing operations for judiciously enough time till the road is fully cleared of all the blasted material. The blasting operations shall be fully coordinated with the Engineer, NHAI, Military, Police and Civil Authorities etc.
Sub-Clause 83.1 **Noise and Disturbance**	All Works shall be carried out without unreasonable noise and disturbance. The Contractor shall indemnify and keep indemnified the Employer from and against any liability for damages on account of noise or other disturbance created while or in carrying out the Works and from and against all claims, demands, proceedings, damages, costs, charges and expenses whatsoever in regard or in relation to such liability. The precautions for safeguarding the Environment shall be the responsibility of the Contractor and to be complied in accordance with Clause 111 of Technical Specifications of MORTH "SPECIFICATIONS FOR ROAD AND BRIDGE WORKS" (FIFTHREVISION 2013)
Sub-Clause **84.1Pollution.**	Subject and without prejudice to any other provision of the Contract and the law of the land and its obligations as applicable, the Contractor shall take all reasonable precautions. a) in connection with rivers, streams, waterways, drains, water- courses, lakes, reservoirs and the like to prevent: i) Silting; ii) Erosion of their beds or banks; and iii) Pollution of the water so as to affect adversely the quality or appearance thereof or cause injury or death to animal and plant life. b) in connection with underground water resources including percolating water to prevent: i) any interference with the supply to or obstruction from such sources; and ii) pollution of the water so as to affect adversely the quality thereof.
Clause 85.1 **Maintenance of Right of Way**	Throughout the period of the Contract, the Contractor shall at all times maintain public vehicular access along the right-of-way and from the right-of-way to all public and private access and land, as exists immediately prior to his commencement of the Works. The Contractor may on written request to the Engineer, (including a

	drawing, programme and specification), be given approval to operate: a) a road diversion suitable for the road traffic of suitable width, or b) traffic on a one way system using manual co-ordinated direction control or automatic traffic lights having a secure source of power. Applications for approval shall show every detail of the proposals including road construction (cross section including pavement and surfacing, and profile and drainage), road signing, communication between the ends of the controlled section lighting and proposed period of operation. One-way systems shall be provided with adequate sign postingand the Contractor shall limit delays to any traffic to the minimum and with the approval of the Engineer. The traveling public shall be notified by signs, of exceptional delay well in advance of the site of delay, as required by the Engineer. **(Note applicable to all relevant clauses above: It is clarified that BOQ Rate/ Rate or price of any item in the BOQ referred in the above clauses is the rate quoted by the bidder in its financial bid ~~given in the priced bill of quantities duly applying percentage above/below quoted in the Financial bid on the total estimated amount).~~**
Clause 85.2 **Video Recording**	During the execution of Works, the Contractor at its own cost shall provide to the Authority for every calendar quarter, a video recording, which will be compiled into a 3 (three)-hour compact disc or digital video disc, as the case may be, covering the status and progress of Works in that quarter. The video recording shall be provided to the Authority no later than 15 (fifteen) days after the close of each ~~quarter~~ **month** after the Appointed Date. In addition, the Contractor shall carry out such drone videography (on monthly basis) in the presence of Engineer. The video of last month and the current month running side by side shall be uploaded on Data Lake ~~(https://datalakeg.nhai.gov.in/nhai)~~ for easily capturing various developments during the month. Engineer shall ensure that the features and quality of drone video is acceptable and video is not distorted/tampered with. Engineer shall analyse these drone videos and give their comments in its digital MPRs covering interalia but not limited to the encumbrances/lands not available, sites of variation demands, progress of project, mobilisation of plant & equipment, mobilisation of camp sites, progress on rectification of NCRs etc along with the proposed action plan. ~~Project Director~~ **General Manager** of Employer shall crosscheck drone videos during the monthly physical inspections and notify the discrepancies noticed, if any, between

	drone video, on Engineer comments and ground reality. The discrepancies shall be examined and addressed through joint site inspections. As per the policy, the Network Survey Vehicle (NSV) survey needs to be carried out twice in a year on completed project. In addition, ~~PD~~ **GMs**/ ROs can also undertake need-based drone videography as and when required. As the drone videos/ reports will be permanent record on Data Lake and will be used as evidences during dispute resolution process before Arbitral Tribunals/ Courts including Supreme Court, the drone video shall be carried out carefully and correctly without distortions/ tampering by all parties concerned.

Annexure-AI

Salient features of some major Labour Laws applicable to establishments engaged in Construction of Civil Works

(i) Workmen Compensation Act, 1923

The Act provides for compensation in case of injury by accident arising out of and duringthe course of employment.

(ii) Payment of Gratuity Act, 1972

Gratuity is payable to an employee under the Act on satisfaction of certain conditions onseparation if an employee has completed 5 years service or more or on death at the rate of
15 days wages for every completed year of service. The Act is applicable to all establishments employing 10 or more employees.

(iii) Employees' PF and Miscellaneous Provisions Act, 1952

The Act provides for monthly contributions by the employer plus workers @10 % or 8.33 %. The benefits payable under the Act are:

(a) Pension or family pension on retirement or death as the case may be.

(b) Deposit linked insurance on the death in harness of the worker.

(c) Payment of PF accumulation on retirement/death etc.

(iv) Maternity Benefit Act, 1951

The Act provides for leave and some other benefits to women employees in case of confinement or miscarriage etc.

(v) Contract Labour (Regulation and Abolition) Act, 1970

The Act provides for certain welfare measures to be provided by the Contractor to contract labour and in case the Contractor fails to provide, the same are required to be provided bythe Principal Employer by Law. The principal employer is required to take Certificate of Registration and the Contractor is required to take a License from the designated Officer. The Act is applicable to the establishments or Contractor of principal employer if they employ 20 or more contract labour.

(vi) Minimum Wages Act, 1948

The employer is supposed to pay not less than the Minimum Wages fixed by appropriate Government as per provisions of the Act if the employment is a scheduled employment. Construction of Buildings, Roads, Runways are scheduled employment.

(vii) Payment of Wages Act, 1936

It lays down as to by what date the wages are to be paid, when it will be paid and what deductions can be made from the wages of the workers.

(viii) Equal Remuneration Act, 1979

The Act provides for payment of equal wages for work of equal nature to Male and Female workers and not for making discrimination against Female employees in the matters of transfers, training and promotions etc.

(ix) Payment of Bonus Act, 1965

The Act is applicable to all establishments employing 20 or more workmen. The Act provides for payments of annual bonus subject to a minimum of 8.33 % of wages and

maximum of 20 % of wages to employees drawing Rs. 3,500/- per month or less. The bonus to be paid to employees getting Rs. 2,500/- per month or above up to Rs.3,500/- per month shall be worked out by taking wages as Rs.2,500/- per month only. The Act does not apply to certain establishments. The newly set up establishments are exempted for five years in certain circumstances. Some of the State Governments have reduced the employment size from 20 to 10 for the purpose of applicability of the Act.

(x) Industrial Disputes Act, 1947

The Act lays down the machinery and procedure for resolution of industrial disputes, in what situations a strike or lock-out becomes illegal and what are the requirements for laying off or retrenching the employees or closing down the establishment.

(xi) Industrial Employment (Standing Orders) Act, 1946

It is applicable to all establishments employing 100 or more workmen (employment size reduced by some of the States and Central Government to 50). The Act provides for laying down rules governing the conditions of employment by the employer on matters provided inthe Act and get the same certified by the designated Authority.

(xii) Trade Unions Act, 1926

The Act lays down the procedure for registration of trade unions of workmen and employees. The trade unions registered under the Act have been given certain immunities from civil and criminal liabilities.

(xiii) Child Labour (Prohibition and Regulation) Act, 1986

The Act prohibits employment of children below 14 years of age in certain occupations and processes and provides for regulation of employment of children in all other occupations and processes. Employment of child labour is prohibited in Building and Construction Industry.

(xiv) Inter-State Migrant Workmen's (Regulation of Employment and Conditions of Service) Act,1979

The Act is applicable to an establishment which employs 5 or more inter-state migrant workmen through an intermediary (who has recruited workmen in one state for employment in the establishment situated in another state). The inter-state migrant workmen, in an establishment to which this Act becomes applicable, are required to be provided certain facilities such as housing, medical aid, traveling expenses from home upto the establishmentand back, etc

(xv) The Building and Other Construction Workers (Regulation of Employment and Conditions of Service) Act, 1996 and the Cess Act of 1996

All the establishments who carry on any building or other construction work and employs 10 or more workers are covered under this Act. All such establishments are required to pay Cess at rate not exceeding 2% of the cost of construction as may be notified by the Government. The employer of the establishment is required to provide safety measures at the Building or Construction work and other welfare measures, such as Canteens, First-aid facilities, Ambulance, Housing accommodation for Workers near the workplace etc. The employer to whom the Act applies has to obtain a registration certificate from the Registering Officer appointed by the Government.

(xvi) The Factories Act, 1948

The Act lays down the procedure for approval of plans before setting up a factory, health and safety provisions, welfare provisions, working hours, annual earned leave and rendering information regarding accidents or dangerous occurrences to designated authorities. It is applicable to premises employing 10 persons or more with aid of power

or 20 or more personswithout the aid of power engaged in manufacturing process.

Annexure-AII

Safety & Welfare Provisions for labour to be employed by the Contractor

All necessary personal safety equipment as considered adequate by the Engineer shall be available for use of persons employed on the Site and maintained in a condition suitable for immediate use; and the Contractor shall take adequate steps to ensure proper use of such equipment by those concerned.

1. Safety Provisions:

The Contractor shall comply with all the precautions as required for the safety of the workmen.

(i) All workmen at site shall be provided with safety helmets and yellow/orange jackets. Workmen required on site during night hours shall be provided with fluorescent yellow jackets with reflective lopes.

(ii) Workers employed on mixing asphaltic materials, cement, lime mortars, concrete etc. shall be provided with protective footwear, protective goggles.

(iii) Those engaged in handling any material, which is injurious to the eyes, shall be provided with protective goggles.

(iv) Those engaged in welding works shall be provided with welder's protective eye-shield.

(v) Stone breakers shall be provided with protective goggles and protective clothing and seated at sufficiently safe intervals.

(vi) Suitable scaffolds shall be provided for workmen for all work that cannot safely be done from the ground, or from solid construction except for such short period work as can be done safely from ladders. When a ladder is used, an extra labourer shall be engaged for holding the ladder and if the ladder is used for carrying materials as well, suitable foot-holds and hand-holds shall be provided on the ladder, which shall be given an inclination not steeper than 1/4 to 1.

(vii) Scaffolding or staging more than 3.25 metres above the ground or floor, swung or suspended from an overhead support or erected with stationary support, shall have a guard rail properly attached, bolted, braced and otherwise secured at least 1 metre high above the floor or platform of such scaffolding or staging and extending along the entire length of the outside and ends thereof with only such openings as may be necessary for the delivery of materials. Such scaffolding or staging shall be so fastened as to prevent it from swaying from the support or structure.

(viii) Working platforms, gangways, and stairways shall be so constructed that they do not sag unduly or unequally, and if the height of any platform or gangway or stairway is more than 3.25 metres above ground level or floor level, it shall have closely spaced boards, have adequate width and be suitably provided with guard rails as described in (ii) above.

(ix) Every opening in the floor of a structure or in a working platform shall be provided with suitable means to prevent fall of persons or materials by providing suitable fencing or railing with a minimum height of one metre.

(x) Safe means of access and egress shall be provided to all working platforms and other working places. Every ladder shall be securely fixed. No portable single ladder shall be over 9 metres in length. The width between side rails in a rung ladder shall in no case be less than 30 cm for ladders up to and including 3 metres in length. For longer

ladders the width shall be increased at least 6 mm for each additional 30 cm of length. Spacing of steps shall be uniform and shall not exceed 30 cm.

(xi) Adequate precautions shall be taken to prevent danger from electrical equipment. No materials on any of the sites shall be so stacked or placed as to cause danger or inconvenience to any person or the public. The Contractor shall provide all necessary fencing and lights to protect the public from accidents and shall be bound to bear the expenses of defending every suit, action or other proceedings at law that may be brought by any person for injury sustained owing to neglect of the above precautions and to pay any damages and costs which may be awarded in any such suit, action or proceedings to any such person or which may with the consent of the Contractor be paid to compromise any claim by any such person.

(xii) Excavation and Trenching: All trenches, 1.5 metres or more in depth, shall at all times be supplied with at least one ladder for each 20 metres in length or fraction thereof. Ladders shall be extended from the bottom of the trench to at least 1 metre above the surface of the ground. The sides of a trench, which is 1.5 met res or more in depth shall be stepped back to provide a suitable slope, or be securely held by timber bracing so as to avoid the danger of side collapse. Excavated material shall not be placed within 1.5 metres of the edge of any trench or half the depth of the trench, whichever is more. Excavation shall be made from the top to the bottom. Under no circumstances shall undermining or undercutting be done.

(xiii) When workers are employed in sewers and manholes, which are in use, the Contractor shall ensure that manhole covers are open and manholes are ventilated at least for an hour before workers are allowed to go into them. Manholes so open shall be cordoned off with suitable railing and provide warning signals or boards to prevent accidents to the public.

(xiv) Demolition: Before any demolition work is commenced and also during the process of the work:

a) All roads and open areas adjacent to the work site shall either be closed or suitably protected.

b) No electric cable or apparatus, which is liable to be a source of danger other than a cable or apparatus used by operators, shall remain electrically charged:

c) All practical steps shall be taken to prevent danger to persons employed by the Employer, from risk of fire or explosion, or flooding. No floor, roof or other part of a building shall be so overloaded with debris or materials as to render it unsafe.

(xv) When work is performed near any place where there is risk of drowning all necessary equipment shall be provided and kept ready for use and all necessary steps taken for prompt first aid treatment of all injuries likely to be sustained during the course of the work.

(xvi) Use of hoisting machines and tackle including their attachments, anchorage and supports shall conform to the following:

(a) These shall be of good mechanical construction, sound material and adequate strength and free from patent defects and shall be kept in good working order be regularly inspected and properly maintained.

(b) Every rope used in hoisting or lowering materials or as a means of suspension shall be of durable quality and adequate strength, and free from defects.

(c) For every hoisting machine and every chain hook, shackle, swivel andpulley block used in hoisting, lowering or as means of suspension, safe working load shall be ascertained by adequate means. Every hoisting

machine and all gear referred to above shall be plainly marked with safe working load. In case of a hoisting machine or a variable safe working load, each safe working load and conditions under which it is applicable shall be clearly indicated. No part of any machine or any gear referred to in the paragraph above shall be loaded beyond safe working load except for the purpose of testing

(xvii) Motors, gearing, transmission, electric wiring and other dangerous parts of hoisting appliances shall be provided with efficient safeguards; hoisting appliances shall be provided with such means as will reduce the risk of accident during descent of load to the minimum. Adequate precautions shall be taken to reduce to the minimum risk of any part of a suspended load becoming accidentally displaced. When workers are employed on electrical installations which are already energised, insulating mats, working apparel such as gloves, sleeves and boots, as may be necessary, shall be provided. Workers shall not wear any rings, watches and carry keys or other material which are good conductors of electricity.

(xviii) All scaffolds, ladders and other safety devices mentioned or described herein shall be maintained in a safe condition and no scaffold, ladder or equipment shall be altered or removed while it is in use. Adequate washing facilities shall be provided at or near places of work.

(xix) These safety provisions shall be brought to the notice of all concerned by displaying on a notice board at a prominent place at the work location. Persons responsible for ensuring compliance with the Safety Code shall be named therein by the Contractor.

(xx) To ensure effective enforcement of the rules and regulations relating to safety precautions, arrangements made by the Contractor shall be open to inspection by the Engineer or his Representative.

(xxi) Notwithstanding anything contained in condition (i) to (xv) above, the Contractor shall remain liable to comply with the provisions of all acts, rules, regulations and bylaws for the time being in force in India and applicable in this matter.

The Contractor shall be responsible for observance, by his sub-contractors, of the foregoing provisions.

2. <u>Labour Welfare Provisions</u>:

(i) First Aid:

At every workplace, there shall be maintained in a readily accessible place first aid appliances including an adequate supply of sterilised dressings and sterilised cotton wool as prescribed in the Factory Rules of the State in which the work is carried on. The appliances shall be kept in good order and, in large work places, they shall be placed under the charge of a responsible person who shall be readily available during working hours.

(ii) Accommodation for Labour:

The Contractor shall during the progress of the work provide, erect and maintain necessary temporary living accommodation and ancillary facilities for labour at his own expense to standards and scales approved by the Engineer.

(iii) Drinking Water:

In every workplace, there shall be provided and maintained at suitable places easily accessible to labour, a sufficient supply of cold water fit for drinking.

Where drinking water is obtained from an intermittent public water supply

each workplace shall be provided with storage tanks where drinking water shall be stored.

Every water supply storage shall be at a distance of not less than 15 metres from any latrine, drain or other source of pollution. Where water has to be drawn fromman existing well, which is within such proximity of any latrine, drain or any othersource of pollution, the well shall be properly chlorinated before water is drawn from it for drinking. All such wells shall be entirely closed in and be provided with a trap door, which shall be dust proof and waterproof.

A reliable pump shall be fitted to each covered well. The trap door shall be kept locked and opened only for cleaning or inspection, which shall be done at least once a month.

(iv) Washing and Bathing Places:

Adequate washing and bathing places shall be provided separately for men and women. Such places shall be kept in clean and drained condition.

(v) Scale of Accommodation in Latrines and Urinals:

There shall be provided within the precincts of every workplace, latrines and urinals in an accessible place, and the accommodation, separately for each for these, shall not be less than at the following scale:

	No. of Seats
(a) Where number of persons does not exceed 50	2
(b) Where number of persons exceed 50 but does not exceed 100	3
(c) For additional persons per 100 or part thereof	3

In particular cases, the Engineer shall have the power to increase the requirement, wherever necessary.

(vi) Latrines and Urinals:

Except in workplaces provided with water-flushed latrines connected with a water borne sewage system, all latrines shall be provided with dry-earth system (receptacles) which shall be cleaned at least four times daily and at least twice during working hours and kept in a strictly sanitary condition. Receptacles shall be tarred inside and outside at least once a year.

If women are employed, separate latrines and urinals, screened from those for men and marked in the vernacular in conspicuous letters "For women only", shall be provided. Those for men shall be similarly marked "For men only". A poster showing the figure of a man and a woman shall also be exhibited at the entrance to latrines for each sex. There shall be adequate supply of water, closeto latrines and urinals.

(vii) Construction of Latrines:

Inside walls shall be constructed of masonry or other non-absorbent material and shall be cement- washed inside and outside at least once a year. The dates of cement washing shall be noted in a register maintained for the purpose and kept available for inspection. Latrines shall have at least a thatched roof.

(viii) Disposal of Excreta:

Unless otherwise arranged for by the local sanitary authority, arrangement for proper disposal of excreta by incineration at the workplace shall be made by means of a suitable incinerator approved by the local medical health and

municipal or cantonment authorities. Alternatively, excreta may be disposed of by putting a layer of night soils at the bottom of a pucca tank prepared for the purpose and covering it with a 15 cm layer of waste or refuse and then coveringit with a layer of earth for a fortnight (when it will turn into manure).

The Contractor shall, at his own expense, carry out all instructions issued to him by the Engineer to effect proper disposal of soil and other conservancy work in respect of Contractor's work-purpose or employees on the site. The Contractor shall be responsible for payment of any charges, which may be levied by municipal or cantonment authority for execution of such work on his behalf.

(ix) Provisions of shelters during rest:

At every workplace, there shall be provided, free of cost, four suitable sheds, twofor meals and two others for rest, separately for use of men and women labour. The height of each shelter shall not be less than 3 metres from floor level to lowest part of roof. Sheds shall be kept clean and the space provided shall be on the basis of at least 0.5 sq.m. per head.

(x) Crèches:

At a place where women are ordinarily employed, there shall be provided at leastone hut for use of children under the age of 6 years belonging to such women. Huts shall not be constructed to a standard lower than that of thatched roof, mud floor and wall with wooden planks spread over mud floor and covered with matting.

Huts shall be provided with suitable and sufficient openings, for light and ventilation. There shall be adequate provision of sweepers to keep the places clean. There shall be a maidservant in attendance. Sanitary utensils shall be provided to the satisfaction of local medical, health a municipal or cantonment authorities. Use of huts shall be restricted to children, their attendants and mothers of children.

(xi) Canteen:

A cooked food canteen on a moderate scale shall be provided for the benefit of workers wherever it is considered necessary.

(xii) Planning, siting and erection of the above mentioned structures shall be approved by the Engineer or his Representative and the whole of such temporary accommodation shall at all times during the progress of the Works be kept tidy and in a clean and sanitary condition to the satisfaction of the Engineer or his Representative and at the Contractor's expense. The Contractor shall conform generally to sanitary requirements of local medical, health and municipal or cantonment authorities and at all times adopt such precautions as may be necessary to prevent soil pollution of the Site.

On completion of the Works, the whole of such temporary structures shall

be cleared away, all rubbish burnt, excreta or other disposal pits or trenches filled in and effectively sealed off and the whole of the site left clean and tidy, at the Contractor's expense, to the entire satisfaction of the Engineer.

(xiii) Anti-malarial precautions:

The Contractor shall, at his own expense, conform to all anti malarial instructions given to him by the Engineer, including filling up any borrow pits which may have been dug by him.

(xiv) **Awareness and Education of HIV/AIDS**

The contractor shall provide/carryout HIV/AIDS awareness and training programme to its labour and management, at least twice per year during the construction period.

(xv) Child Labour Prohibition

The contractor shall not employ Child Labour for any works or in any manner under the Contract at any time. In the event that the Contractor uses child labour,the Employer shall terminate the Contract.

(xvi) Amendments:

The Employer may, from time to time, add to, or amend these Rules and issue such directions as it may be considered necessary for the proper implementation of these Rules or for the purpose of removing any difficulty, which may arise in the administration thereof.

Annexure-AIII

Procedure for Dispute Resolution Board

(see Clause 67 of the Conditions of Particular Application)

The parties to the Contract Agreement mutually agree as follows:

1) The Board shall comprise of three Members having experience in the field of construction or have been involved in the Works related to construction and with the interpretation of contractual documents. One Member shall be selected by each of the Authority and the Contractor from the list maintained by NHAI hosted on its website (www.nhai.gov.in). In the event the parties fail to select the member within 28 days of the date of the signing of Contract Agreement, in that eventuality, upon the request of either or both parties such Member shall be selected by SAROD within 14 days. The third Member shall be selected by the other two members from the same list. If the two Members selected by or on behalf of the parties fail to select the third Member within 14 days after the later of their selections, then upon the request of either or both parties such third Member shall be selected by SAROD within 14 days. The third Member shall serve as Chairman of the Board.

2) The Board shall be constituted when each of the three Board Members has signed a Board Member's declaration of Acceptance as required by the DRB's rules and procedures (which, along with the declaration of acceptance form, are attached herewith).

3) In the event of death, disability, or resignation of any Member, such Member shall be replaced in the same manner as the Member being replaced was selected. If for any other reason, a Member fails or is unable to serve, the Chairman (or failing the action of the Chairman then either of the other Members) shall inform the Parties and such non-serving Member shall be replaced in the same manner as the Member being replaced was selected. Any replacement made by the parties shall be completed within 28 days after the event giving rise to the vacancy on the Board, failing which the replacement shall be made by SAROD in the same manner as described above. Replacement shall be considered complete when the new Member signs the Board Member's Declaration of Acceptance. Throughout any replacement process, the Members not being replaced shall continue to serve and the Board shall continue to function and its activities shall have the same force and effect as if the vacancy had not occurred, provided, however, that the Board shall not conduct a hearing nor issue a decision until the replacement is completed

4) If either the Authority or the Contractor is dissatisfied with any decision of the Board, and/or if the Board fails to issue its decision within 56 days after receipt of all the pleadings (along with the supporting documents) of the parties by the Chairman of the Board or any extension mutually agreed upon by the Authority and the Contractor, in such a case, either the Authority or the Contractor may, within 28 days after his receipt of the decision, or within 28 days after the expiry of the said period, as the case may be, give notice to the other party, with a copy for information to the Authority Engineer, of his intention to refer the matter to the Conciliation Committee of Independent Experts (CCIE) of the Authority for Conciliation/amicable settlement.

5) It is mandatory to refer all the disputes to DRB before issuance of completion certificate and satisfactory completion of punch list items. No dispute shall be entertained after completion of aforementioned date.

6) If the Board has issued a decision to the Authority and the Contractor within the said 56 days or any extension mutually agreed upon by the Authority and the Contractor and no notice of intention to commence Conciliation by the Conciliation Committee of Independent Experts (CCIE) of the Authority for Conciliation/amicable settlement as to such dispute has been given by either the Authority or the Contractor within 28 days after the parties received such decision from the Board, the decision shall become final and binding upon the Authority and Contractor.

7) Whether or not it has become final and binding upon the Authority and the Contractor, a decision shall be admissible as evidence in any subsequent dispute resolution procedure, including any arbitration or litigation having any relation to the dispute to which the decision relates.

8) All decision of DRB which have become final and binding or till they have been reversed in subsequent conciliation/Arbitration process shall be implemented by the parties forthwith. Such implementation shall also include any relevant action of the Authority Engineer

9) If during the Contract Period, the Authority and the Contractor are of the opinion that the Disputes Resolution Board is not performing its functions properly, the Authority and the Contractor may together disband the Disputes Resolution Board and reconstitute it. In that case, a new board shall be selected in accordance with the provisions applying to the selection of the original Board as specified above, except that words "within 28 days after the signing of this Contract Agreement" shall be replaced by the words "within 28 days after the date on which the notice disbanding the original Board became effective".

10) The Authority and the Contractor shall jointly sign a notice specifying that the Board shall stand disbanded with effect from the date specified in the notice. The notice shall be posted by email to each Member of the Board. A Member shall be deemed to have received the e mail even if he refuses to have received the same.

11) All other terms and conditions of the original Contract Agreement shall remain unaltered/unaffected and the parties shall remain bound by terms and conditions as contained therein.

Attachment to Annexure-III

Disputes Resolution Board's Rules and Procedures

1. Except for providing the services required hereunder, the Board Members shall not give any advice to either party or to the Authority Engineer concerning conduct of the Works. The Board Members:

   (a). Shall have no financial interest in any party to the Contract Agreement, or the Authority Engineer, or a financial interest in the Contract, except for payment for services on the Board.

   (b). Shall have had no previous employment by, or financial ties to, any party to the Contract Agreement, or the Authority Engineer, except for fee-based consulting services/advisers on other projects, and/or be Retired Government Officers (not connected in whole or part with the project), all of which must be disclosed in writing to both parties prior to appointment to the Board.

   (c). Shall have disclosed in writing to both parties prior to appointment to the Board any and all recent or close professional or personal relationships with any director, officer, or employee of any party to the Contract Agreement, or the Authority Engineer, and any and all prior involvement in the project to which the Contract relates;

   (d). Shall not, while Board member, be employed whether as a consultant or adviser or otherwise by either party to the Contract Agreement, or the Authority Engineer, except as a Board Member, without the prior consent of the parties and the other Board Members,

   (e). Shall not, while a Board Member, engage in discussion or make any agreement with any party to the Contract Agreement, or with the Authority Engineer, regarding employment whether as a consultant or otherwise whether after the Contract is completed or after service as a Board Member is completed

   (f). Shall remain and be impartial and Independent of the parties and shall disclose in writing to the Authority, the Contractor and one another any fact or circumstance which might be such as to cause either the Authority or the Contractor to question the continued existence of the impartiality and independence required of Board Members; and

   (g). Shall be fluent in the language of the Contract.

2. Except for its participation in the Board's activities as provided in the Contract and in this Agreement none of the Authority, the Contractor, and or the Authority Engineer shall solicit advice or consultation from the Board or the Board Members on matters dealing with the conduct of the Works.

3. The Contractor shall:

   (a). Furnish to each Board member one copy of all documents which the Board may request including Contract Agreement, progress reports and other documents pertinent to the performance of the Contract Agreement.

(b). In cooperation with the Authority, coordinate the site visits of the Board, including conference facilities, and secretarial and copying service.

4. The Board shall begin its activities following the signing of a Board Member's Declaration of Acceptance by all three Board Members, and it shall terminate these activities as set forth below:

(a). The Board shall terminate its regular activities when either (i) issuance of completion certificate and completion of punch list items or (ii) the parties have terminated the Contract and when, in either case, the Board has communicated to the parties and the Authority Engineer its decision on all disputes previously referred to it.

(b). Once the Board has terminated its regular activities as provided by the previous paragraph, the Board shall remain available to process any dispute referred to it by either party. In case of such a referral, Board Members shall receive payments as provided in paragraphs 7(a) (ii), (iii) and (iv).

5. Board Members shall not assign or subcontract any of their work under these Rules and Procedures.

6. The Board Members are Independent and not employees or agents of either the Authority or the Contractor.

7. Payments to the Board Members for their services shall be governed by the following provisions:

(a). Each Board Member will receive payments as follows:

i. A retainer fee per calendar month as specified in the schedule of fee made part of this Schedule and its revision from time to time. This retainer fee shall be considered as payment in full for:

(A). Being available, on 7 days' notice, for all hearings, Site Visits, and other meetings of the Board.

(B). Being conversant with all project developments and maintaining relevant files.

(C). All offices and overhead expenses such as secretarial services, photocopying and office supplies (but not include telephone calls, faxes and telexes) incurred in connection with the duties as a Board Member

ii. A daily fee as specified in the schedule of fee in respect of fee for site visit & meeting, fee for meeting/ hearing not at site and extra charges for days (max. of 02 days for travel on each occasion) other than hearing/meeting days.

iii. Expenses, in addition to the above, all reasonable and necessary travel expenses (including economy class air fare, subsistence, and other direct travel expenses).

Receipts for all expenses in excess of Rs. 2000/- (Rupees Two Thousand only) shall be provided.

iv. Reimbursement of any taxes that may be levied on payments made to the Board Member pursuant to this paragraph 7.

(b). The retainer fee and other fees shall remain fixed for the period of each Board Member's term until revised by NHAI.

(c). Phasing out of monthly retainer fee. Beginning with the next month after the completion certificate (or, if there are more than one, the one issued last) has been issued, the Board members shall receive only one third of the monthly retainer fee till next one year. Beginning with the next month after the Board has terminated its regular activities pursuant to paragraph 4(a) above, the Board members shall no longer receive any monthly retainer fee.

(d). Payments to the Board Members shall be shared equally by the Authority and the Contractor. The concerned Project Implementation Unit (PIU) of Authority shall pay members' invoices within 30 calendar days after receipt of such invoices and shall invoice the Contractor for one-half of the amounts of such invoices. The Contractor shall pay such invoices within 30 days' time period after receipt of such invoices.

8. Board Site Visits:

(a). The Board shall visit the Site and meet the representatives of the Authority, the Contractor and the Authority Engineer at regular intervals, at times of critical construction events, at the written request of either party, and in any case not less than 6 times in any period of 18 months. The timing of Site visits shall be as agreed among the Authority, the Contractor and the Board, but failing agreement shall be fixed by the Board.

(b). Site visits shall include an informal discussion of the status of the construction of the Works. Site visits shall be attended by personnel from the Authority, the Contractor and the Authority Engineer

(c). At the conclusion of each Site visit, the Board shall prepare a report covering its activities during the visit and shall send copies to the parties and to the Authority Engineer.

9. Procedure for Dispute Referral to the Board:

(a). If either party objects to any action or inaction of the other party or the Authority Engineer, the objecting party may file a written Notice of Dispute to the other party with a copy to the Authority Engineer stating that it is given pursuant to the Agreement and state clearly and in details the basis of the dispute.

(b). The party receiving the Notice of Dispute will consider it and respond to it in writing within 14 days after receipt.

(c). This response shall be final and conclusive on the subject, unless a written appeal to the response is filed with the responding party within 10 days after receiving the response and call upon Authority Engineer to mediate and assist the parties in arriving an amicable settlement thereof. Both parties are encouraged to pursue the matter further to attempt to settle the dispute.

(d). If the Authority Engineer receiving the Notice of Dispute fails to provide a written response within 14 days after receipt of such Notice or failing mediation by Authority Engineer, either party may require such dispute to be referred to the Board, either party may refer the dispute to the Board by written Request to the Board. The Request for decision shall state clearly and in full detail the specific issues of the dispute (s) to be considered by Board and shall be addressed to the Chairman of the Board, with copies to the other Board Members, the other party, and the Authority Engineer, and it shall state that it is made pursuant to this Agreement.

(e). When a dispute is referred to the Board, and the Board is satisfied that the dispute requires the Board's assistance, the Board decide when to conduct a hearing on the dispute. The Board may request that written documentation and arguments from both parties be submitted to each Board Member before the hearing begins. The parties shall submit insofar as possible agreed statements of the relevant facts.

(f). During the hearing, the Contractor, the Authority, and the Authority Engineer shall each have ample opportunity to be heard and to offer evidence. The Board's decision for resolution of the dispute will be given in writing to the Authority, the Contractor and the Authority Engineer as soon as possible, and in any event not more than 56 days or any mutually extended period between the Authority and the Contractor. The time period of 56 days of issuance of DRB decision will reckon/start from the day of first hearing that begins after submission of complete pleadings (including supporting documents, if any) by the parties.

10. Conduct of Hearings:

(a). Normally hearings will be conducted at the Site, but any location that would be more convenient and still provide all required facilities and access to necessary documentation may be utilized by the Board. Private session of the Board may be held at any cost effective location convenient to the Board. Video recordings of all hearings shall invariably be made.

(b). The Authority, the Authority Engineer and the Contractor shall be given opportunity to have representatives at all hearings. Parties should restrain to bring any Advocate/Law Firm during DRB hearings.

(c). During the hearings, no Board Member shall express any opinion concerning the merit of the respective arguments of the parties.

(d). After the hearings are concluded, the Board shall meet privately to formulate its decision. The private meeting (s) of the Board shall not exceed 3 sittings. All Board deliberations

shall be conducted in private, with all Members' individual views kept strictly confidential. The Board's decisions, together with an explanation of its reasoning shall be submitted in writing to both parties and to the Authority Engineer. The decision shall be based on the pertinent Contract provisions, applicable laws and regulations and the facts and circumstances involved in the dispute.

(e). The Board shall make every effort to reach a unanimous decision. If this proves impossible the majority shall decide and the dissenting Member may prepare a written minority report together with an explanation of its reasoning for submission to both parties and to the Authority Engineer.

11. In all procedural matters, including the furnishing of written documents and arguments relating to disputes, site visits and conduct of hearings, the Board shall have full and the final authority. If a unanimous decision on any such matter proves impossible, the majority shall prevail.

12. After having been selected and where necessary approved each Board Member shall sign two copies of the following declaration and make one copy available each to the Authority and to the Contractor.

BOARD MEMBER'S DECLARATION OF ACCEPTANCE

WHEREAS

(a) A Contract (the Contract) for the *** [Name of the Project] on item rate (percentage) basis project has been signed on _____ *[fill in date]* between *National Highways Authority of India* (the Employer) and _____ (the Contractor).;

(b) The provisions of Agreement and Dispute Resolution Board's rules and procedure provided for establishment and operation of Dispute Resolution Board (DRB).

(c) the undersigned has been selected (and where required, approved) to serve as a Board Member on said Board;

NOW THEREFORE, the undersigned Board Member hereby declares as follows:

1. I accept the selection as a Board Member and agree to serve on the Board and to be bound by the provisions of Clause 67 of the Conditions of Particular Application of the Contract and Annex A to said Conditions.

2. With respect to paragraph 1 of said Annex A, I declare

   (a) that I have no financial interest of the kind referred to in subparagraph (a);

   (b) that I have had no previous employment nor financial ties of the kind referred to in subparagraph (b); and

   (c) that I have made to both parties any disclosures that may be required by sub-paragraphs (b) and (c).

3. I declare that I have ____ no. of Arbitrations (list enclosed) and ___ no. of DRBs (list enclosed) in progress and that I will give sufficient time for the current assignment.

BOARD MEMBER

_____

_____ *[insert name of Board Member]*

Date : _____"

Schedule of expenses and fees payable to the Member (s) of Dispute Resolution Board (DRB)

The fee and other expenses payable to the Members of DRB shall be as under:-

S. No.	**PARTICULAR**	**AMOUNT PAYABLE**
1.	Retainer-ship fee, secretarial assistance and incidental charges (telephone, fax, postage etc.)	Rs. 50,000/- per month for one package, Rs. 25,000/- per month for 2nd package, Rs. 15,000/- per month for 3rd package, and Rs. 10,000/- per month each for 4th, 5th and 6th package, (maximum of Rs. 1,20,000/- per month)
2. (i)	Fee for site visit or meetings at site	Rs. 25,000/- per day **maximum to Rs. 50,000/- irrespective to number of days of stay at site**
(ii)	Fee for meetings/hearings not at site	Rs. 10,000/- per day
3.	Traveling expenses	Economy class by air, AC first class by train and AC taxi own car by road (mileage allowance @ 24/- per km for travel by taxi/ own car)by road
4.	Lodging & Boarding	Rs. 15,000/- per day (Metro Cities); or Rs. 10,000/- per day (in other cities); or Rs. 5,000/- per day (own arrangement)
5.	Extra charges for days other than hearing/ meeting days (travel days maximum of 2 days on each occasion)	Rs. 5,000/- per day
6.	Local conveyance	Rs. 2,000/- per day

Notes:

(i) Lodging, boarding and travelling expenses will be allowed only for those members who are residing 100 kms away from the place of meeting.

(ii) Delhi, Mumbai, Chennai, Kolkata, Bangalore and Hyderabad shall be considered as Metro Cites.

(iii) The above schedule of fee and expenses shall be applicable on or after the date of issue of this circular.

(iv) The consent of the Contractor may be obtained on the above schedule before releasing the payment to the Member(s) as the expenses are to be shared equally by the parties.

Safety Code of Practice for working on slopes

1. The code is designed to promote the safety of all Department and Contract personnel while working on slopes at site where persons are at risk of falling by more than two meters.
2. No one may be allowed assess to the site unless authorized by the engineer or the contractor
3. No person may work unaccompanied unless they are on a very gentle slope (less than30degree slope. All persons must leave the slope together to take refreshments, meals etc.
4. All fragile slopes should be clearly marked off and personnel informed of the dangers.
5. Extreme care must be exercised on slopes during adverse weather conditions as wind, rain; fog and darkness create their own hazards inherent in slope work. The site in-charge must assess the conditions with care before allowing assess to the slopes. Only in emergencies may persons go on to the slopes in heavy rains or during hours of darkness. In such cases no person shall be allowed to go on the slopes unaccompanied.
6. All assess equipment, ropes and tackle must be regularly inspected and maintained in good condition.
7. Where persons could fall over the edge of a slope, temporary guard rails or ropes are to be installed where practicable. All persons exposed to a risk of falling must be provided with a secure and well anchored safety line. Such a rope must be of sufficient strength to provide them with safe arrest in the event of a fall.
8. Care must be taken to prevent tools and loose objects falling from the slopes. Loose articles should be raised or lowered in a safe manner. They should not be carried up or down ladders unless, in the case of small items, which may be carried in a suitable shoulder bag.
9. Any scaffolding that is used must be composed of good quality materials. Scaffolding must be of appropriate capacity and correctly erected by competent workmen.
10. Ladders must be in good condition and adequate for the job. Ladders must extend one meter beyond the landing point and must be on a firm base, correctly pitched and lashed as soon as possible.
11. If there is any potential hazard to personnel below where the slope work is taking place, adequate temporary warning notices, barriers and “look out” persons need to be employed. Where appropriate standards traffic warning and control measures must be taken.
12. Appropriate protective clothing shall be issued, including, where necessary, protective helmets and boots with steal toe caps and slip resistant soles.

Section VI

Technical Specification
Page 1 - 21

TECHNICAL SPECIFICATIONS

4.1 PREAMBLE:

The Technical Specifications contained herein shall be read in conjunction with the other Bidding Documents as specified.

4.2 GENERAL REQUIREMENTS

The Technical Specifications in accordance with which the entire work described hereinafter shall be executed and completed by the Contractor shall comprise of the following:

4.3 PART – I – GENERAL TECHNICAL SPECIFICATIONS

The General Technical Specifications shall be the "SPECIFICATIONS FOR ROAD AND BRIDGE WORKS" (FIFTH REVISION 2013) issued by the Ministry of Road Transport & Highways, Government of India and published by the Indian Roads Congress, along with any other addendum / corrigendum issued up to 30 days before the final date of submission of bid, henceforth with MORT&H specification and deemed to be bound into this document.

4.4 PART – II – SUPPLEMENTARY TECHNICAL SPECIFICATIONS

The Supplementary Technical Specifications shall comprise of various Amendments/Modifications/Additions to the "SPECIFICATIONS FOR ROAD AND BRIDGE WORKS" referred to in PART-I above and Additional Specifications for particular item of works not already covered in Part – I.

A particular clause or a part thereof in "SPECIFICATIONS FOR ROAD AND BRIDGE WORKS" (FIFTH REVISION 2013), referred in Part-I above, where Amended/Modified/Added upon and incorporated in Part-II, referred to above, the Amendment/ Modification/ Addition supersedes the relevant clause or part of the clause.

When an Amended/Modified/Added Clause supersedes a Clause or part thereof in the said Specifications, then any reference to the superseded clause shall be deemed to refer to the Amended/Modified/Added Clause or part thereof.

In so far Amended/Modified/Added Clause may come in conflict or be inconsistent with any of the provisions of the MOR&TH Specifications under reference, the Amended/Modified/Added clause and the additional specifications shall always prevail.

In the absence of any definite provisions on any particular issue in the aforesaid Specifications, reference may be made to the latest codes and specifications of IRC and BIS in that order, Where even these are silent, the construction and completion of the works shall conform to sound engineering practice as approved by the Engineer and, in case of any dispute arising out of the interpretation of the above, the decision of the Engineer shall be final and binding on the Contractor.

4.5 TESTS

The Authority/Client shall get the 3rd party quality audit of bituminous work from any nearest reputed government technical institute for its gradation, bitumen content, thickness and of cement concrete for its strength (compressive and flexural), workability, the riding quality tests, rutting tests, resilient modulus tests, and other tests as per requirement of Authority/engineer for every km and construction agency shall bear the cost of these tests.

4.6 Maintenance Procedures

The Contractor shall repair/rectification of defects and deficiencies and rectify the Defect and deficiencies within 30 days as notified by Engineer / NHIDCL.

4.7 Project Specific Provision

As the Project Road is a running highway in operation, therefore construction has to be done after approved traffic diversion plan and newly constructed pavement layer has to be opened to traffic after proper curing time only as per direction of Engineer in charge / Authority. All the cost related to the Traffic Diversion shall be borne by the Contractor and NHIDCL shall not pay any extra cost.

PART - II

7.3 AMENDMENTS/MODIFICATIONS/ADDITIONS TO EXISTING CLAUSES OF GENERAL TECHNICAL SPECIFICATIONS (PART- I).

SECTION 100 – GENERAL

Clause 102 Definitions:

The following abbreviation shall be added in this Clause: "MOST" – Ministry of Surface Transport, Govt. of India (Now Ministry of Road Transport and Highways) "NHIDCL" – National Highways & Infrastructure Development Corporation Ltd.

Clause 106 Construction Equipment:

Clause 106 (a) Add the following sentence. "The trial run is to be carried out laying the relevant pavement material and it is not to be part of the permanent works. The trial is to be carried out on prior approval of equipment by Engineer-in-Charge."

Add Sr. No. (g)

"The Contractor shall furnish to the engineer the detailed technical literature and other relevant documents regarding the performance of plant/equipment for approval prior to its purchase

or mobilization on site."

Clause 107 Contract Drawings:

Clause 107.3 Deleted this Sub-Clause entirely. Clause 108.4 The clause shall be read as follows:

"Identification of quarry sites and borrow areas shall be the responsibility of the Contractor. Materials procured from quarry sites and borrow areas identified by the Contractor and to be used in Works must comply with the requirements of quality as stipulated in the Technical Specifications for particular item of work".

Clause 109 Setting Out:

Clause 109.10 Add new sub-clause

"Before carrying out any survey work the Contractor shall submit to the Engineer for the approval a programme and methodology for the calibration of all optical and electronic survey equipment to be used on site during construction of the works. The Contractor will maintain calibration records for all such equipment in his site office, available at all times for inspection by the Engineer.

Clause 110 Public Utilities:

Clause 110.1 Revise the clause as under:

Existing services like water pipes, sewers, oil pipelines, cables, gas ducts etc. Owned by various authorities including Public Undertaking an Local Authorities shall be checked and located by the Contractor prior to commencement of work.

Clause 110.2 Revise the clause as under:

The Contractor's programme must take into account the period of notice and duration of diversionary works of each body as existing at site. The Contractor must also allow for any effect of these services and alterations upon the Works and for arranging regular meetings with the various bodies at the commencement of the Contract and throughout the period of the Works in order to maintain the required co-ordination. During the period of the Works, the contractor shall have no objection if the public utility bodies and their decisions in the execution of their proposal in terms of programme and construction. Provided that, in the opinion of the Engineer, the Contractor has received reasonable notice thereof before the relevant alterations are put in hand.

Clause 111 Precautions for Safeguarding the Environment: Clause 111.1 General

Add the following after the first paragraph:

The Contractor shall preserve existing trees, plants and other vegetation that are to remain within or adjacent to the works and shall use every precaution necessary to prevent damage or injury thereto. On completion of the Works, all areas disturbed by the Contractor's construction activities shall be restored in their original condition, or as may be acceptable to the Engineer. The cost of this work shall be deemed to be included in the rates generally.

Clause 111.4 Add the following sentence:

"The Contractor is to ensure that there is good drainage at all construction areas, to avoid creation of stagnant water bodies especially in urban/industrial areas, including water in old water bodies."

Clause 111.5 Pollution from Hot Mix Plants and Batching Plants

Add the following paragraph at the end of this Sub-clause.

The H.M.P. should be sited at least 500m away from the nearest habitation.

The H.M.P. shall be fitted with a dust extraction unit in order that the exhaust gases comply with the requirements of the relevant current emission control legislation. "All operations at plants shall be undertaken in accordance with all current rules and regulations protecting the environment."

Clause 111.6 Substances Hazardous to Health

Add the following after the first paragraph as follows:

"The use of any herbicide or other toxic chemical shall be strictly in accordance with the manufacturer's instructions. The Engineer shall be given at least 6 working day's notice of the proposed use of any herbicide or toxic chemical.

A register of all herbicides and other toxic chemicals delivered to the site, shall be kept and maintained up to date by the contractor. The register shall include a name physical properties and characteristics, chemical ingredients, health and safety hazard information, safe handling and storage procedures, and emergency and first aid procedures for the product."

Clause 111.9 Add the following sentence at the end of the para.

Vehicles delivering materials to the site shall be covered to avoid spillage of materials on public roads.

Clause 111.12 After the last sentence add the following:

"The costs of compliance with Clause 111 shall be deemed to be included in the rates for items included in the Bill of Quantities."

Refer to Clause 114.2 (xv) of MOST Specification.

Clause 111.13 Add new Sub-Clause:

"The Discharge Standards promulgated under the Environment Protection Act, 1986 shall be adhered to strictly. All waste arising from the project is to be disposed of in a manner which is acceptable to the State Pollution Control Board and the Engineer."

All vehicles and machinery employed in the execution of the works shall be regularly maintained to ensure that pollutant emission levels comply with the relevant requirements of current pollution control legislation. During routine servicing operations, the effectiveness of exhaust silencers must be checked and if found to be defective must be replaced. Notwithstanding this requirement, noise levels from any item of plant must comply with the relevant legislation for levels of sound emission. Non compliant plant is to be removed from site.

Vehicle maintenance and refueling shall be carried out in such a fashion that spillage of fuels and lubricants do not contaminate the ground or nearby watercourse. An "oil interceptor" shall be provided for wash down and refueling areas. Fuel storage shall in proper bounded areas. All spilt and collected petroleum products shall be disposed of in accordance with the relevant legislation.

Clause 111.14 Add the following New Sub-Clause:

All temporary accommodation must be constructed and maintained in such a fashion that uncontaminated water is available for drinking, cooking and washing. The sewage system for the camp must be properly designed, built and operated so that no health hazard occurs and no pollution to the air, ground or adjacent watercourses take place compliance with relevant legislation must be strictly adhered to Garbage bins must be provided in the camp and regularly emptied and the garbage disposed of in a hygienic manner. Construction camps are to be sited away from vulnerable people and adequate health care is to be provided for the work force.

Clause 111.15 Add the following New Sub-Clause:

All works are to be carried out in such a fashion that the damage or disruption to the flora and fauna is reduced to a minimum wherever possible. Trees or shrubs will only be felled or removed that impinge directly on the permanent works or necessary temporary works, after seeking approval of the Engineer.

Clause 112 Arrangement For Traffic During Construction:

Clause 112.1 General

Delete the last sentence and add the following:

"The Contractor shall submit, for the Engineer's approval, Traffic Control Plan 5 days prior to commencement of the temporary / permanent works."

The plan shall include:

i. Typical drawings for temporary diversions in accordance with Clause 112.3

ii. Typical details of arrangements for construction under traffic including details of traffic arrangement after the cessation of work each day. Special consideration shall be given in the preparation of the Traffic Control Plan to the safety of pedestrians and workers at night. Temporary diversions will be constructed only with the approval of the Engineer.

Clause 112.2 Passage of Traffic along a part of the Existing Carriage way under improvement:

Delete this clause replace as follows:

"For strengthening of existing carriage way, where part of the existing carriage way is proposed to be used for passage of traffic & hard holder are not available then, treated shoulders shall be provided on the side on which work is not in progress. If the existing shoulder width less than

1.5m the same shall be extended up to 1.5m for earth work duly compacted. The top 15.0cm or as directed by the engineer including extended shoulder of 1.5m width shall be filled up by granular sub base material duly bounded with binding material and compacted. The sub base material shall conform to MOST specification Clause 401, the work of excavation and filling of granular sub-base material so carried out shall be paid under relevant items of bill of quantities. The contractor shall maintain the bypass/diversion during the period of construction by way of watering, compacting, and making good loss of sub-base material after filling up of the rutting/depression etc. by additional quantity of granular sub base material. The items operations like maintenance, making good the loss of material, watering, compacting, leveling and dressing along with additional quantity of sub-base material shall be considered as incidental to the work and no extra payment will be ade for these operations. The continuous length in which such works shall be carried out would be within a range of 200 to 500m

at a place.

Clause 112.6 Measurements for Payments and Rate

Add "and no extra payment will be made except the treatment of shoulders for earth work and granular sub-base as per Clause 112.2 above." At the end of first paragraph.

Clause 112.7 Side Roads and Property Accesses

Add new sub Clause:

"At all times, the Contractor shall provide safe and convenient passage for vehicles pedestrians and livestock to and from side roads and property accesses connecting to the roadway. Work which affects the use of side roads and existing accesses shall not be undertaken without providing adequate prior provisions to the satisfaction of the Engineer."

Clause 112.8 Plant and Equipment Add new sub Clause:

"During the day, plant and equipment working in a position adjacent to traffic and having a projection beyond the normal width of the item, for example, a grader blade shall have a fluorescent red marker attached to the outer end of the projection. During poor light conditions an additional traffic controller with an illuminated red marker shall direct traffic around such plant and equipment. At night, all plant items and similar obstructions shall be removed from the normal path of vehicles, to provide a lateral clearance of at least 6m where practicable, with a minimum clearance of 1.2m. Plant and equipment, within 6m of the normal path of vehicles, shall be lit by not less than two yellow steady lamps suspended vertically from the point of the obstruction nearest to a traffic lane, and one yellow steady lamps at each end of the obstruction on the side farthest away from the traffic lane."

Clause 113 General Rules For the Measurement of Works for Payment:

Clause 113.2 Measurements for Lead of Materials

Delete this Clause and replace with:

"The rates in the Bill of Quantities are deemed to include the costs of haulage from source of supply to the site for all materials required for the Works."

Clause 114 Scope of rates for different items of work:

Add to Clause 114.2 (xvii). Cost of all provisions for executing the work safely including all protective clothing, barriers, earplugs etc.

Clause 115 Methodology and Sequence of Work:

Substitute "28 days" for "30 days" in the 2nd line.

Clause 121 Field Laboratory:

Clause 121.1 Scope

Delete this Clause and replace with:

"The work under this Clause covers the provision and maintenance of a fully equipped laboratory." The equipment in the laboratory shall be as decided by Engineer, keeping in view of item of works prescribed in BOQ.

Clause 121.2 Description

Delete this Clause and replace with:

"The Contractor shall construct a fully furnished and equipped field laboratory to the satisfaction of the Engineer. The laboratory will be located at a site approved by the Engineer and must be of adequate size to perform all the tests required under the contract including sufficient light, electric and water supply. The Contractor shall provide working drawings incorporating all the services based on the information given in the changes for the approval of the Engineer prior to commencement of construction. An office must be provided in the laboratory for the exclusive use of the Engineer's, Materials Engineer, adequate toilet and washing facilities must be provided. The contractor shall provide the field laboratory within one month from the date of the commencement of the work. Prior to this, contractor must make suitable alternative arrangements for the testing of materials, which are acceptable to the Engineer.

Clause 121.3 Laboratory Equipment shall be provided as prescribed by the Engineer relevant to items of work in BOQ.

Clause 121.3.2 For soils and aggregates

Delete item no. (xi) and (xii)

Clause 121.3.5 Add New Sub-Clause:

For Control of Profile and Surface Evenness

- *i) Theodolite 2 sets*
- *ii) Precision automatic level 2 sets*
- *iii) Precision staff 4 sets*
- *iv) Camber templates 2 lane*
- *a) Crown type cross-section 4 sets*
- *b) Straight run cross-section 4 sets*

Steel Tape

- *a) 3 m long 4 sets*
- *b) 5 m long 4 sets*
- *c) 10 m long 4 sets*
- *d) 20 m long 4 sets*

e) 30 m long 4 sets

Clause 121.3.6 Add New Sub-Clause:

In addition clause 121.3 any equipment which is not mentioned in this clause but which is necessary for the work for complying with the provisions of the contract and Section 900 of MOST specifications or as required by the engineer shall be provided by the contractor. No extra payment shall be made to the contractor and it will be considered as incidental to the work.

Clause 121.6 Delete this Sub-Clause.

Clause 121.7 Substitute this Sub-Clause by the following:

"There is no separate item in the Bill of Quantities for establishing and maintenance of the laboratory and supply, erection maintenance of equipment and also running cost of testing. The rates quoted by the Contractor shall be deemed to cover the cost of all these items."

Clause 126: Supply of Video Cassettes

126.1 Description

The work consists of taking video films of important activities of the work as directed by the Engineer during the currency of the project and editing them and converting them to a CD (master CD+ 4 copies) film of playing time not less than 60 minutes and upto 180 minutes as directed by the Engineer. It shall contain narration of the activities in English by competent narrator. The editing of the film and the script for narration shall be as approved by the Engineer. The CD shall be acceptable quality and the film shall be capable of producing colour pictures.

126.2 Measurement for Payment & Rates

No separate payment shall be made and the work shall be treated as incidental.

SECTION 300 – EARTHWORK EROSION CONTROL AND DRAINAGE

Clause 301 Excavation for Roadway and Drains Clause 301.3.3 Excavation – General

Delete the last two sentences of last paragraph. And add, "The earthwork shall be carried out as per the sequences stated in this contract or as directed by engineer-in-charge".

Clause 301.3.12 Back-filling

After the last sentence add the following:

"Density requirements for back filling shall be in accordance with Table 300-2" of MOST.

Clause 301.9 Rates

Clause 301.9.2 This Clause is replaced as follows:

"The contract unit rate for loosening and re-compacting at sub- grade level shall include full compensation for loosening to the specified depth, removing the loosened soil outside the roadway wherever considered necessary, rolling the surface below, breaking the clods, spreading the excavated soil layers, watering where necessary and compacting to the requirements."

Clause 304 Excavation for Structures:

Clause 304.3.7 Back filling

Add second paragraph as under:

"The working space between the structure and the excavation shall be cleared out completely of all construction materials and loose earth that fallen into the excavation during construction. The excavation shall be pumped dry and all saturated and soft earth removed prior to being inspected by the Engineer who will give his permission for the placement of any fill material, provided the space has been properly prepared. Compaction will only be carried out with mechanical compactors of sufficient capacity to ensure correct compaction of the back fill material. The fill is to be brought up in layers not greater than 150 mm. Mass filling of structures with machines will not be permitted and contractors should make allowance in their rates for the methodology Described above."

Clause 305 Embankment Construction:

Clause 305.2 Material and General Requirements

Clause 305.2.1 Physical Requirements

Clause 305.2.1.2 Amend the first sentence of this Clause as under:

"Highly expansive soils such as Ch, MH or OH exhibiting marked swell and shrinkage properties („free swelling index" exceeding 50 per cent when tested as per IS 2720 – Part 40) shall not be used in construction of sub grade and embankment."

Clause 305.2.1.4 Delete the second and third sentence of Clause 305.2.1.4, i.e.,

"However, the Engineer may…….. Compacted layer thickness."

Clause 305.2.2.2 Borrow Materials

Paragraph 1 of this clause shall read as under:

"No borrow area shall be made available by the Employer for this work. The arrangement for the source of supply of the material for embankment and sub grade as well as compliance to the different environmental requirements in respect of excavation and borrow areas as stipulated, from time to time, by the Ministry of Environment and Forest, Government of India and the local bodies, as applicable shall be the sole responsibility of the Contractor."

Paragraph 8 of this Clause given below Table 300-2 shall read as under:

"The contractor shall at least 7 working days before commencement of compaction submit the following to the Engineer for approval:

i) The Values of maximum dry density and optimum moisture content obtained in accordance with IS 2720 (Part 8) for each fill material he intends to use.

ii) The graphs showing values of density against moisture content from which each of the values in (i) above of the maximum dry density and optimum moisture content were determined.

iii) The dry density-moisture content-CBR relationship for each of the fill materials be intends to use in the sub grade."

Clause 305.3 Construction Operations

Clause 305.3.4 Compacting ground supporting embankment/subgrade

Delete "where necessary" in the first sentence of the first paragraph.

Clause 305.3.5.2 In Paragraph 3, delete "IS: 2720 (Part 7) or "and "as the case may be".

Clause 305.3.6 Compaction

The second paragraph of this Clause shall read as under:

"Only vibratory rollers of not less than 8 – 10ton static weight with plain or pad foot drum shall be used for compaction."

Clause 305.4 Construction of Embankment and sub-grade under special condition.

Clause 305.4.1 Add new para after para 1 as under:

"The earthwork for widening the existing road embankment and shoulders shall be carried out in layers duly compacted. On completion of earth work to the required height the triangular portion on the sloping face of the layers shall be cut in such a manner that the specified slope is achieved. This operation is incidental to work and no extra payment shall be made for this."

Clause 305.4.7 Earthwork for high Embankment

Substitute the first paragraph of this clause as under:

"In the case of high embankments, the Contractor shall use the material from the approved borrow area."

Soil Erosion and Sedimentation Control Clause 306.4 Measurement for Payment

Substitute the Clause 306.4 as follows:

"All temporary sedimentation and pollution control works shall be deemed as incidental to the earthwork and other items of work and as such no separate payment shall be made for the same."

Clause 306.5 Rate

This Clause is deleted.

Clause 307 Turfing with sods.

Clause 307.5 Add "(iii) application of top soil" after (ii). Delete "the contract unit rate for application of top soil shall be as per clause 301.9.5".

Clause 309 Surface/Sub-Surface Drains

Clause 309.2 Surface Drains

Add at the end of third paragraph:

Metal grates for sumps on concrete lined surface drains shall be heavy duty (trafficable by commercial vehicle) proprietary products with gaps between bars no greater than 26mm. The Contractor shall submit proposals for grating to the Engineer for approval before commencing construction of the sumps."

Clause 309.4 Measurement for Payment

Delete the first sentence and replace with:

"Surface drains not lined shall be included in the items for excavation for the roadway in accordance with Clause – 301.8."

Clause 309.5 Rates

Add at the end of this clause as under:

"The rate for concrete lined drains shall include bedding concrete and jointing. The rate for lined surface drains shall include inlet sumps and metal grates where specified."

Add Clause 314 as under:

Clause 314 Leveling and Dressing over area:

Clause 314.1 Scope

The work shall consist of excavation, removal, filling and satisfactory disposal of all materials necessary for the area to be leveled and dressed in line, grades as directed by the Engineer. It shall include cutting and filling the ground in all type of soil where variation of existing ground level is + 30 cm or less. It will also include the grubbing of the existing rank vegetation and clearance of undergrowth completely.

Clause 314.2 Construction Operation

The engineer shall identify the area where leveling and dressing is to be carried out. The clearing and grubbing of rank vegetation and undergrowth shall be carried out as per clause 201.1. If the stagnant water is existing on the side, the same shall be pumped / bailed out. The area shall be kept dry throughout the operation of leveling and dressing. The leveling and dressing shall be carried out by excavating the high area and filling the low area with the excavated material in proper slope. This operation will be carried out manually/mechanically as per site conditions.

Clause 314.3 Measurements

The measurement shall be made for the area to be leveled and dressed in Sqm.

Clause 314.4 Rates

The contract unit rates for the items for leveling and dressing shall be payment in full for carrying out the required operations including full compensation for:

1. Cost of all labour, materials, tool, equipment and incidentals to complete the work.

2. Clearing and grubbing the rank vegetation and undergrowth and their disposal within 1000m.

3. Pumping and bailing out of water and keeping the area dry during construction.

4. In all type of soils and saturated earth.

SECTION 400 - SUB-BASES, BASES (NON-BITUMINOUS) ANDSHOULDERS:

Clause 401.4.1 Substitute "Smooth wheeled roller" by "Vibratory Roller" or as approved by Engineer-In-charge.

Clause 401.4.2 Spreading and Compacting

The following shall be added to Paragraph 1:

"The thickness of the loose layers shall be so regulated that the maximum thickness of the layer after compaction does not exceed

150 mm."

The fifth paragraph of this Clause shall be as under:

"Immediately thereafter, rolling shall start with the help of a vibratory roller of minimum 80 to 100 KN static weight with plain drum or pad foot drum of heavy pneumatic tyre roller of minimum 200 to 300 KN weight having a minimum tyre pressure of 0.7 kN/m2 or adequate capacity capable of achieving the required compaction. Rolling shall commence at the lower edge and proceed towards the upper edge longitudinally for portions having unidirectional cross fall and super-elevation and shall commence at the edges and proceed towards the crown for portions having cross falls on both sides."

Clause 401.7 Measurement for payment:

Add paragraph 3 as under:

For carrying out full depth repair and/or reconstruction of road pavement, if the granular sub-base materials laid on the shoulders for diversion of traffic (as per clause 112) is required to be scarified/removed and re-laid after compensating the loss during handling and by movement of traffic on completion of Full depth repair/reconstruction of road pavement, this operation shall be considered incidental to the work of providing granular sub-base and no extra payment shall be made for the same.

Clause 404.2.1 Coarse aggregate:

Amend this clause as under:

Coarse aggregate shall be either crushed or broken stone. The aggregates shall conform to the physical requirements set-forth in Table 400-6. The type and size range of the aggregate shall be specified in the contract or shall be as specified by the Engineer. If the water absorption value of the coarse aggregates is greater than 2 percent, the soundness test shall be carried out on the material delivered to site as per IS: 2386 (part 5).

Clause 404.2.3 Crushed Slag:

Delete this Clause

Clause 404.2.4 Over-burnt (Jhama) brick aggregates:

Delete this Clause.

Clause 404.3.4 Rolling:

Delete in first para "three wheeled rollers80 to 100 kN capacity or tandem or"

SECTION 500 - BASE AND SURFACE COURSES (BITUMINOUS):

Clause 501.8.2.4 Profile Corrective Course and its application:

Replace (ii)) with

"The material for bituminous profile corrective course shall be laid independently of all other courses, adopting such construction procedures and using such equipment as may be appropriate to the specified type of material and thickness of the course manually/machine paid as approved by the engineer-in-charge. The method of providing profile corrective course shall be approved by the engineer-in-charge.

Clause 501.8.3.1 Preparing Existing Granular Surface

Amend the Clause as under:

"The surface on which bituminous profile corrective course is to be laid shall be thoroughly swept clean of dust and any other extraneous material using mechanical broom and dust collected removed or blown of using compressed air except in places where technical means cannot reach. A prime coat conforming to Clause 502 shall be applied prior to laying profile corrective course.

Clause 501.8.3.4 Laying the Profile Corrective Course. Clause 501.8.3.4.1 This clause shall read as under:

"The surface on which profile corrective course is to be laid shall be thoroughly swept clean of dust and any other extraneous material using mechanical broom and dust collected removed or blown off using compressed air except in places where mechanical mans cannot reach."

"After preparing the granular surface as in Clauses 501.8.3.1 and 501.8.3.2, the profile corrective course with materials as per Clause 501.8.2.3/501.8.2.4 shall be laid and compacted to the requirement of particular Specification Clause."

Clause 502 Prime Coat Over Granular Base:

Clause 502.2.3 The type of bitumen emulsion shall be slow setting. Clause 503 Tack Coat

Clause 503.2.1 The type of bitumen emulsion shall be medium setting. Clause 504 Bituminous Macadam:

Clause 504.2 Materials

Clause 504.2.1 Bitumen:

The penetration grade of bitumen shall be 60/70.

Clause 507& 509 Bitumen

The penetration grade of bitumen shall be 60/70.

Clause 507.9 For DBM, Clause 508.9 for SDBC and Clause 509.9 for BC

These clauses stand amended to the extent that the rate shall cover the provision of bitumen in the mix as per job mix formula. No variation in the rate for this item will be admissible on account of quantity of bitumen used.

Clause 801

801 TRAFFIC SIGNS

801.1 GENERAL

801.1 The color, configuration, size and location of all traffic signs for highways (other than Expressways for which the size of the signs, letters and their placement shall be as specified in the drawings and relevant Specifications or as directed by the Engineer) and for other roads, shall be in accordance with the Code of Practice for Road Signs, IRC:67:2010, or as shown on the drawings. In the absence of any details or for any missing details (for example, chevron signs etc.), the signs shall be provided in accordance with international standards and/or as directed by the Engineer.

801.1.2 Unless otherwise specified, the signs shall be reflectorized as shown on the drawings or as directed by the Engineer. They shall be of retro-reflectorized type and made of micro- prismatic type reflective as per IRC:67:2010.

801.1.3 In general, cautionary and mandatory signs shall be fabricated through process of screen printing. In regard to informatory signs with inscriptions or cut letters of, coloured retroreflective sheeting comprising un metalized micro prismatic element material as per IRC:67:2010 or durable transparent, coloured overlay film shall be used which must be bonded well on the base sheeting, as directed by the Engineer.

801.2 Materials

The various materials and fabrication of the traffic signs shall conform to the following requirements:

801.2.1 Concrete: Concrete shall be of the grade shown on the Contract drawing or otherwise as directed by the Engineer.

801.2.2 Reinforcing steel: Reinforcing steel shall conform to the requirement of IS:1786unless otherwise shown on the drawing.

801.2.3 Bolts, nuts, washers: High strength bolts shall conform to IS: 1367 whereas precision bolts, nuts, etc., shall conform to IS:1364.

801.2.4 Plates and supports: Plates and support sections for the sign posts shall conform to IS:226 and IS:2062 or any other relevant IS Specifications.

801.2.5. Substrate; Sign panels may be fabricated on aluminum sheet, aluminium composite panel, fibre glass sheeting, or sheet moulding compound. Aluminum sheets used for sign boards shall be of smooth, hard and corrosion resistant aluminium alloy conforming to IS:736-Material designation 24345 or 1900. Aluminium Composite Panel and other materials shall meet the relevant ASTM (D903, E8, E393, E732)/BS/BIS requirements.

801.2.6 Shoulder mounted ground signs with a maximum side dimension not exceeding600mm shall not be less than 1.5 mm thick with Aluminium and 3 mm thick with Aluminum Composite Material. All other signs shall be at least 2 mm thick with Aluminium and 4 mm thick with Aluminium Composite Material. The thickness of the sheet shall be related to the size ofthe sign and its support and shall be such that it does not bend or deform under prevailing wind and other loads. All overhead signs made with Aluminium Composite Material shall be minimum 4 mm thick to withstand wind and other loads without deformation.

801.2.7 In respect of sign sizes not covered by IRC:67: 2010 the structural details (thickness, etc.) shall be as per the approved drawings or as directed by the Engineer.

801.3 Traffic Signs having Retro-Reflective Sheeting

801.3.1 General requirements: The retro-reflective sheeting used on the sign shall consist of the white or coloured sheeting having a smooth outer-surface which has the property of retro- reflection over its entire surface. It shall be weather-resistant and show colour fastness. It shall be new and unused and shall show no evidence of cracking, scaling, pitting, blistering, edge lifting or curling and shall have negligible shrinkage or expansion. A certificate of having tested the sheeting for co-efficient of retro-reflection, day/night time colour luminous, shrinkage, flexibility, linear removal, adhesion, impact resistance, specular gloss and fungus resistance 3 years outdoor weathering and its having passed these tests shall be obtained from a Government Laboratory, by the manufacturer of the sheeting. The retro- reflective sheeting shall be either of Engineering Grade material with enclosed lens, High Intensity Grade with encapsulated lens or Micro-prismatic Grade retro-reflective element material as given in Clause below

801.3.2 Micro Prismatic Grade Sheeting (Type XI) :Retro reflective sheeting typically manufactured as a cube corner. The reflective sheeting shall be retro reflective sheeting made of micro prismatic retro reflective material. The retro reflective surface, after cleaning with soap and water and in dry condition shall have the minimum co-efficient of retro reflection (determined in accordance with ASTM D 4956-09) as indicated in Table 800

Table 800 Acceptable Minimum Coefficient of Retro-reflection for Type XI Prismatic Grade SheetingA (Candelas per Lux per Square Metre)

Observation Angle	Entrance Angle	white	Yellow	Orange	Green	Red	Blue	Brown	Florescent yellow - Green	Florescent yellow	Florescent Orange
0.1°[B]	-4°	830	620	290	83	125	37	25	660	500	250
0.1°[B]	+30°	325	245	115	33	50	15	10	260	200	100
0.2°	-4°	580	435	200	58	87	26	17	460	350	175
0.2°	+30°	220	165	77	22	33	10	7	180	130	66
0.5°	-4°	420	315	150	42	63	19	13	340	250	125
0.5°	+30°	150	110	53	15	23	7	5	120	90	45
1.0°	-4°	120	90	42	12	18	5	4	96	72	36
1.0°	+30°	45	34	16	5	7	2	1	36	27	14

A Minimum Coefficient of Retro reflection (RA) (cd.lx-1.m-2).

B Values for 0.1o observation angles are supplementary requirements that shall apply only when specified by the purchaser in the contract or order.

When totally wet, the sheeting shall show not less than 90 percent of the values, of retro reflection indicated in above Table. At the end of 10 years, the sheeting shall retain at least 80 percent of its original retro-reflectance.

801.3.3 Messages / borders: The messages (legends, letters, numerals etc.) and borders shall either be screen-printed or of cut-outs from durable transparent overlay or cut-out from same type of reflective sheeting (excluding for black colour) for the cautionary/ mandatory signs. Screen printing shall be processed and finished with materials and in a manner specified by the sheeting manufacturer. For the information and other signs, the messages (legends, letters, numerals etc.) and borders shall be cut-out from durable transparent overlay film or cut out from same reflective sheeting only. Cut-outs shall be bonded with the sheeting in the manner specified by the manufacturer. Both the screen printed areas and cut-out messages sheetings and cut-out durable transparent overlay film shall be covered under the warranty period of the sheeting type, issued by the sheeting manufacturer

801.3.4 For screen-printed transparent coloured areas on white sheeting, the coefficient of retro- reflection shall not be less than 50 per cent of the values of corresponding colour in Tables 800 as applicable.

801.3.4.1 Cut-out messages and borders, wherever used, shall be made out of retro-reflective sheeting (as per Clauses 801.3.2 as applicable), except those in black which shall be of non- reflective sheeting.

801.3.5 Color: Unless otherwise specified, the general color scheme and properties shall be as stipulated in ASTM 4956-09. The colors shall be durable and uniform in acceptable hue when viewed in day light or under normal headlights at night and in inclement weather conditions.

801.3.6 Adhesives: The sheeting shall have either a pressure-sensitive adhesive of the aggressive-tack type requiring no heat, solvent or other preparation for adhesion to a smooth clean surface, or a tack free adhesive activated by heat, applied in a heat-vacuum applicator, in a manner recommended by the sheeting manufacturer. The adhesive shall be protected by an easily removable liner (removable by peeling without soaking in water or other solvent) and shall be suitable for the type of material of the base plate used for the sign. The adhesive shall form a durable bond to smooth, corrosion and weather resistant surface of the base plate such that it shall not be possible to remove the sheeting from the sign "base in one piece by use of sharp instrument. In case of pressure-sensitive adhesive sheeting, the sheeting shall be applied in accordance with the manufacturer's Specifications. Sheeting with adhesives requiring use of solvents or other preparation for adhesive shall be applied strictly in accordance with the manufacturer's instructions.

801.3.7 Refurbishment: Where existing signs are specified for refurbishment, the sheeting shall have a semi-rigid aluminum backing or materials as per Clause 801.2.5, pre- coated with aggressive-tack type pressure sensitive adhesive. The adhesive shall be suitable for the type of material used for the sign and should thoroughly bond with that material.

801.3.8 Fabrication

801.3.8.1 Surface to be reflectorised shall be effectively prepared to receive the retro-reflective sheeting. The sheeting of the material as per IRC:67:2010 , shall be de-greased either by acid or hot alkaline etching and all scale/dust/ coating of any type removed/ scrubbed to obtain a smooth plain surface before the application of retro-reflective sheeting. If the surface is rough, approved surface primer may be used. After cleaning, metal shall not be handled, except by suitable device or clean canvas gloves, between all cleaning and preparation operation and application of reflective sheeting/primer. There shall be no opportunity for the substrate to come in contact with grease, oil or other contaminants prior to the application of retro-reflective sheeting.

801.3.8.2 Complete sheets of the material shall be used on the signs except where it is unavoidable; at splices, sheeting with pressure sensitive adhesives shall be overlapped not less than 5 mm. Where screen printing with transparent colours is proposed, only butt jointing shall be used. The material shall cover the sign surface evenly and shall be free from twists, cracks and folds. Cut-outs to produce legends and borders shall be bonded with the sheeting in the manner specified by the manufacturer.

801.3.9 Warranty and durability: The Contractor shall obtain from the manufacture a ten year warranty for satisfactory field performance including stipulated retro-reflectance of the retro- reflective sheeting of micro-prismatic sheeting, a seven-year warranty for high intensity grade and a five year warranty for the sheeting of engineering grade and submit the-same to the Engineer. In addition, a ten year, seven year and a five year warranty for satisfactory In-field performance of the finished sign with retro-reflective sheeting of micro prismatic, high intensity grade and engineering grade respectively, inclusive of the screen printed or cut out letters/legends and their bonding to the retro-reflective sheeting shall be obtained from the contractor/supplier and submitted to the Engineer. The Contractor/ supplier shall also furnish the LOT numbers and certification that the signs and materials supplied against the assigned work meets all the stipulated requirements and carry the stipulated warranty and that the contractor/supplier is the authorized converter of the particular sheeting:

All signs shall be dated during fabrication with indelible markings to indicate the start of warranty. The warranty shall also cover the replacement obligation by the sheeting manufacturer as well as contractor for replacement/repair/restoration of the retro-reflective efficiency.

A certificate in original shall be given by the sheeting manufacturer that its offered retro- reflective sheeting has been tested for various parameters such as co-efficient of retro-reflection, day/night time colour and luminance, shrinkage, flexibility, linear removal, adhesion, impact resistance, specular gloss and fungus resistance and 3 year outdoor weathering; the tests shall be carried out by a Government Laboratory in accordance with various ASTM procedures and the results must show that the sheeting have passed the requirements for all the above mentioned parameters. A copy of the test reports shall be attached with the certificate.

801.4 Installation

801.4.1 The traffic signs shall be mounted on support posts, which may be of Gl pipes conforming to IS: 1239, Rectangular Hollow Section conforming to IS :4923 or Square Hollow Section conforming to IS:3589. Sign posts, their foundations and sign mountings shall be so constructed as to hold these in a proper and permanent position against the normal storm wind loads or displacement by vandalism. Normally, signs with an area up to 0.9 sqm shall be mounted on a single post, and for greater area two or more supports shall be provided. Post- end(s) shall be firmly fixed to the ground by means of properly designed foundation. The work of foundation shall conform to relevant Specifications as specified.

801.4.2 All components of signs (including its back side) and supports, other than the reflective portion and G.I. posts shall be thoroughly de scaled, cleaned, primed and painted with two coats of epoxy/ fibre glass/ powder coated paint, Any part of support post below ground shall be painted with protective paint.

801.4.3 The signs shall be fixed to the posts by welding in the case of steel posts and by bolts and washers of suitable size. After the nuts have been tightened, the tails of the bolts shall be furred over with a hammer to prevent removal.

801.5 Measurements for Payment

The measurement of standard cautionary, mandatory and information signs shall be in numbers of different types of signs supplied and fixed, while for direction and place identification signs, these shall be measured by area in square, metres.

801.6. Rate

The Contract unit rate shall be payment in full for the cost of making the road sign, including all materials, installing it at the site furnishing of necessary test certificates, warranty and incidentals to complete the work in accordance with these Specifications.

Note : The warranty as specified in clause- 801.3.9 should be in the name of NHIDCL and it must be deposited to the PD.

802 OVERHEAD SIGNS

802.1 General

802.1.1 Overhead signs may be used in lieu of, or as an adjunct to, kerb mounted signs where the situation so warrants for proper information and guidance of the road users. The following conditions may be considered while deciding about the provision of overhead signs:

- *Traffic volume at or near capacity*
- *Complex interchange design*
- *Three or more lanes in each direction*
- *Restricted sight distance*
- *Closely spaced interchanges*
- *Multi.-lane exits*
- *Large percentage of commercial vehicles*
- *High speed traffic*

804 Reflective Pavement Markers (Road Studs/Cat eyes)

804.1 General

The work cover the providing and mixing of reflective pavement marker (RPM) or road stud, a device which is bonded to or anchored within the road surface for lane marking and delineation for nighttime visibility. It reflects incident light in directions close to the direction from which it came.

804.2 Material

804.2.1 Plastic body of RPM/road stud shall be moulded from ASA (Acrylic Styrene Acrylonitrite) or HIPS (Hi-impact Polystyrene) or Acrylonitrite Butadiene Styrene(ABS) or any other suitable material approved by the Engineer. The markers shall support a load of 13635 kg tested in accordance with ASTM D 4280.

804.2.2 Reflective panels shall consist of number of lenses containing single or dual prismatic cubes capable of providing total internal reflection of the light entering the lens face. Lenses shall be molded of methyl merthcrylate conforming to ASTMD 788 or equivalent.

804.3 Design

The slope or retro-reflecting surface shall preferably be 35+5 degree to base and the area of each retro-reflecting surface shall not be less than 13.0 sqcm.

804.4 Optical Performance

804.4.1Unidirectional and bi-directional studs

Each reflector or combination of reflectors on each face of the stud shall have a Coefficient of Luminous Intensity (C.I.L.) not less than that given in Table 800-12 or Table 800-13 as appropriate.

804.4.2 Omni-directional studs

Each Omni-directional stud shall have a minimum (C.I.L.) of not less than 2 mcd/lx

Table 800-12 Minimum C.I.L. Values for Category "A" studs

Entrance	**Observation**		**C.I.L. in mcd/lx**	
angle	**angle**	**White**	**Amber**	**Red**
0^0U 5^0 L&R	0.3^0	220	110	44
0^0U 10^0 L&R	0.5^0	120	60	24
	Table 800-13 Minimum C.I.L. Values for Category "B" studs			
Entrance	**Observation**		**C.I.L. in mcd/lx**	
angle	**angle**	**White**	**Amber**	**Red**
0^0U 6^0 L&R	0.3^0	20	10	4
0^0U 10^0 L&R	0.5^0	15	7.5	3

Note: 1) The entrance angle or 0^0 U corresponds to the normal aspect of the reflectors when the reflecting road stud is installed in horizontal road surface.

2) A stud that incorporates one or more corner cube reflectors shall be considered to be included in category „A". A stud that incorporates one or more bi-convex reflectors shall be considered to be included in category „B".

804.5 Tests

804.5.1 Coefficient of luminance intensity can be measured by procedure described in ASTM E

809 "Practice for Measuring Photometric Characteristics" or as recommended in BS: 873 – Part 4:1973.

804.5.2 Under test conditions, a stud shall not be considered to fail the photometric requirements if the measured C.I.L at any one position of measurement is less than the values specified in Table 800-12 or 800-13 provided that

(i) the value is not less than 80% of the specified minimum, and

(ii) the average of the left and right measurements for the specific angle is greater than the specified minimum.

804.6 Solar Powered Road Markers (Solar Studs)

The solar studs shall be made of Aluminum alloy and poly carbonate material which shall be absolutely weather resistance and strong enough to support a load of 13635 kg tested in accordance with ASTM D4280. Its colour may be white, red, yellow, green or blue or combination as directed by the Engineer. Its water resistance shall meet the requirements of IP 65 in accordance with IS:12063:1987 Category 2 for protection against water ingress. The dimentsions of solar studs shall not be less than 100 mm x 100 mm x 10 mm. It shall have super bright LEDs so as to provide long visibility from a distance of more than 800m. Its flashing rate shall not be less than 1 Hz. Its should be able to give the prescribed performance in the temperature range of -400C to +550C. Its life shall be not less than 3 years.

804.7 Fixing of Reflective Markers

804.7.1 Requirements

The enveloping profile of the head shall be smooth and the studs shall not present any sharp edges in traffic. The reflective portions of the studs shall be free from crevice or ledges where dirt might accumulate. All road studs shall be legibly market with the name, trademark or other means of identification of the manufacturer. Marker height shall not exceed 20 mm. Marker width shall not exceed 130 mm. The base of the marker shall be flat within 1.3 mm. If the bottom of the marker is configured, the outermost faces of the configurations shall not deviate more than 1.3 mm from a flat surface. All road studs shall be legibly marked with the name, trade mark or other means of identification of the manufacturer.

804.7.2 Placement

The reflective marker shall be fixed to the road surface using the adhesives and the procedure recommended by the manufacturer. No nails shall be used to affix the marker, as nails are hazardous for the roads. Regardless of the type of adhesive used, the markers shall not be fixed if the pavement is not surface dry and on new asphalt concrete surfacing until the surfacing has been opened to traffic for al period of not less than 14 hours. The portions of the highway surface, to which the marker is to be bonded by the adhesive, shall be free of dirt, curing compound, grease, oil, moisture, loose or unsound layers, paint and any other material which would adversely affect the bond of the adhesive. The adhesive shall be placed uniformly on the cleaned pavement surface or on the bottom of the marker in a quantity sufficient to result in complete coverage of the area of contact of the marker with no voids present and with a slight excess after the marker has been lightly pressed in place. For epoxy installations, excess adhesive around the edge of the marker, excess adhesive on the pavement and adhesive on the exposed surfaces of the markers shall be immediately removed.

804.7.3 Warranty and durability

The contractor shall obtain from the manufacturer a two-year warranty for satisfactory field performance including stipulated retro-reflectance of the reflecting panel and submit the same to the Engineer, In addition, a two year warranty for satisfactory infield performance of the finished road marker shall also be given by the contractor who carried out the work of fixing of reflective road markers. In case the markers are displaced, damages, get worn out or lose their reflectivity compared to stipulated standards, the contractor would be required to replace all such markers within 15 days of the intimation from the Engineer at his own cost.

804.8 Measurement for Payment

The measurement of reflective road markers shall be in numbers of different types of markers supplied and fixed.

804.9 Rate

The contract unit rate for reflective road markers shall be payment in full compensation for furnishing all labour, material, tools, equipment including incidental costs necessary for carrying out the work at site conforming to the specifications complete as per approved drawings or as directed by the Engineer.

Note : The warranty as specified in clause- 804.7.3 should be in the name of NHIDCL and it must be deposited to the BO.

SECTION 900 – QUALITY CONTROL FOR ROAD WORKS

Clause 901 General

Amend the clause 901.10 as under:

Clause 901.10 For bitumen, cutback, emulsion, mild steel, cement and other similar material where essential tests are to be carried out at the manufacture‟s plant or at laboratories other than the site laboratory, the cost of samples, sampling, testing, and furnishing of the test certificates shall be borne by the Contractor. The frequency of tests regarding bitumen, cutback and emulsion in respect of its quality shall be as per the Table 900-4 of MOST Specification.

SECTION 1000 – MATERIALS FOR STRUCTURES:

Clause 1014 Storage of Materials:

Clause 1014.3 Aggregates

The following shall be added at the end of the Clause: "Aggregates shall be stockpiled in a manner that will avoid segregation, contamination by foreign materials and intermixing of various sizes of aggregates."

SECTION 3002- RESTORATION OF RAIN CUTS:

Clause 3002.4 Amend this as under:

"The earth works for restoration of rain cuts shall be measured in cum."

NATIONAL HIGHWAYS & INFRASTRUCTURE DEVELOPMENT CORPORATION LTD.

Bidding Document – Item Rate Contract

International Competitive Bidding

Re-construction of selected stretches between Km 514.360 and Km 534.800 of Jhanji to Demow section of NH-37 (old) in the State of Assam in FY: 25-26 on item rate (percentage) basis.

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Section VII

Form of Bid and Appendix to Bid
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A: FORM OF BID

(The Appendix forms part of the Bid. Bidders are required to fill up all the blanks in the formof Bid and the Appendix thereto)

No. of the contract: AS/NH-2/Jor/Cons/JD4/25-26/1

Construction of 2 Nos. of Major Bridge at Km. 508+414 and Km 523+271 in Jhanji to Demow section of NH- 37(Old) in State of Assam in FY:25-26.

To

Executive Director (Projects)
National Highways & Infrastructure Development Corporation Limited. Regional Office, 2nd Floor, Agnishanti Business Park, Opp. AGP Office GNB Road, Ambari, Guwahati-781001
Email: edpnhidclghy1@gmail.com**.**

Dear Sir,

1. Having examined the Bidding Document including Invitation to Bids, Instructions to Bidders, General Condition of Contract, Condition of Particular Application, Technical Specifications, Bill of Quantities, Drawings, Schedules, Annexures and Addenda for the execution of the above named Works, we, the undersigned, offer to execute and complete such Works and remedy any defects therein in conformity with the said Bidding Document for the total Bid Price as indicated in Financial Bid submitted online.

2. We acknowledge that the Appendix to Bid forms part of our Bid.

3. We undertake, if our Bid is accepted, to commence the Works on Site within the period stated in the Appendix to Bid hereto after receipt of an order of the Engineer's notice to commence, and to complete and deliver the sections and the whole of the Works comprised in the Contract within the period stated in the Appendix to Bid hereto.

4. If our Bid is accepted, we will furnish Performance Security (ies) in the form of Bank Guarantee(s) to be jointly and severally bound on us in accordance with the Conditions of Contract.

5. We agree to abide by this Bid for the period of one hundred and twenty (120) days after the date of bid opening, and it shall remain binding upon us and may be accepted at any time before the expiry of that period.

6. Unless and until a formal Agreement is prepared and executed, this Bid, together with your written acceptance thereof, shall constitute a binding contract between us.

7. We understand that you are not bound to accept the lowest or any Bid you may receive.

Dated this_____day of_____2025

Signature_____ Name of Authorised

Signatory

in the capacity of_____duly authorised[1] to sign Bid for and on behalf of_____

Address (in block capitals)

_____

_____

Name of Witness _____

Occupation of the Witness _____

Address of Witness

_____

_____

Signature of Witness_____

[1] Certified copy of Power of Attorney/Authorization for signature shall be furnished by the Contractor in accordance with **RFP** ~~Clause 20.2 of Instruction to Bidders (Section I) of Volume I and Qualification Form No. 12 ofSection IX of Volume III.~~

B: APPENDIX TO BID

Sl. No.	Items	Conditions ofContract Clause/ Sub Clause	Particular Conditions for this Contract
1.	Addresses	11.2	1. The Employer is: Name : National Highways & Infrastructure Development Corporation Ltd. Address:1st & 2nd Floor, Tower A, World Trade Centre, Nauroji Nagar, New Delhi – 110029 Name of authorized Representative: General Manager (Projects), National Highways & Infrastructure Development Corporation Limited. C/o Shri. Diganta Bora, S/o Shri Sonadhar Bora, 2nd Floor,R/o Chirotia Hazari Link Road, Pulibor, Jorhat, Assam, Pin No-785006 **2.** The Engineer is: Team Leader, M/s. URS Scott Wilson India Private Limited in Association with M/s Krivam Consultant Private Limited Address: 1st Floor, Madhupur, Demow, Sibsagar-785662
2.	Language ability of Contractor's Representative	15.2	English
3.	Minimum amount of third party Insurance	23.2	Rupees Four million per occurrence, with number of occurrences unlimited.
4.	Time for commencement of Works	41.1	**07 days**
5.	Time of completion	43.1	**05 Months**
6.	Amount of liquidated damages	47.1	1/2000 of contract price per day delay
7.	Limit of liquidated damages	47.1	10% of contract price
8.	Defects Liability Period	49.1	48 months
9.	Limit of Retention Money	60.4	5% of contract price
10.	Mobilization advance	60.6 (a)	(i) Payment of interest bearing mobilization advance up to 5% of the contract price at commencement of work. (ii) Payment of additional interest bearing advance up to 5% of the contract price after the contractor has achieved a financial progress of 10% of the contract price. (iii) Rate of interest shall be 10% per annum.

11.	Equipment advance	60.6 (b)	(i) Payment of interest bearing equipment advance up to 5% of the contract price against the new equipment purchased by the contractor on or after the date of issue of letter of acceptance, under its ownership, subject to production of proof of payment. No equipment advance shall beadmissible on any other equipment where no purchase of equipment is involved (i.e. equipments already owned by the contractor) or equipments purchased under hire purchase scheme/ financing arrangement or on hired equipments, etc. (ii) Rate of interest shall be 10% per annum.
12.	(a) Limiting Period of Withdrawal of Mobilization advance	60.6(d)	~~Nine~~ **One** months from commencement of work.
	(b) Limiting Period of Withdrawal of Equipment advance	60.6 (d)	~~Twelve~~ **One and a Half** months from commencement ofwork.
13.	Rate of Interest upon unpaid sums	60.12 (b)	10% per annum
14.	Recovery after Termination	63.3	20%
15.	Integrity Pact	63.7	Contractor shall comply with the provisions Integrity Pact (IP), which shall be part of the Contract Agreement
16.	Number of members of Dispute Review Board	67.1	Three
17.	Member of Dispute ReviewBoard (if not agreed) to be appointed by	67.1	Society for Affordable Redressal of Disputes
18.	Number of Arbitrators	67.3	Three
19.	Place of Arbitration	67.3	New Delhi
20.	Members of the Arbitral Tribunal(if not agreed) to be appointed by	67.3	Society for Affordable Redressal of Disputes
21.	Language of Arbitration	67.4	English
22.	Fee of Arbitrators		

23.	Notice to Employer andEngineer	68.2	The Engineer is –**Team Leader, M/s. URS Scott Wilson India Private Limited in Association with M/s Krivam Consultant Private Limited Address: 1st Floor, Madhupur, Demow, Sibsagar-785662** Name of Authorized Representative of Employer: **General Manager (Projects), National Highways & Infrastructure Development Corporation Limited. C/o Shri. Diganta Bora, S/o Shri Sonadhar Bora, 2nd Floor,R/o Chirotia Hazari Link Road, Pulibor, Jorhat, Assam, Pin No-785006**
24.	Price Adjustment	70.3 (i)	~~Adjustment of Labour Component : District : *** State : ***~~
		70.3(v)	~~Adjustment of Bitumen Component: Mathura Refinery for supply of bitumen in the state of ***~~
		70.3(vi)	~~Adjustment for Fuel and Lubricants: Place : Nearest Petrol Pump from contractor's site office for supply of HSD~~

Section VIII

Bill of Quantities

Section IX

Form of Bid Security, Form of Performance Security/ Additional Performance Security, Form of LoA, Form of Advance Payment Security, Form of Agreement, Integrity Pact, Salient note specific to the site/contract

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SECTION IX

- **FORM OF BID SECURITY**
- **FORM OF PERFORMANCE SECURITY/ ADDITIONAL PERFORMANCE SECURITY**
- **FORM OF LOA**
- **FORM OF ADVANCE PAYMENT SECURITY**
- **FORM OF AGREEMENT**
- **FORM OF INTEGRITY PACT**
- **SALIENT NOTE SPECIFIC TO THE SITE/CONTRACT**

SECTION-IX

FORM OF e-BANK GUARANTEE FOR BID SECURITY
(e-BGs Only - Entity ID of NHIDCL is AAECN7759E)

To
National Highways & Infrastructure Development Corporation Limited.
Regional Office, 2nd Floor, Agnishanti Business Park,
Opp. AGP Office GNB Road, Ambari, Guwahati-781001
Email: edpnhidclghy1@gmail.com

WHEREAS _____ (Name of Bidder) (hereinafter called the Bidder) wishes to submit his Bid for herein after called "the Bid" KNOW ALL MEN by these present that we ___ (Name of Bank) of_____ (Name of country) having our registered office at (_____) (hereinafter called the „Bank") are bound unto Executive Director (Projects), National Highways & Infrastructure Development Corporation Ltd. (hereinafter called "the Employer") in the sum of the Rs. _____ (Rupees _____) *for which payment can truly be made to the said Employer. The Bank bind themselves, their successors and assigns by these present with the common seal of the Bank this day _____of _____and undertake to pay the amount of _____ Rs._____ to the employer upon receipt of his first written demand without the employer having to substantiate his demand.

The conditions of this obligation are:

(i) If the Bidder withdraws his Bid during the period of Bid validity specified in the Form of Bid.

Or

(ii) If the Bidder having been notified of the acceptance of his Bid by the Employer during the period of Bid validity.

(a) fails or refuses to execute the Form of Agreement in accordance with the instructions to bidders, if required; or

(b) fails or refuses to furnish the Performance Security, in accordance with the Instruction to Bidders.

We undertake to pay to the Employer upto the above amount upon receipt of his first written demand, without the employer having to substantiate his demand, provided that in his demand the Employer will note that the amount claimed by him is due to him owing to the occurrence of any one of the above conditions, specifying the occurred condition or conditions.

This guarantee will remain in force upto and including the date 45 days beyond the validity of the bid as stated in the Instructions to Bidders or as it may be extended by the Employer, at any time prior to the closing date for submission of the Bidders Notice of which extension to the Bank is hereby waived. Any demand in respect of this guarantee should be made on the Bank on or before the date of expiry of this guarantee.

This guarantee shall also be operatable at our.....Branch at **Guwahati**, from whom, confirmation regarding the issue of this guarantee or extension/ renewal thereof shall be made available on demand. In the contingency of this guarantee being invoked and payment there

under claimed, the said branch shall accept such invocation letter and make payment of amounts so demanded under the said invocation. Notwithstanding anything contained herein before, our liability under this guarantee

is restricted to Rs…….. (Rs._____in words) and the guarantee shall remain valid till_____. Unless a claim or a demand in writing is served upon us on or before
_____all our liability under this guarantee shall cease.

e-Bank Guarantee has been sent to authority's bank through SFMS gateway as per the details below: -

Sl. No.	**Particulars**	**Details**
1	Name of Beneficiary	RO NHIDCL Projects
2	Beneficiary Bank Account No.	73653210000013
3	Beneficiary Bank Branch	CNRB0007374
4	Beneficiary Bank Branch Name	Canara Bank, Specialized Government Business Branch
5	Beneficiary Bank Address	Kay M Plaza, 1st Floor, Near KAR Bhawan, GS Road, Ganeshguri, Guwahati, Assam - 781006
6	Beneficiary UIN	NCTGC2506P

SIGNATURE OF AUTHORISED REPRESENTATIVE OF THE BANK _____

NAME AND DESIGNATION _____ EMPLOYEE CODE NUMBER SEAL OF THE BANK _____

SIGNATURE OF THE WITNESS (IF THIS IS TO BE WITNESSED AS PER BANK'S POLICY) ___

NAME OF THE WITNESS _____ ADDRESS OF THE WITNESS _____

SECTION-IX

FORM OF e-BANK GUARANTEE FOR PERFORMANCE SECURITY/ ADDITIONAL PERFORMANCE SECURITY

(e-BGs Only - Entity ID of NHIDCL is AAECN7759E)

Contract Package No AS/NH-2/Jor/Cons/JD4/25-26/1

To
National Highways & Infrastructure Development Corporation Limited. Regional Office, 2nd Floor, Agnishanti Business Park, Opp. AGP Office GNB Road, Ambari, Guwahati-781001
Email: edpnhidclghy1@gmail.com

WHEREAS…… (name and address of contractor) hereinafter called "the contractor" has undertaken, in pursuance of Letter of Acceptance No. ……. Dated…….. to execute… ..... (name of Contract and brief description of Works) (hereinafter called "the contract").

AND WHEREAS it has been stipulated by you in the said contract that the Contractor shall furnish you with a Bank Guarantee for the sum specified therein as security for compliance with his obligations in accordance with the Contract;

AND WHEREAS we have agreed to give the Contractor such a Bank Guarantee:

NOW THEREOF we hereby affirm that we are the guarantor and responsible to you on behalf of the Contractor, up to a total of Rs…… (amount of guarantee) (Rupees……. (in words), , and we undertake to pay you, upon your first written demand and without cavil or argument, any sum or sums within the limits of… (amount of guarantee) as aforesaid without your needing to prove or to show grounds or reasons for your demand for the sum specified therein.

We hereby waive the necessity of your demanding the said debt from the Contractor before presenting us with the demand.

We further agree that no change or addition to or other modification of the terms of the contract or of the works to be performed there under or of any of the contract documents which may be made between you and the Contractor shall in any way release us from any liability under this guarantee, and we hereby waive notice of any such change, addition or modification.

This guarantee shall be valid until 60 days from the date of expiry of the Defects Liability Period.

This guarantee shall also be operatable at our ……..….. branch at Guwahati, from whom, confirmation regarding the issue of this guarantee or extension/ renewal thereof shall be made available on demand. In the contingency of this guarantee being invoked and payment there under claimed, the said branch shall accept such invocation letter and make payment of amounts so demanded under the said invocation.

Notwithstanding anything contained herein before, our liability under this guarantee is restricted to Rs. _____ (Rs._____in words) and the guarantee shall remain valid till___ _____. Unless a claim or a demand in writing is served upon us on or before all our liability under this guarantee shall cease.

Bank Guarantee has been sent to authority's bank through SFMS gateway as per the details below:-

Sl. No.	**Particulars**	**Details**

1	Name of Beneficiary	RO NHIDCL Projects
2	Beneficiary Bank Account No.	73653210000013
3	Beneficiary Bank Branch	CNRB0007374
4	Beneficiary Bank Branch Name	Canara Bank, Specialized Government Business Branch
5	Beneficiary Bank Address	Kay M Plaza, 1st Floor, Near KAR Bhawan, GS Road, Ganeshguri, Guwahati, Assam - 781006
6	Beneficiary UIN	NCTGC2506P

Signature and seal of the Guarantor with Name, Designation, Employee Code Number & Telephone Number……

Name of the Issuing Bank/ Branch .....

Name of the Controlling Branch/Bank…..

Address & Telephone Number.....Address & Telephone Number……. Date…….

In the presence of (if this is to be witnessed as per bank's policy)……

1…… (Name, Address & Occupation)

2…… (Name, Address & Occupation)

An amount shall be inserted by the Guarantor, representing the percentage of the Contract Price specified in the Contract including additional security for unbalance bids, if any and denominated in Indian Rupees.

SECTION-IX
FORM OF LETTER OF ACCEPTANCE

No. ……. Dated ……..

To

{Name of Selected Bidder}

Sub.: ……. Name of Work……

Reference: Your bid No.:……for the subject work dated ……..

Sir,

Based on your bid submitted on ..... in compliance of bidding document of NHIDCL for execution of the work of ....., it is hereby notified that your bid for a contract price of Rs…… (Rupees in words…. .....) has been accepted for and on behalf of NHIDCL. You are requested to return a duplicate of the LOA as an acknowledgement immediately.

2. You are also requested to furnish Performance Security for an amount of ……. {and Additional Performance Security for an amount of …….. } as per Section 33 of ITB within 07 (seven) days of receipt of this Letter of Acceptance (LOA), failing which the actions as stipulated in ITB shall be taken.

Thanking you,

Yours faithfully,

(……..)
General Manager (Projects)

"Accepted By:

(Name of the Authorized person)
(Name of the sole bidder/lead partner of JV) Seal of the bidder"

SECTION – IX

F ORM OF ADVANCE PAYMENT

Form for Guarantee for Advance Payment

The Executive Director

National Highways & Infrastructure Development Corporation Limited. Regional Office, 2nd Floor, Agnishanti Business Park, Opp. AGP Office GNB Road, Ambari, Guwahati-781001
Email: edpnhidclghy1@gmail.com

WHEREAS:

(A) …….[name and address of contractor] (hereinafter called the "**Contractor**") has executed an agreement (hereinafter called the "**Agreement**") with the National Highways & Infrastructure Development Corporation Limited, (hereinafter called the "**Authority**") for the "**Construction of 2 Nos. of Major Bridge at Km. 508+414 and Km 523+271 in Jhanji to Demow section of NH- 37(Old) in State of Assam in FY:25-26**", subject to and in accordance with the provisions of the Agreement.

(B) In accordance with the provisions of the Conditions of Particular Application – Part II, Sub Clause 60.6 ("Mobilization Advance"), the Authority shall make to the Contractor an interest bearing advance payment (herein after called "**Advance Payment**"); and that the Advance Payment shall be made in two installments subject to the Contractor furnishing an irrevocable and unconditional guarantee by a scheduled bank of such installment to remain effective till the complete and full repayment of the installment of the Advance Payment as security for compliance with its obligations in accordance with the Agreement. The amount of {first/second} installment of the Advance Payment is Rs. ------ cr. (Rupees ------ crore) and the amount of this Guarantee is Rs. ------- cr. (Rupees ------ crore) (the **"Guarantee Amount").**

(C) We, …….. through our branch at ……. (the "**Bank"**) have agreed to furnish this bank guarantee (*hereinafter called the* **"Guarantee"**) for the Guarantee Amount.

NOW, THEREFORE, the Bank hereby, unconditionally and irrevocably, guarantees and affirms as follows:

1. The Bank hereby unconditionally and irrevocably guarantees the due and faithful repayment on time of the aforesaid instalment of the Advance Payment under and in accordance with the Agreement, and agrees and undertakes to pay to the Authority, upon its mere first written demand, and without any demur, reservation, recourse, contest or protest, and without any reference to the Contractor, such sum or sums up to an aggregate sum of the Guarantee Amount as the Authority shall claim, without the Authority being required to prove or to show grounds or reasons for its demand and/or for the sum specified therein.

2. A letter from the Authority, under the hand of an officer not below the rank of General Manager in the National Highways & Infrastructure Development Corporation Limited, that the Contractor has committed default in the due and faithful performance of all or any of its obligations for the repayment of the instalment of the Advance Payment under and in accordance with the Agreement shall be conclusive, final and binding on the Bank. The Bank further agrees that the Authority shall be the sole judge as to whether the Contractor is in default in due and faithful performance of its obligations during and under the Agreement and its decision that the Contractor is in default shall be final and binding on the Bank, notwithstanding any differences between the Authority and the Contractor, or any dispute between them pending before any court, tribunal, arbitrators or any other authority or body, or by the discharge of the Contractor for any reason whatsoever.

3. In order to give effect to this Guarantee, the Authority shall be entitled to act as if the Bank were the principal debtor and any change in the constitution of the Contractor and/or the Bank, whether by their absorption with any other body or corporation or otherwise, shall not in any way or manner affect the liability or obligation of the Bank under this Guarantee.

4. It shall not be necessary, and the Bank hereby waives any necessity, for the Authority to proceed against the Contractor before presenting to the Bank its demand under this Guarantee.

5. The Authority shall have the liberty, without affecting in any manner the liability of the Bank under this Guarantee, to vary at any time, the terms and conditions of the Advance Payment or to extend the time or period of its repayment or to postpone for any time, and from time to time, any of the rights and powers exercisable by

the Authority against the Contractor, and either to enforce or forbear from enforcing any of the terms and conditions contained in the Agreement and/or the securities available to the Authority, and the Bank shall not be released from its liability and obligation under these presents by any exercise by the Authority of the liberty with reference to the matters aforesaid or by reason of time being given to the Contractor or any other forbearance, indulgence, act or omission on the part of the Authority or of any other matter or thing whatsoever which under any law relating to sureties and guarantors would but for this provision have the effect of releasing the Bank from its liability and obligation under this Guarantee and the Bank hereby waives all of its rights under any such law.

6. This Guarantee is in addition to and not in substitution of any other guarantee or security now or which may hereafter be held by the Authority in respect of or relating to the Advance Payment.

7. Notwithstanding anything contained hereinbefore, the liability of the Bank under this Guarantee is restricted to the Guarantee Amount and this Guarantee will remain in force for the period specified in paragraph 8 below and unless a demand or claim in writing is made by the Authority on the Bank under this Guarantee all rights of the Authority under this Guarantee shall be forfeited and the Bank shall be relieved from its liabilities hereunder.

8. The Guarantee shall cease to be in force and effect on ****. Unless a demand or claim under this Guarantee is made in writing on or before the aforesaid date, the Bank shall be discharged from its liabilities hereunder.

9. The Bank undertakes not to revoke this Guarantee during its currency, except with the previous express consent of the Authority in writing, and declares and warrants that it has the power to issue this Guarantee and the undersigned has full powers to do so on behalf of the Bank.

10. Any notice by way of request, demand or otherwise hereunder may be sent by post addressed to the Bank at its above referred branch, which shall be deemed to have been duly authorised to receive such notice and to effect payment thereof forthwith, and if sent by post it shall be deemed to have been given at the time when it ought to have been delivered in due course of post and in proving such notice, when given by post, it shall be sufficient to prove that the envelope containing the notice was posted and a certificate signed by an officer of the Authority that the envelope was so posted shall be conclusive.

11. This Guarantee shall come into force with immediate effect and shall remain in force and effect up to the date specified in paragraph 8 above or until it is released earlier by the Authority pursuant to the provisions of the Agreement.

12. This guarantee shall also be operatable at our…….. Branch at **Guwahati**, from whom, confirmation regarding the issue of this guarantee or extension / renewal thereof shall be made available on demand. In the contingency of this guarantee being invoked and payment thereunder claimed, the said branch shall accept such invocation letter and make payment of amounts so demanded under the said invocation.

13. The guarantor/bank hereby confirms that it is on the SFMS (Structural Finance Messaging System) platform & shall invariably send an advice of this Bank Guarantee to the designated bank of NHIDCL, details of which is as under:

Sl. No.	**Particulars**	**Details**
1	Name of Beneficiary	RO NHIDCL Projects

2	Beneficiary Bank Account No.	73653210000013
3	Beneficiary Bank Branch	CNRB0007374
4	Beneficiary Bank Branch Name	Canara Bank, Specialized Government Business Branch
5	Beneficiary Bank Address	Kay M Plaza, 1st Floor, Near KAR Bhawan, GS Road, Ganeshguri, Guwahati, Assam - 781006
6	Beneficiary UIN	NCTGC2506P

Signed and sealed this ……. day of ……., 20…… at …….. SIGNED, SEALED AND DELIVERED

For and on behalf of the Bank by: (Signature)

(Name)

(Designation)

(Code Number)

(Address)

NOTES:

(i) The bank guarantee should contain the name, designation and code number of the officer(s) signing the guarantee.

(ii) The address, telephone number and other details of the head office of the Bank as well as of issuing branch should be mentioned on the covering letter of issuing branch.

[1] *an amount is to be inserted by the bank or financial institution representing the amount of the Advance Payment, and denominated in the currency(ies) of the Advance Payment as specified in the Contract.*

Annex-II: Form for Insurance Surety Bond for Advance Payment

To,
The Executive Director
National Highways & Infrastructure Development Corporation Limited. Regional Office, 2nd Floor, Agnishanti Business Park, Opp. AGP Office GNB Road, Ambari, Guwahati-781001. Email: edpnhidclghy1@gmail.com
WHEREAS:

(A) [Name and address of contractor] (hereinafter called the "Contractor") has executed an agreement (hereinafter called the "Agreement") with the National Highways & Infrastructure Development Corporation Limited, (hereinafter called the "Authority") for the "Construction of 2 Nos. of Major Bridge at Km. 508+414 and Km 523+271 in Jhanji to Demow section of NH- 37(Old) in State of Assam in FY:25-26", subject to and in accordance with the provisions of the Agreement.

(B) In accordance with the provisions of the Conditions of Particular Application – Part II, Sub Clause 60.6 ("Mobilization Advance"), the Authority shall make to the Contractor an interest bearing (herein after called "Advance Payment"); and that the Advance Payment shall be made in two installments subject to the Contractor furnishing an irrevocable and unconditional Insurance Surety Bond by Insurance Company of such instalment to remain effective till the complete and full repayment of the installment of the Advance Payment as security for compliance with its obligations in accordance with the Agreement. The amount of {first/second} installment of the Advance Payment is Rs. . .. - - cr. (Rupees - - - crore) and the amount of this Insurance Surety Bond is Rs. --•--- cr. (Rupees ----- crore) (the "Guarantee Amount").

(C) We... through our branch at .... (the "Insurance Company" have agreed to furnish this Insurance Surety Bond (hereinafter called the "Guarantee") for the Guarantee Amount.
NOW, THEREFORE, the Insurance Company hereby, unconditionally, and irrevocably, guarantees and affirms as follows:

(1) The Insurance Company hereby unconditionally and irrevocably guarantees the due and faithful repayment on time of the aforesaid instalment of the Advance Payment under and in accordance with the Agreement, and agrees and undertakes to pay to the authority, upon its mere first written demand, and without any demur, reservation, recourse, contest, or protest, and without any reference to the Contractor, such sum or sums up to an aggregate sum of the Guarantee Amount as the Authority shall claim, without the Authority being required to prove or to show grounds or reasons for its demand and/or for the sum specified therein.

A letter from the Authority, under the hand of an officer not below the rank of [General Manager in the NHIDCL], that the Contractor has committed default in the due and faithful performance of all or any of its obligations for the repayment of the instalment of the Advance Payment under and in accordance with the Agreement shall be conclusive, final, and binding on the Insurance Company. The Insurance Company further agrees that the Authority shall be the sole judge as to whether the Contractor is in default in due and faithful performance of its obligations during and under the Agreement and its decision that the Contractor is in default shall be final and binding on the Insurance Company, notwithstanding any differences between the Authority and the Contractor, or any dispute between them pending before any court, tribunal, arbitrators or any other authority or body, or by the discharge of the Contractor for any reason whatsoever.

(2) In order to give effect to this Insurance Surety Bond, the Authority shall be entitled to act as if the Insurance Company were the principal debtor and any change in the constitution of the Contractor and/or the Insurance company, whether by their absorption with any other body or corporation or otherwise, shall not in any way or manner affect the liability or obligation of the Insurance Company under this Guarantee.

(3) It shall not be necessary, and the Insurance Company hereby waives any necessity, for the Authority to proceed against the Contractor before presenting to the Insurance Company its demand under this Guarantee.

(4) The Authority shall have the liberty, without affecting in any manner the liability of the Insurance Company under this Guarantee, to vary at any time, the terms and conditions of the Advance Payment or to extend the time or period of its repayment or to postpone for any time, and from time to time, any of the rights and powers exercisable by the Authority against the Contractor, and either to enforce or forbear from enforcing any of the terms and conditions contained in the Agreement and/or the securities available to the Authority, and the Insurance Company shall not be released from its liability and obligation under these presents by any exercise by the Authority of the liberty with reference to the matters aforesaid or by reason of time being given to the Contractor or any other forbearance, indulgence, act or omission on the part of the Authority or of any other matter or thing whatsoever which under any law relating to sureties and guarantors would but for this provision have the effect of releasing the Insurance Surety Bond from its liability and obligation under this Guarantee and the Insurance Company hereby waives all of its rights under any such law.

(5) This Insurance Surety Bond is in addition to and not in substitution of any other guarantee or security now or which may hereafter be held by the Authority in respect of or relating to the Advance Payment.

(6) Notwithstanding anything contained herein before, the liability of Insurance Company under this Guarantee is restricted to the Guarantee Amount and this Guarantee will remain in force for the period specified in paragraph 8 below and unless a demand or claim in writing is made by the Authority on the Insurance Company under this Guarantee all rights of the Authority under this Insurance Surety Bond shall be forfeited and the Insurance Company shall be relieved from its liabilities hereunder.

(7) The Insurance Surety Bond shall cease to be in force and effect on***. Unless a demand or claim under this Guarantee is made in writing on or before the aforesaid date, the Insurance Company shall be discharged from its liabilities hereunder.

(8) The Insurance Company undertakes not to revoke this Guarantee during its currency, except with the previous express consent of the Authority in writing, and declares and warrants that it has the power to issue this Guarantee and the undersigned has full powers to do so on behalf of the Insurance Company.

(9) Any notice by way of request, demand or otherwise hereunder may be sent by post addressed to the Insurance Company at its above referred branch, which shall be deemed to have been duly authorised to receive such notice and to effect payment thereof forthwith, and if sent by post it shall be deemed to have been given at the time when it ought to have been delivered in due course of post and in proving such notice, when given by post, it shall be sufficient to prove that the envelope containing the notice was posted and a certificate signed by an officer of the Authority that the envelope was so posted shall be conclusive.

(10) This Insurance Surety Bond shall come into force with immediate effect and shall remain in force and effect up to the date specified in paragraph 8 above or until it is released earlier by the Authority pursuant to the provisions of the Agreement.

Signed and sealed this .... day of …….20……... at…….

SIGNED, SEALED AND DELIVERED

For and on behalf of the Insurance Company by:

(Signature)
(Name)
(Designation)
(Code Number)
(Address)

NOTES:

(i) The Insurance Surety Bond should contain the name, designation, and code number of the officers) signing the Insurance Surety bond.

(ii)The Address, telephone number and other detail of the head of the Insurance Company as well as issuing branch should be mentioned on the covering letter of issuing branch.

SECTION – IX

FORM OF AGREEMENT

THIS AGREEMENT made the day of_____,2025 between **National Highways &**

Infrastructure Development Corporation Ltd., New Delhi, (hereinafter called "the Employer") of the one part and M/s._____(Name of the Selected Bidder andAddress of its Registered Office) (hereinafter called "the Contractor") of the other part.

WHEREAS the Employer is desirous that certain works should be executed by the Contractor, viz [Name of the Project] hereinafter referred to as the "**Works**" and has accepted the bid by the Contractor for the execution and completion of such works and the remedying of any defects therein at a contract price of Rs._____). (Rupees _____)

AS WHEREAS the Contractor has accepted and agreed to undertake such Works and has furnished Performance Security pursuance to Sub-Clause 10.1 of the Condition of Particular Application – Part II (Section III, Vol. I)

AND WHEREAS the Contractor by a deed of undertaking dated has agreed to abide by all the terms of the bid, including but not limited to the amount quoted for the execution of Contract, as stated in the bid, and also to comply with such terms and conditions as may be required from time to time.

AND WHEREAS pursuant to the bid submitted by the Contractor vide letter dated ---------- (hereinafter referred to as the "the Offer"), the employer has by his letter of acceptance no.---------- accepted the offer submitted by the Contractor for the execution and completion of such works and the remedying of any defects therein, on terms and conditions in accordance in the conditions of particular application and condition included hereinafter;

AND WHEREAS the contractor has agreed to undertake such works and has furnished a performance security pursuant to clause 33 of the instructions to bidders (Section-I).

NOW THIS AGREEMENT WITNESSETH as follows:

1. In this Agreement, words and expressions shall have the same meanings as arerespectively assigned to them in the Conditions of Contract hereinafter referred to.
2. The following documents shall be deemed to form and be read and construed as partof this Agreement, viz.:
   - (a) the Contract Agreement;
   - (b) the Letter of Acceptance;
   - (c) the said Bid and Appendix to Bid;
   - (d) the Conditions of Particular Application (PartII);
   - (e) the General Conditions of Contract (PartI);
   - (f) the Technical Specifications
3. In consideration of the payments to be made by the Employer to the Contractor as hereinafter mentioned, the Contractor hereby covenants with the Employer to execute and complete the Works and remedy any defects therein in conformity in all respects with the provisions of the Contract.

4. The Employer hereby covenants to pay the Contractor in consideration of the execution and completion of the Works and the remedying of defects therein the Contract Price or such other sum as may become payable under the provisions of the Contract at the times and in the manner prescribed by the Contract.

IN WITNESS whereof the parties hereto have caused this Agreement to be executed the dayand year first before written.

Signed, sealed, and delivered by the said Employer and the Contractor in the presence of:

WITNESSES:

On behalf of **National Highways & Infrastructure Development Corporation Ltd**	On behalf of M/s.
1. 2.	1. 2.

Binding Signature of the Employer :Binding Signature of the Contractor :

SECTION-IX

INTEGRITY PACT

BETWEEN

NATIONAL HIGHWAYS & INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED (NHIDCL) hereinafter referred to as **"The Principal"** (which expression, unless repugnant to the context thereof, shall mean and include its legal representatives, heirs and assigns)

AND

.....hereinafter referred to as **"The Bidder/Contractor"** (which expression, unless repugnant to the context thereof, shall mean and include its legal representatives, heirs and assigns)

Preamble

The Principal intends to award, under laid down organizational procedures, contract(s) for **(Name of the contract) (herein after referred to as the 'Project').** The Principal necessarily requires full compliance with all relevant laws of the land, rules, regulations, economic use of resources and of fairness/transparency in its relations with its Bidder(s) and/or Contractor(s).

In order to achieve these goals, the Principal may appoint an Independent External Monitor (IEM), who will monitor the tender process and the execution of the contract for compliance with the Integrity Pact by all parties concerned, for all works covered in the Project.

Section1-Commitments of the Principal

(1) The Principal commits itself to take all measures necessary to prevent corruption and to observe the following principles:-

a. No employee of the Principal, personally or through family members or through any other channel, will in connection with the tender for or the execution of a contract, demand, take a promise for or accept, for self or third person, any material or immaterial benefit,which the person is not legally entitled to.

b. The Principal will, during the tender process treat all Contractor(s)/Bidder(s) with equity and reason. The Principal will in particular, before and during the tender process, provide to all Contractor(s)/Bidder(s) the same information and will not provide to any Contractor(s)/Bidder(s), confidential/additional information through which the Contractor(s)/Bidder(s) could obtain an advantage in relation to the tender process or the contract execution.

c. The Principal will exclude from the process all known prejudiced persons. **The Principal shall** obtain bids from **only** those parties who have been short-listed or pre qualified or through a process of open advertisement/web publishing or any combination thereof.

(2) If the Principal obtains information on the conduct of any of its employees, Contractor(s) and/or Bidder(s), which is a criminal offence under the IPC/PC Act, or if there be a substantive suspicion in this regard, the Principal will inform the Chief Vigilance Officer and **subject to its discretion,** can **additionally** initiate disciplinary actions.

(3) The Principal will enter in to agreements with identical conditions with all Contractor(s)/Bidder(s) **for the different Work Packages in the aforesaid Project.**

(4) The Principal will disqualify from the tender process all Contractor(s)/Bidder(s) in the range of Rs.50 Crore and above, who do not sign this Pact or violate its provisions.

Section 2: Commitments of the Bidder(s)/Contractor(s)

(1) The Bidder(s)/Contractor(s) commit(s) itself/themselves to take all measures necessary to prevent corruption. He commits himself to observe the following principles during his participation in the tender process and during the contract execution.

(a) The Bidder(s)/Contractor(s) will not, directly or through any other person or firm offer, promise or give to any of the Principal's employees involved in the tender process or the execution of the contract any material or other benefit which he/she is not legally entitled to, in order to obtain in exchange any advantage, of any kind whatsoever, during the tender process or during the execution of the contract.

(b) The Bidder(s)/ Contractor(s) will not enter with other Bidders in to any undisclosed agreement or understanding, whether formal or in formal. This applies in particular to prices, specifications, certifications, subsidiary contracts, submission or non- submission of bids or any other actions to restrict competitiveness or to introduce cartelization in the bidding process.

(c) The Bidder(s)/Contractor(s) will not use improperly, for purpose of competition or personal gain, or pass on to others, any information or document provided by the Principal as part of the business relationship, regarding plans, technical proposals and business details,including information contained or transmitted electronically.

(d) The Bidder(s)/Contractor(s) of foreign origin shall disclose the name and address of the Agents/representatives in India, if any. Similarly the Bidder(s)/Contractor(s) of Indian Nationality shall furnish the name and address of the foreign principals, if any. Further details as mentioned in the "Guidelines on Indian Agents of Foreign Suppliers" shall be disclosed by the Bidder(s)/Contractor(s). Further, as mentioned in the Guidelines all the payments made to the Indian agent/representative have to be in Indian Rupees only. Copy of the "Guidelines on Indian Agents of Foreign Suppliers" is annexed and marked as Annex-"A".

(e) The Bidder(s)/ Contractor(s) will, when submitting his bid, disclose any and all payments he has made, is committed to or intends to make to agents, brokers or any other intermediaries in connection with the award of the contract.

(2) The Bidder(s)/Contractor(s) will not instigate third persons to commit offences outlined above or be an accessory to such offences.

Section 3: Disqualification from tender process and/or exclusion from future contracts.

(1) If the Bidder(s)/ Contractor(s),before awarding the Project or during execution has committed a transgression by violating Section2 above or in any other form so as to put his reliability or credibility in question, the Principal, at its sole discretion, is entitled to disqualify the Bidder(s)/Contractor(s) from the tender process or terminate the contract, if already awarded, for that reason, without prejudice to any other legal rights or remedies available to the Principal under the relevant clauses of GCC/SCC of the tender/contract.

(2) If the Contractor(s)/Bidder(s) has committed a transgression through a violation of any of the terms under Section2 above or in any other form such as to put his reliability or credibility into question, the Principal will also been titled to exclude such Contractor(s)/Bidder(s) from future tenders/contract award processes. The imposition and duration of the exclusion will be determined by the Principal, keeping in view the severity of the transgression. The severity will be determined by the circumstances of the case, in particular, the number of transgressions and/or the amount of the damage.

(3) Ifitisobservedafterpaymentoffinalbillbutbeforetheexpiryofvalidity of Integrity Pact that the contractor has committed a transgression, through a violation of any of the terms under Section 2 above or any other term(s) of this Pact, during the execution of contract, the Principal will be entitled to exclude the contractor from further tender/contract award processes.

(4) The exclusion will be imposed for a minimum period of six (6) months and a maximum period of three (3) years.

(5) If the Contractor(s)/Bidder(s) can prove that he has restored/recouped the damage to the Principal caused by him and has installed a suitable corruption prevention system, the

Principal may, at its sole discretion, revoke or reduce the exclusion period before the expiry of the period of such exclusion.

Section 4: Compensation for Damages

(1) If the Principal has disqualified the Bidder(s)/Contractor(s) from the tender process prior to the awarding of the Project according to Section 3, the Earnest Money Deposit (BID SECURITY)/ Bid Security furnished, if any, along with the offer, as per terms of the Invitation of Tender, shall also be forfeited. The Bidder(s)/Contractor(s)understands and agrees that this will be in addition to the disqualification and exclusion of the Contractor (s)/Bidder(s) as may be imposed by the Principal, in terms of Section 3above.

(2) If, at any time after the awarding of the Project, the Principal has terminated the contractaccordingtoSection3, or if the Principal is entitled to terminate the contract according to Section3, the Security Deposit/Performance Bank Guarantee furnished by the contractor, if any, as per the terms of the NIT/Contract shall be forfeited without prejudice to any other legal rights and remedies available to the Principal under the relevant clauses of General/ Special Conditions of Contract.

The Contractor(s)/Bidder(s) be in addition to the Bidder(s)/Contractor(s), as terms of Section3 *above.* Understands and agrees that this will disqualification and exclusion of the maybe imposed by the Principal in

Section 5: Previous transgression

(1) The Bidder(s)/Contractor(s) here in declare that it has committed no transgressions in the last 3 years with any other Company in any country conforming to the anticorruption approach as detailed herein or with government/any other Public Sector Enterprise in India that could justify its exclusion from the tender process.

(2) If at any point of time during the tender process or after the awarding of the Contract, it is found that the Bidder(s)/Contractor(s) has made an incorrect statement on this subject, he can be disqualified from the tender process or if, as the case maybe, that the Contract, is already awarded, it will be terminated for such reason and the Bidder(s)/Contractor(s) can be blacklisted in terms of Section 3above.

Section 6: Independent External Monitor/Monitors

(1) The Principal shall, in case where the Project Value is in excess of Rs.50 Crore and above, appoint competent and credible Independent External Monitor(s) with clearance from Central Vigilance Commission. The Monitor shall review independently, the cases referred to it to assess whether and to what extent the parties concerned comply with the obligations under this Integrity Pact.

(2) In case of non-compliance of the provisions of the Integrity Pact, the complaint/non-compliance is to be lodged by the aggrieved party with the Nodal Officer only, as shall be appointed by the MD, NHIDCL. The Nodal Officer shall refer the complaint/non-compliance so received by him to the aforesaid Monitor.

(3) The Monitor will not be subject to any instructions by the representatives of the

parties and will perform its functions neutrally and independently. The Monitor shall report to the Managing Director, NHIDCL.

(4) The Bidder(s)/Contractor(s) accepts that the Monitor shall have the right to access, without restriction, all Project documentation of the Principal including that provided by the Contractor. The Contractor will also grant the Monitor, upon his/her request and demonstration of a valid interest, unrestricted and unconditional access to its project documentation. The Monitor is under contractual obligation to treat the information and documents of the Bidder (s) /Contractor(s) with confidentiality.

(5) The Principal will provide to the Monitor, sufficient information about all meetings among the parties related to the Project, provided such meetings could have an impact on the contractual relations between the Principal and the Contractor.

(6) As soon as the Monitor notes, or believes to note, a violation of this Pact, he will so inform the Principal and request the Principal to discontinue and/or take corrective action, or to take other relevant action (s). The Monitor can in this regard submit non- binding recommendations. However, beyond this, the Monitor has no right to demand from the parties that they act in a specific manner and/or refrain from action and/or tolerate action.

(7) The Monitor will submit a written report to the MD, NHIDCL within 4 to 6 weeks from the date of reference or intimation to it and, should the occasion arise, submit proposals for corrective actions for the violation or the breaches of the provisions of the agreement noticed by the Monitor.

(8) If the Monitor has reported to the MD, NHIDCL, of a substantiated suspicion of an offence under relevant IPC/PC Act, and the MD, NHIDCL, has not, within the reasonable time taken visible action to proceed against such offence or reported it to the Chief Vigilance Officer, the Monitor may also transmitthis information directly to the Chief Vigilance Officer, NHIDCL / MD.

(9) The word 'Monitor' means Independent External Monitor and includes both singular and plural forms.

Section 7: Criminal Contractor(s)/charges against violating Bidder(s) /Subcontractor(s)

If the Principal obtains knowledge of conduct of a Bidder/Contractor or any employee or a representative or an associate of a Bidder/Contractor, which constitutes a criminal offence under the IPC/PC Act, or if the Principal has substantive suspicion in this regard, the Principal will forth within form the same to the Chief Vigilance Officer, NHIDCL/MD.

Section 8: Duration of the Integrity Pact

This Pact shall come into force when both parties have legally signed it. The Pact shall expire, in case of the Contractor(s), 3(three) months after the last payment under the Contract is made and in case of the unsuccessful Bidder(s), 2 (two) months after the contract for the project has been awarded.

If any claims is made/lodged during this time, the same shall be binding and continue to be valid despite the lapse of this pact as specified above, unless it is discharged/determined by MD of NHIDCL.

The Bidder(s)/Contractor(s), however, understands and agrees that even upon the completion of the Project and/or the last payment under the Contract having been made, if any transgression/violation of the terms of this Pact comes/is brought to the notice of the Principal, it may, subject to its discretion, blacklist and/or exclude such Bidder(s)/Contractor(s) as provided for in Section 3, without prejudice to any other legal right or remedy so available to the Principal.

Section 9: Other provisions

(1) This Agreement is subject to Indian Law. Place of performance and jurisdiction is the Registered Office of the Principal, i.e. New Delhi.

(2) Changes and supplements as well as termination notices need to be made in writing.

(3) If the Bidder/Contractor is a partnership or a consortium, this Agreement must be signed by all partners or consortium members.

(4) Should one or several provisions of this Agreement turn out to be invalid, the remainder of this Agreement shall remain valid and binding. In such a case, the parties will strive to come to an Agreement in accordance to their original intentions.

(5) Wherever he or his as indicated in the above sections, the same may be read as he/she or his/her, as the case maybe.

(For & On behalf of the Principal)	(For & On behalf of Bidder/Contractor)
(Office Seal)	(Office Seal)
Place-	Place-
Date-	Date-

Witness1:

(Name & Address)

Witness2:

(Name & Address)

SALIENT NOTE SPECIFIC TO THE CONTRACT

1. Strict quality controls (including testing) shall be ensured at every stage of construction as per the relevant IRC/MoRT&H/BIS Specifications. The Contractor must ensure that highest standard quality standards at site.
2. Detailed method statements and checklists shall be submitted for every activity of the construction well before start of the activity at the site and get it approved from the Engineer in Charge. The checklist shall be filled during the activity and submitted to the Engineer in charge after the completion of the activity, which shall be mandatory for processing the bill of the Contractor.
3. Integrity testing of the piles to be done by the agency selected by the Employer. The payment shall be released by the Employer directly to the testing agency, by deducting from the running bills of the Contractor, on actual market rates, irrespective of the rates quoted by the contractor.
4. HYSD Reinforcement and prestressing steel shall be purchased from the reputed manufacturers such as Tata/ Sail or equivalent only. The manufacturers having the product showing inconsistent results shall not be allowed to be used.
5. Concrete surface finish shall be paid specific attention. The surface shall be smooth enough at every place (including the location of joints between shuttering plates) and free of any defects/honeycombing/air voids etc.
6. Water cement ratio shall strictly be kept within the limits given in the IRC Specifications. Required slump of concrete shall be achieved using admixtures conforming to IS: 9103.
7. Inside surface of forms/shuttering plates shall be coated with release agent (such as Reebol of M/S Fosroc or approved equivalent) to prevent the adhesion of concrete with the formwork/shuttering plates. Release agent shall be applied as per the recommendations of the supplier. Use of Mobil Oil for this purpose is strictly prohibited.
8. Joints between the shuttering plates shall be water tight and no leakage of cement slurry shall be permitted through the joints.
9. Bearings shall be installed under the supervision of the bearing manufacturer who shall certify the correct installation of the bearings. The certificate from manufacturer shall be pre requisite for release of the payments.
10. Expansion joints shall be installed under the supervision of the expansion joint supplier who shall certify the correct installation of the expansion joints. The certificate from manufacturer shall be pre requisite for release of the payments.
11. Filling behind abutments shall conform to IRC:78 Specifications i.e. it shall be granular material, preferably soil group GW/GP/GM/SW/HP according to is:1498-1970.
12. Painting (if done) of concrete surfaces to be done with Anti Carbonation paints, as specified in the BOQ.

Section X

Schedules for Supplementary Information
PAGE 1-7

SECTION X

Schedules for Supplementary Information

Schedule- A	**:**	**HANDING OVER OF SITE**
Schedule- B	**:**	**DETAILS OF KEY EQUIPMENT AND MACHINERY**
Schedule- C	**:**	**DETAILS OF KEY PERSONNEL PROPOSED FOR THE PROJECT**
Schedule- D	**:**	**PROPOSED SUBCONTRACTORS**
Schedule- E	**:**	**DELETED**
Schedule- F	**:**	**WORK PROGRAMME**

SECTION X

SCHEDULE - A HANDING OVER OF SITE

Time schedule	*Length to be handed over* (km)
Within the time specified for commencementof work in the Appendix to bid in accordance with Sub Clause 41.1	**Full Length**

SECTION X

SCHEDULE - B

DETAILS OF KEY EQUIPMENT ANDMACHINERY

Name of the Bidder :

MINIMUM PLANT AND EQUIPMENT TO BE OWNED/LEASEDBY THE CONTRACTOR

Whereas it is entirely the responsibility of the Contractor to deploy sufficient construction plant and equipment to ensure compliance with its obligations under the Contract. This list constitutes the Employer's estimate of the minimum essential basic holding of construction plant and equipment which the contractor must own or havelong term leasing arrangements :-

Name of the Equipment	Quantity
Tipper/Trucks	8
Hydraulic Excavator /JCB	2
Excavator 1.0 cum bucket capacity	2
Front end Loader	2
RMC Plant	1
Generator set (63/100/250 KVA)	3
Any other equipment required for carrying out work as per Ministry's specification.	
Note: The bidder must upload scanned copy of the documentary evidence in support of his owning/leased/ rented of the above equipments. In case the bidder proposes to hire or take the above equipment on lease, he should, along with the lease/rent agreement, attach the proof of ownership of these equipments with the company/ entity from whom the equipments are proposed to be hired on lease/ rent.	

T = Tonnes *T/hr = Tonnes per hour*

- Any total system for crushing stone aggregate and feeding aggregate fractions in their required proportions into the plant to achieve the desired mix, if such is utilized by the contractor, must be capable of meeting all the requirements of the Specifications under stringent quality control.

Note : The contractors are requested to verify latest position in respect of "Duties on Contractor's equipment" from Department of Revenue, Ministry of Finance, Government of India. (Their attention is also invited to customs notifications wherein customs duty exemption for certain equipments subject to certain conditions, have been made available by Government of India).

SECTION X

SCHEDULE - C

DETAILS OF KEY PERSONNEL PROPOSED FOR THE PROJECT@

Name of the Bidder :

For specific positions essential to contract implementation, bidders shall provide the nameof candidates who qualify to meet the specified requirements stated for each position. The data on their experience shall be supplied in separate sheets for each candidate.

SL. No.	Personnel	Qualification	Particular Experience (minimum requirement)	No. of Persons
1	Project Manager	B.E (Civil) or equivalent + 10 Years Exp.	5 years on Bridge constructions	1
2	Plant manager	B.E (Mech.) or equivalent + 10 Years Exp.	2-year relevant Exp.	1
3	Site Engineer	B.E (Civil) + 3Years Exp. Or Diploma + 5 Years Exp.	2 years on Bridge constructions	2
4	Quantity Surveyor	B.E. Civil + 3Years Exp. Or Dip. Civil. + 5Years Exp.	2 years on Bridge constructions	1
5	Soil and Material Engineer	B.E. Civil+ 5 Year Exp. Or Dip. Civil+ 7year Exp.	2 years on Bridge construction	1
6	Bridge Engineer	B.E (Civil) or equivalent + 10 Years Exp.	5 years on Bridge Constrction	1
			Total	**6**

@The Contractor shall employ the technical personnel named above or other technical persons approved by the Engineer. These numbers as specified in the contract are minimum and contractor has to employ the adequate technical personnel required for execution of works. The Engineer will approve any proposed replacement of technical personnel only if their relevant qualifications and abilities are substantially equal to or better than those of the personnel stated above. If the personnel stated above are not deployed on site by the Contractor within 15 days of issue of notice to proceed with the work, a penalty of Rs 2000/- per day per person shall be levied for next 30 days, beyond which it shall be treated as a breach of Contract and action will be taken as per Clause 63.1. The replacement of Project Manager will be approved by the Employer.

SECTION X

SCHEDULE - D

Deleted

SECTION X

SCHEDULE - E

Deleted

SECTION X SCHEDULE - F

WORK PROGRAMME

Name of the Bidder

Bidders shall submit work programme taking into consideration the work methods, backed with equipment planning and cash flow requirements etc. in sufficient details for assessing the bidder's capability to complete the work in accordance with the specification and time for completion.

This shall cover

i) Site Organisation

ii) Method Statement

iii) Mobilization Schedule (Resources, equipment etc.)

iv) Construction Schedule for completion of the work in accordance with the specifications and project completion time.

v) Others

ss

Name of the Work: Construction of 2 Nos. of Major Bridge at Km. 508+414 and Km 523+271 in Jhanji to Demow section of NH- 37(Old) in State of Assam in FY:25-26

Structure Wise Distribution of Quantities

Sl. No.	Item	Unit	Qty. 523+271	Qty 508+154	Total Qty
1	**LUMPSUM: Taking, exploratory boring 100 mm dia at the location of piers and abutments or for high embankments in approaches in all types of strata as per IRC-78-1983 and section 2400 of specifications. Upto 1.0 m below bed level**	Meter	4.000	5.000	9.00
2	**LUMPSUM:Taking, exploratory boring 100 mm dia at the location of piers and abutments or for high embankments in approaches in all types of strata as per IRC-78-1983 and section 2400 of specifications. Beyond 1.0 m depth upto 5.0 m**	Meter	16.000	20.000	36.00
3	**LUMPSUM:Taking, exploratory boring 100 mm dia at the location of piers and abutments or for high embankments in approaches in all types of strata as per IRC-78-1983 and section 2400 of specifications. Beyond 5.0 m depth**	Meter	180.000	225.000	405.00
4	**APWD SOR-NH-20-21-ITEM NO. 12.37:** **Pile load test on single vertical pile in accordance with IS:2911(Part-IV). i) Initial and Routine load test.**	Ton	4500.000	3600.000	8,100.00
5	**APWD SOR-NH-20-21-ITEM NO. 12.37:** **Pile load test on single vertical pile in accordance with IS:2911(Part-IV). (ii) lateral Load test**	Ton	250.000	250.000	500.00

Name of the Work: Construction of 2 Nos. of Major Bridge at Km. 508+414 and Km 523+271 in Jhanji to Demow section of NH- 37(Old) in State of Assam in FY:25-26

Structure Wise Distribution of Quantities

Sl. No.	Item	Unit	Qty. 523+271	Qty 508+154	Total Qty
6	**APWD SOR-NH-20-21-ITEM NO. 16.55:** **Pile intrigity test:** Integrity testing of all piles by using pile driving analyser or equivalent as approved by Engineerin- Charge and detailed in specification.Test to be carried out by an approved reputed agency.Item to include all incidental work to execute the job.	Each	48.000	68.000	116.00
7	**APWD SOR-NH-20-21-ITEM NO. 12.1 (B):** **Excavation for Structures** Excavation for Structures (Earth work in excavation of foundation of structures as per drawing and technical specification, including setting out, construction of shoring and bracing, removal of stumps and other deleterious matter, dressing of sides and bottom and backfilling with approved material. **(I) (i) Ordinary soil with dewatering by mechanical means (Depth upto 3 m)**	Cum	1382.687	2592.021	3,974.71
8	**APWD SOR-NH-20-21-ITEM NO. 12.1 (B):** **Excavation for Structures** Excavation for Structures (Earth work in excavation of foundation of structures as per drawing and technical specification, including setting out, construction of shoring and bracing, removal of stumps and other deleterious matter, dressing of sides and bottom and backfilling with approved material. **(I) (ii) Ordinary soil (Depth 3 m to 6 m)**	Cum	921.600	1665.750	2,587.35
9	**APWD SOR-NH-20-21-ITEM NO. 12.1 (B):** **Excavation for Structures** Excavation for Structures (Earth work in excavation of foundation of structures as per drawing and technical specification, including setting out, construction of shoring and bracing, removal of stumps and other deleterious matter, dressing of sides and bottom and backfilling with approved material. **(I) (iii) Ordinary soil (Depth above 6m)**	Cum	0.000	293.040	293.04

Name of the Work: Construction of 2 Nos. of Major Bridge at Km. 508+414 and Km 523+271 in Jhanji to Demow section of NH- 37(Old) in State of Assam in FY:25-26

Structure Wise Distribution of Quantities

Sl. No.	Item	Unit	Qty. 523+271	Qty 508+154	Total Qty
10	**APWD SOR-NH-20-21-ITEM NO. 12.8 N (a):** **Plain/Reinforced cement concrete**, in open foundation complete as per drawing and technical specification including steel shuttering formwork **Without Plasticiser, PCC Grade M-15**	Cum	29.366	33.622	62.99
11	**APWD SOR-NH-20-21-ITEM NO. 12.39:** **Levelling course for Pile cap PCC in M-15** below Pile cap as per drawing and as per section 1100 and 1700.	Cum	103.746	116.663	220.41
12	**APWD SOR-NH-20-21-ITEM NO. 12.8 (N) B:** **Providing and laying Plain/Reinforced cement concrete in open foundation** including form work shuttering etc. complete as per drawing and technical specifications and as per relevant clauses of sections 1500, 1700 & 2100 **PCC M-20**	Cum	81.847	100.157	182.00
13	**APWD SOR-NH-20-21-ITEM NO. 12.25(B):** **Bored cast-in-situ M35 grade R.C.C. pile** excluding reinforcement complete as per drawing and technical specifications and removal of excavated earth with all lifts and lead upto 1000 m. including providing plasticiser (Masterplast PL-1/SPL-2 or equivalent), air entraining and water reducing plasticiser (Masterplast PAE or equivalent) and accelerating plasticiser (Masterplast ACPL or equivalent) conforming to IS-9103-1999 (Pile diameter- 1200 mm)	Meter	1760.000	2482.000	4,242.00
14	**APWD SOR-NH-20-21-ITEM NO. 12.38(I) D 1:** **Cement concrete for reinforced concrete in pile cap** complete as per drawing and Technical Specification and as per relevant clauses of sections 1100, 1500 & 1700. **RCC Grade M35**	Cum	783.000	1131.354	1,914.35
15	**APWD SOR-NH-20-21-ITEM NO. 13.5 (N):** **Plain/Reinforced cement concrete in sub-structure** complete as per drawing and technical specifications and steel shuttering formwork **H (a) Case II: RCC M-35 UPTO 5 MTR.**	Cum	262.227	489.220	751.45

Name of the Work: Construction of 2 Nos. of Major Bridge at Km. 508+414 and Km 523+271 in Jhanji to Demow section of NH- 37(Old) in State of Assam in FY:25-26

Structure Wise Distribution of Quantities

Sl. No.	Item	Unit	Qty. 523+271	Qty 508+154	Total Qty
16	**APWD SOR-NH-20-21-ITEM NO. 13.5 (N):** **Plain/Reinforced cement concrete in sub-structure** complete as per drawing and technical specifications and steel shuttering formwork **H (b) Case II: RCC M-35 5 TO 10 MTR.**	Cum	146.066	261.514	407.58
17	**APWD SOR-NH-20-21-ITEM NO. 13.5 (N):** **Plain/Reinforced cement concrete in sub-structure** complete as per drawing and technical specifications and steel shuttering formwork **H (c) Case II: RCC M-35 10 TO 15 MTR.**	Cum	152.450	197.140	349.59
18	**APWD SOR-NH-20-21-ITEM NO. 13.5 (N):** **Plain/Reinforced cement concrete in sub-structure** complete as per drawing and technical specifications and steel shuttering formwork : **Pedestal M40** **H (c) Case II: RCC M-40 10 TO 15 MTR.**	Cum	31.550	34.704	66.25
19	**APWD SOR-NH-20-21-ITEM NO. 14.1 E Case II, (i) (c):** **Plain/Reinforced cement concrete in sub-structure** complete as per drawing and technical specifications and steel shuttering formwork : **Pedestal M40** **RCC M-40 10 TO 15 MTR.**	Cum	454.167	595.905	1,050.07
20	**APWD SOR-NH-20-21-ITEM NO. 14.1 G , (i) (c):** **Concrete in Superstructure (Girder) including launching** **PSC M-50 ABOVE 15 MTR.**	Cum	638.005	751.660	1,389.66
21	**APWD SOR-NH-20-21-ITEM NO. 14.10:** **Approach slab** **PCC M15 Grade** leveling course below approach slab complete as per drawing and Technical specification and as per relevant clauses of section 1700.	Cum	13.125	13.125	26.25

Name of the Work: Construction of 2 Nos. of Major Bridge at Km. 508+414 and Km 523+271 in Jhanji to Demow section of NH- 37(Old) in State of Assam in FY:25-26

Structure Wise Distribution of Quantities

Sl. No.	Item	Unit	Qty. 523+271	Qty 508+154	Total Qty
22	**APWD SOR-NH-20-21-ITEM NO. 14.11:** **Approach slab** Reinforced cement concrete non-structural approach slab (Grade of concrere M 30) as per MOST standard drawing including reinforcement and formwork complete as per drawing and Technical specification and as per relevant clauses of section 1500, 1600, 1700 and clause 2704 of specifications.	Cum	30.625	30.625	61.25
23	**APWD SOR-NH-20-21-ITEM NO. 12.40:** **Reinforcement (HYSD Bar)** **Reinforcement in Foundation**: Supplying, fitting and placing un-coated HYSD bar reinforcement in the foundation, complete as per drawing and technical specifications and as per relevant clauses of section 1600 **TMT Corrosion Resistant Steel (CRS) reinforcement** **bar of Fe-500 N/mm2**	Mt	494.988	698.452	1,193.44
24	**APWD SOR-NH-20-21-ITEM NO. 13.6:** **Reinforcement in Sub structure:** Supplying, fitting and placing HYSD bar reinforcement in sub- structure complete as per drawing and technical specifications and as per relevant clause of section 1600. **Super Ductile (SD) TMT reinforcement bar of Fe-500 N/mm2**	Mt	142.064	193.619	335.68
25	**APWD SOR-NH-20-21-ITEM NO. 14.2:** **Reinforcement in Super structure:** Supplying, fitting and placing HYSD bar reinforcement in super- structure complete as per drawing and technical specifications as per relevant clauses of section 1600 **Super Ductile (SD) TMT reinforcement bar of Fe-500 N/mm2**	Mt	223.787	280.381	504.17
26	**APWD SOR-NH-20-21-ITEM NO. 14.3:** **High tensile steel wires/strands** including all accessories for stressing, stressing operations and grouting complete as per drawing and Technical Specifications and as per relevant clauses of section 1800.	Tonne	63.800	75.166	138.97

Name of the Work: Construction of 2 Nos. of Major Bridge at Km. 508+414 and Km 523+271 in Jhanji to Demow section of NH- 37(Old) in State of Assam in FY:25-26

Structure Wise Distribution of Quantities

Sl. No.	Item	Unit	Qty. 523+271	Qty 508+154	Total Qty
27	**APWD SOR-NH-20-21-ITEM NO. 8.22 ii:** **Reinforced Cement Concrete Crash Barrier** Providing of an Reinforced cement concrete crash barrier at the edges of the road, approaches to bridge structures and medians, constructed with M-40 grade concrete with HYSD reinforcement conforming to IRC:21 and dowel bars 25 mm dia, 450 mm long at expansion joints filled with pre-moulded asphalt filler board, keyed to the structure on which it is built and installed as per design given in the enclosure to MoRT&H circular No. RW/NH - 33022/1/94-DO III dated 24 June 1994 as per dimensions in the approved drawing and at locations directed by the Engineer, all as specified. M 40 grade concrete	Rmt	273.220	346.400	619.62
28	**APWD SOR-NH-20-21-ITEM NO. 14.6:** Construction of precast RCC railing of M30 Grade, aggregate size not exceeding 12 mm, true to line and grade, tolurence of vertical RCC post not to exceed 1 in 500, centre to centre spacing between vertical post not to exceed 2000 mm, leaving adequat space between vertical posts for expansion, complete as per approved drawings and technical specifications.	Meter	136.610	173.200	309.81
29	**APWD SOR-NH-20-21-ITEM NO. 13.14:** **Bearings** Supplying, fitting and fixing in position true to line and level elastomeric bearing conforming to IRC: 83 (Part-II) section IX and clause 2005 of MoRTH specifications complete including all accessories as per drawing and Technical Specifications.	Cubic Cm	234000.000	306000.000	5,40,000.00
30	**APWD SOR-NH-20-21-ITEM NO. 13.16:** **Bearings** Supplying, fitting and fixing in position true to line and level POT-PTFE bearing consisting of a metal piston supported by a disc or unreinforced elastomer confined within a metal cylinder, sealing rings, dust seals, PTFE surface sliding against stainless steel mating surface, completre assembly to be of cast steel/fabricated structural steel, metal and elastomer elements to be as per IRC: 83 part-I & II respectively and other parts conforming to BS: 5400, section 9.1 & 9.2 and clause 2006 of MoRTH Specifications complete asper drawing and approved technical specifications.	Tonne Capacity	12000.000	16000.000	28,000.00

Name of the Work: Construction of 2 Nos. of Major Bridge at Km. 508+414 and Km 523+271 in Jhanji to Demow section of NH- 37(Old) in State of Assam in FY:25-26

Structure Wise Distribution of Quantities

Sl. No.	Item	Unit	Qty. 523+271	Qty 508+154	Total Qty
31	**APWD SOR-NH-20-21-ITEM NO. 14.22:** **Expansion joint** **Strip Seal Expansion Joint** Providing and laying of a strip seal expansion joint catering to maximum horizontal movement upto 70 mm, complete as per approved drawings and standard specifications to be installed by the manufacturer/supplier or their authorised representative ensuring compliance to the manufacturer's instructions for installation.	Meter	50.000	62.500	112.50
32	**APWD SOR-NH-20-21-ITEM NO. 14.9:** **Drainage Spouts** complete as per MOST standard drawing and Technical specification and as per clause 2705 of specifications.	No.	53.000	70.000	123.00
33	**APWD SOR-NH-20-21-ITEM NO. 13.8:** **Providing weep holes** in Brick masonry/Plain/Reinforced concrete abutment, wing wall/return wall with 100 mm dia AC pipe, extending through the full width of the structure with slope of 1V :20H towards drawing foce. Complete as per drawing and Technical specifications	Meter	69.607	185.000	254.61
34	**APWD SOR-NH-20-21-ITEM NO. 13.9:** **Back filling behind abutment**, wing wall and return wall complete as per drawing and Technical specification and as per relevant clauses 305 of specifications and as per appendix 6 of IRC-78. **A. Granular material**	Cum	994.414	1754.123	2,748.54
35	**APWD SOR-NH-20-21-ITEM NO. 15.4 (A):** **Providing and laying Pitching on slopes** laid over prepared filter media including boulder apron laid dry in front of toe of embankment complete as per drawing and Technical specifications stone boulders	Cum	43.896	89.303	133.20

Name of the Work: Construction of 2 Nos. of Major Bridge at Km. 508+414 and Km 523+271 in Jhanji to Demow section of NH- 37(Old) in State of Assam in FY:25-26

Structure Wise Distribution of Quantities

Sl. No.	Item	Unit	Qty. 523+271	Qty 508+154	Total Qty
36	**APWD SOR-NH-20-21-ITEM NO. 15.5:** **Filter Media :** Providing and laying suitable designed Filter material underneath pitching in slopes complete as per drawing and Technical specification	Cum	10.974	22.326	33.30
37	**APWD SOR-NH-20-21-ITEM NO. 13.10:** **Providing and laying of Filter media** with granular materials/stone crushed aggregates satisfying the requirements laid down in clause 2504.2.2 of MoRTH specifications to a thickness of not less than 600 mm with smaller size towards the soil and bigger size towards the wall and provided behind entire surface after abutment, return wall and wing wall to the full height compacted to a firm condition complete as per drawing and technical specification.	Cum	71.859	113.546	185.40
38	**APWD SOR-NH-20-21-ITEM NO. 2.4 II B:** **Dismantling of Structures** Dismantling of existing structures like culverts, bridges, retaining walls and other structure comprising of masonry, cement concrete, wood, steel, including T&P and scaffolding wherever necessary, sorting the dismantled material, disposal of unserviceable material and stacking the serviceable material with all lifts and lead upto 1000 metres. Prestressed / Reinforced cement concrete grade M-20 &above a-abutment & Abutment	Cum	1185.100	1617.536	2,802.64
39	**APWD SOR-NH-20-21-ITEM NO. 17.62:** Providing ,fitting,fixing 6mm thick permanent liner during cast in situ pile boring to resist collapse of soil as per drawing and technical specification	Meter	480.000	680.000	1,160.00

Structure Wise Distribution of Quantities

Sl. No.	Item	Unit	Qty. 523+271	Qty 508+154	Total Qty
40	**APWD SOR-NH-20-21-ITEM NO. 16.36:** Providing and applying Deckguard E 2000 or Masterseal 878 of BASf or equivalent a High Performance Anticarbonation Protective Coating System, over the prime surface using an airless spray or roller at right angles to each other @ coverage of 5 Sqm per litre per coat @ 200 microns wft / 100 microns DFT with an intercoat period of minimum 12 hrs @ 35ºC. The coverage per litre for 2 coats shall be 2.5 Sqm @ 200 microns DFT. The protective coating system should have CO2 diffusion resistance not less than 240mm equivalent of air thickness and 60cm equivalent of 30N concrete along with a water vapour transmission resistance of less than 1.0 metre (Taywood method), the coating should have static crack accommodation of not less than 2mm (BRE) and adhesion greater than 1.0 N/mm² as per BS 1881.	Sqm	3017.710	3977.204	6,994.91
41	**APWD SOR-NH-20-21-ITEM NO. 5.14 & 14.5 (A):** Providing and laying **25 mm** thick mastic asphalt wearing course on top of deck slab **including** prime coat with paving grade bitumen meeting the requirements given in table 500-29, prepared by using mastic cooker and laid to required level and slope aftering cleaning the surface, including providing antiskid surface with bitumen pre coated fine grained hard stone shipping of 9.5mm nominal size at the rate of .005 cum per 10sqm and at approximate spacing of 10cm center to center in both directions, pressed into surfaces when temperature of the surfaces not less than 100 degC. , protuding 1mm to 4mm over mastic surfaces, all complete as per clause 515.	Sqm	1620.113	2077.500	3,697.61
42	**APWD SOR-NH-20-21-ITEM NO. 5.14 & 14.5 (B):** **Providing and laying Bituminous wearing course** comprising of tack coat with bitumen emulsion CSS-1h as per APWD SOR item no 5.2 & MOSRT&H Specification Nos 503, **40 mm thick Asphalt concrete** including of close Graded Premix Surfacing(CGPS) materials with Type-a aggregate as per APWD SOR tem no 5.11 & MOSRT&H Specification Nos 512, including all lead and lift as directed.	Sqm	1620.113	2077.500	3,697.61
43	**LUMPSUM: Construction of Coffer Dams** for accommodating the piling rigs and accessories, of sheet piles or Bamboo, including sand bags, and construction of an island around the piling rigs, including all accessories, complete in all respects, as per the direction of the Engineer-in-Charge In-Charge	No.	3.000	4.000	7.00

Name of the Work: Construction of 2 Nos. of Major Bridge at Km. 508+414 and Km 523+271 in Jhanji to Demow section of NH- 37(Old) in State of Assam in FY:25-26

Structure Wise Distribution of Quantities

Sl. No.	Item	Unit	Qty. 523+271	Qty 508+154	Total Qty
44	**LUMPSUM: Construction of a Granular access road** as per requirement at site, for construction of Foundation and Sub structures and launching the Girders, including provision and laying of the required number of Hume Pipes culverts for keeping the river water flow uninterrupted, including MS plates for movement of the crane from the casting yard to the position for launching of the Girders, across the river, complete in all respects, as per direction of Engineer in charge	No.	1.000	1.000	2.00