

ರೈಲು ಮೂಲಸೌಲಭ್ಯ ಅಭಿವೃದ್ಧಿ ಕಂಪನಿ (ಕರ್ನಾಟಕ) ನಿಯಮಿತ

रेल इन्फ्रास्ट्रक्चर डेवलपमेंट कंपनी (कर्नाटक) लिमिटेड

**Rail Infrastructure Development Company (Karnataka) Limited
(K-RIDE)**

(A Joint Venture of Govt. of Karnataka and Ministry of Railways)

TENDER DOCUMENT FOR THE WORK OF

“Baiyyappanahalli - Hosur Doubling Project: Construction of 1 x 76.2m span open web girder (welded through type) for Bridge No. 533, 1 x 18.30m span composite welded girder + 2 x 7.5m RCC box extension for Bridge No. 531, Prestressed concrete (PSC) Box girders for Br. No. 519A (only super structure) and steel girder bridge to carry pipe line for Br No. 516A for new doubling line between Baiyyappanahalli “A” panel and Belandur Road Station in Bangalore Division of South Western Railway”.

TENDER NO. K-RIDE/DL/09/2022

Date:04.05.2022

RAIL INFRASTRUCTURE DEVELOPMENT COMPANY (KARNATAKA) LIMITED

Samparka Soudha, 1st Floor,

Dr. Rajkumar Road,

Opposite Orion Mall,

Rajajinagar 1st Block, Bengaluru-560010

Tel +91-6364890811, +91-6364890808.

Email: praveen.kumar.kride@ka.gov.in



TENDER DOCUMENT

(Through e-Tendering Mode)

Tender for the work of :

“Baiyyappanahalli - Hosur Doubling Project: Construction of 1 x 76.2m span open web girder (welded through type) for Bridge No. 533, 1 x 18.30m span composite welded girder + 2 x 7.5m RCC box extension for Bridge No. 531, Prestressed concrete (PSC) Box girders for Br. No. 519A (only super structure) and steel girder bridge to carry pipe line for Br No. 516A for new doubling line between Baiyyappanahalli “A” panel and Belandur Road Station in Bangalore Division of South Western Railway”.

TENDER NO:	K-RIDE/DL/09/2021, Date: 04.05.2022
TENDER DOCUMENT CAN BE DOWNLOADED FROM	Date: 04.05.2022
DATE OF PRE-BID MEETING	Date : 19.05.2022 IST 15.30 Hrs (at K-RIDE office & also through VC)
LAST DATE AND TIME FOR RECEIPT OF BIDS	Date: 05.06.2022 IST 15:00 Hrs (Only electronic tender permitted.)
DATE AND TIME OF OPENING OF COVER ONE OF TENDER (TECHNICAL BID)	Date: 06.06.2022, IST 15:30 Hrs
PLACE OF OPENING OF COVER ONE OF TENDER (TECHNICAL BID)	The opening of the Technical Bid shall take place at e- procurement portal of K-RIDE i.e., https://eproc.karnataka.gov.in
PLACE OF OPENING OF COVER TWO OF TENDERS (FINANCIAL BID)	The opening of the Financial Bid shall take place at e- procurement portal of K-RIDE i.e., https://eproc.karnataka.gov.in
DATE AND TIME OF OPENING OF COVER TWO OF TENDERS	Will be intimated to the Qualified Tenderers through Karnataka Public Procurement Portal.
ADDRESS FOR COMMUNICATION	GM/Civil (Projects) K-RIDE (Rail Infrastructure Development Company (Karnataka) Limited) #8, 1 st Floor, Samparka Soudha, Dr. Rajkumar Road, Opposite Orion Mall Rajajinagar 1 st Block, BENGALURU Tel – 91-6364890811, +91-6364890808. E Mail – praveen.kumar.kride@ka.gov.in

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SECTION: 1

NOTICE FOR INVITATION FOR TENDERS (IFT)

Rail Infrastructure Development Company (Karnataka) Limited

INVITATION FOR BIDS

(Through e-tendering mode)

Tender Notice No. K-RIDE/DL/09/2022

Date: 04.05.2022

THE RAIL INFRASTRUCTURE DEVELOPMENT COMPANY (KARNATAKA) LIMITED (K-RIDE), having its Corporate office, at #8, 1st Floor, Samparka Soudha, Dr. Rajkumar Road, Opposite Orion Mall, Rajajinagar 1st Block, Bengaluru-560010, India, which is a Joint Venture of Government of Karnataka and Ministry of Railways invites Bids from eligible Bids, for the construction of works detailed in the table below under **Single stage: Two tender document system (Technical Bid and Financial Bid)**.

SL. NO.	NAME OF WORK	APPROX. VALUE OF WORK (IN ₹ CRS)	TENDER SECURITY/EMD	PERIOD OF COMPLETION
1	2	3	4	5
1	“Baiyyappanahalli - Hosur Doubling Project: Construction of 1 x 76.2m span open web girder (welded through type) for Bridge No. 533, 1 x 18.30m span composite welded girder + 2 x 7.5m RCC box extension for Bridge No. 531, Prestressed concrete (PSC) Box girder for Br. No. 519A (only super structure) and steel girder bridge to carry pipe line for Br No. 516A for new doubling line between Baiyyappanahalli “A” panel and Belandur Road Station in Bangalore Division of South Western Railway”.	22.59 Cr	Rs. 22,58,930/-	18 months

NOTE:

1. The Tenderers shall submit the tender through e - procurement portal. Tenderers should scan the registration copy; work done certificate and any other document and submit through online. More information can be had from website www.eproc.karnataka.gov.in

2. On the stipulated date of opening of Tenders, initially, only the Technical Bids are opened through Karnataka Public Procurement Portal. The Technical Bids shall be evaluated by the Employer in accordance with the stipulated Qualification and Evaluation criteria. No amendments or changes to the Technical Bids would be permitted after the opening of Technical Bids.
3. Tenderers who are qualified in the technical evaluation, their Price Bid shall be opened at a date and time advised by the Employer (K-RIDE) through e-tendering portal. The Price Bids are evaluated and the Contract is awarded to the Tenderer whose Tender has been determined to be the lowest evaluated substantially responsive tender.
4. Tenderers are advised to note the eligibility and minimum qualifying criteria specified in the Section 2: Instruction to Tenderers of the tender document.
5. Tenders must be accompanied by a Tender Security/EMD of requisite value. Any Tender received without tender security/EMD shall be summarily rejected.
6. Incomplete Tender submission will be considered non-responsive and such Tenders shall not be considered for further evaluation.
7. Tender Documents can be downloaded free of cost from Karnataka Public Procurement Portal i.e., <https://eproc.karnataka.gov.in> from **04.05.2022** and the Tenders must be submitted online via Karnataka Public Procurement Portal only.

Please note that drawings, if any, referred in the tender document, but not uploaded with the tender document, can be viewed in this office on any working day. The Tenderer can also have a copy of the same on payment of non-refundable cost of Rs. 5,000/- (Rupees Five Thousand only) by a e-Payment mode (credit card/debit card/net banking/UPI) in favour of **Rail Infrastructure Development Company (Karnataka) Limited, Bangalore.**

It will be the responsibility of the Tenderer who is submitting the Tender on downloaded Tender documents to check and see any Addendum/Corrigendum issued in this regard from the website from time to time and ensure submission of bid along with all Addendum/Corrigendum.

In case of any clarification the Tenderer can visit the Rail Infrastructure Development Company (Karnataka) limited Corporate Office Bengaluru at #8, 1st Floor, Samparka Soudha, Dr. Rajkumar Road, Opposite Orion Mall, Rajajinagar 1st Block, Bengaluru-560010. Tel. No.+91-6364890811.

8. Validity of Tender: Tenders shall remain valid for a period of **120 days** after the Tender submission deadline date prescribed by the employer. A Tender valid for a shorter period shall be rejected by the employer as non-responsive.
9. In exceptional circumstances, the Employer may request Tenderers to extend the period of validity of their Tenders. The request and the responses shall be made in writing. If a Tender security is requested in accordance with ITT 13, it shall also be extended up to the date mentioned in the letter of request for extension. A Tenderer may refuse the request without forfeiting its Tender security. A Tenderer granting the request shall not be required or permitted to modify its Tender.
10. If, the office happens to be closed on the date of opening of Tender, the Tenders will be opened on next working day at the same time and venue.

11. A **Pre- Bid meeting** will be held on **19.05.2022 @ 15.30 hrs** . IST at the office of K-RIDE, Bangalore to clarify the issues if any and to answer questions on any matter that may be raised at that stage as stated in Clause - 8 of ITT of the Tender document.

12. Other details can be seen in Tender documents.

13. REGISTRATION:

- a. Tenderers are required to enroll on the e-tendering Portal (<https://eproc.karnataka.gov.in>) with clicking on the link "Tenderers Registration" on the e-tender Portal by paying requisite registration fee as applicable.
- b. As part of the enrolment process, the Tenderers will be required to choose a unique user name and assign a password for their accounts.
- c. Tenderers are advised to register their valid email address and mobile numbers as part of the registration process. These would be used for any communication with the Tenderer.
- d. Upon enrolment, the Tenderers will be required to register their valid Digital Signature Certificate (Only Class III Certificates with signing + encryption key usage) issued by any Certifying Authority recognized by CCA India with their profile.
- e. Only one valid DSC should be registered by a Tenderer. Please note that the Tenderers are responsible to ensure that they do not lend their DSC"s to others which may lead to misuse.
- f. Tenderers then logs in to the site through the secured log-in by entering their user ID/password and the password of the DSC / e-Token.
- g. The scanned copies of all original documents should be uploaded on portal.
- h. For any query regarding e-procurement on the Karnataka Public Procurement Portal, contact helpdesk number **+91-8046010000, +91-8068948777, support@eprochelpdesk.com**

14. SEARCHING FOR PROPOSAL DOCUMENTS

Once the Tenderers have selected the proposals they are interested in, the Tenderers can pay non-refundable processing fee as per the Karnataka Public Procurement Portal.

15. PRECAUTIONS FOR SUBMITTING / PREPARATION OF PROPOSALS THROUGH E TENDERING PORTAL

- a. Tenderer, in advance, should get ready the proposal documents to be submitted as indicated in the proposal document / schedule and generally, they can be in PDF /JPEG formats.

- b. Tenderer should log into the website well in advance for the submission of the proposal so that it gets uploaded well in time i.e., on or before the proposal submission time. Bidder will be responsible for any delay due to other issues.
 - c. The Tenderer has to digitally sign and upload the required proposal documents one by one as indicated in the tendering document.
 - d. The server time (which is displayed on the consultant's dashboard) will be considered as the standard time for referencing the deadlines for submission of the proposals by the consultants, opening of proposals etc. The consultants should follow this time during proposal submission.
16. The Tenderer should furnish the Name of the individual / firm/ Company / Joint venture with address and telephone number with place of registration, year of incorporation etc.,
17. Tender by a joint venture of contractors is permitted subject to conditions indicated in tender document.
18. The application made by the firm / company / Joint Venture shall be signed by a person holding the power of attorney, in which case the Tenderer shall furnish a copy of power of attorney.
19. **Employees Provident Fund Registration Certificate**
- The Contractor shall furnish EPF Registration Certificate before entering into agreement in the event of award of work to them after tender, subject to compliance with the following conditions:
- a) If the contractor is registered already with the EPF authorities, they should produce a copy of the EPF Registration Certificate.
 - b) If not registered with the EPF authorities, the Tenderer should produce an undertaking at the time of participating in the tender that he shall within 7 days of the close of every month submit a Statement to Engineer showing the recoveries of contribution in respect of Employees by or through him and shall also furnish such information as the Engineer is required to furnish under the provisions of the Scheme to the Commissioner EPF.
 - c) However, having given an undertaking to this effect if the Contractor does not furnish the information, the Employer will deduct the necessary amount from the amount due to the Contractor. Notwithstanding the above, the Contractor will be liable for any consequential penalty /damages levied by the EPF authorities.
20. The necessary certificates / documents in support fulfilling qualifying criteria stipulated separately shall be scanned and attached to e-procurement document. The original documents if required by the Employer shall be produced whenever asked by Employer on Technical Bid/ Financial Bid.
21. The intending Tenderers are advised to visit the site of work before attending the Pre- Bid meeting and also before submitting the Tenders.
22. The qualification criteria as indicated in bid document should be met by the intending Tenderers.

23. Tenderers shall not be under a declaration of ineligibility for corrupt and fraudulent practices issued by the Govt. of Karnataka, Govt of India and any PSUs thereof.
24. **Pre-bid meeting** will be held on **19.05.2022 @ 15.30 hrs** in the office of K-RIDE Bangalore.
25. The conditional Tenders will not be accepted.
26. The Employer is not responsible for any delay in accessing Karnataka Public Procurement Portal.
27. The rates quoted by the Tenderer must be inclusive of all Taxes, Duties etc.,
28. The Employer reserves the right to either postpone or to cancel the entire process of tender.
29. If Employer wishes to engage third party consultants for quality control assessment, apart from the Employer quality control and field tests, the Tenderer should co-operate with both Quality control authorities and the third party.
30. Building and other construction workers welfare: The Tenderer shall subscribe 1% of gross amount of each bill payable to him in respect of contract to the building and other construction workers welfare cess as per GO No: LD 300 LET 2006, Bangalore, dated: 18-01-2007. The amount of subscription will be recovered out of payable amount to him in each bill. This component is deemed to have been included in the quoted rate.
31. **Last Date of Receipt and opening of Bids:** The completed Tenders must be submitted through Karnataka Public Procurement Portal <https://eproc.karnataka.gov.in> not later than **15.00 Hrs** on **05.06.2022** and shall be opened on **06.06.2022 at 15.30 hrs**. K-RIDE will not be responsible for any delays in the receipt of Tender by K-RIDE. Late Tenders (received after stipulated date and time of submission of Tenders) shall not be accepted under any circumstances. K-RIDE reserves the right to accept/reject any or all proposals without assigning any reason thereof.
32. Any suit or application, arising out of any dispute or differences on account of this tender shall be filed in a competent court at Bengaluru, Karnataka only and no other court or any other district of the country shall have any jurisdiction in the matter.
33. **Address for Communication:** Interested eligible Tenderers may obtain further information from the following address:

**GM/Civil (Projects),
Rail Infrastructure Development Company (Karnataka) Limited,
#8, 1st Floor, Samparka Soudha, Dr. Rajkumar Road, Opposite Orion Mall
Rajajinagar 1st Block, Bengaluru-560010
Tel +91-6364890811, +91-6364890808.
E-mail: praveen.kumar.kride@ka.gov.in
For any Query regarding e tendering portal/ Tender submission please contact
helpdesk Number **+91-8046010000, +91-8068948777**
Email: support@eprochelpdesk.com**

SECTION – 2

INSTRUCTIONS TO TENDERERS (ITT)

SECTION 2: INSTRUCTIONS TO TENDERERS (ITT)
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A. GENERAL

1. SCOPE OF THE TENDER:

1.1 THE RAIL INFRASTRUCTURE DEVELOPMENT COMPANY (KARNATAKA) LIMITED (K-RIDE), Having its Corporate office, at #8, 1st Floor, Samparka Soudha, Dr. Rajkumar Road, Opposite Orion Mall, Rajajinagar 1st Block, Bengaluru-560010, India, which is a Joint Venture of Government of Karnataka and Ministry of Railways invites Tenders from Eligible Tenderers, for the construction of works details as given in the invitation for the Tenders (IFT). The tenderers may submit the tenders for the works detailed in the IFT.

2. ELIGIBLE TENDERERS:

2.1 The Tenderers shall not be under a declaration of ineligibility for corrupt and fraudulent practices issued by Govt. of Karnataka, Govt of India and PSUs.

2.2 JOINT VENTURES:

Tendering by a joint venture of Contractors is permissible subject to following conditions:

- a. If the Applicant comprises a number of firms combining their resources in a joint venture, the legal entity constituting the joint venture and the individual partners in the joint venture shall be registered after award of work and shall not be under a declaration of ineligibility for corrupt and fraudulent practices issued by GOK.
- b. The joint venture must satisfy collectively the Qualification criteria. For this purpose, the following data of each member of the joint venture may be added together to meet the collective qualifying criteria:
 - i. Average annual turnover (sub clause 3.2a).
 - ii. Particular experience including key production rates. (Sub clause 3.2b & c).
 - iii. Financial means (sub clause 3.3b liquid assets, 3.6 assessed available Tender capacity & the audited balance sheets or other financial statements acceptable to the employer, for the last five years shall be submitted and must demonstrate current soundness of the applicant's financial position and indicates its prospective long-term profitability.
 - iv. Personnel capabilities (sub clause 3.3c: List of minimum key staff/position required during the contract implementation).
 - v. Equipment capabilities (sub clause 3.3a: own/lease equipment's).
- c. Each partner must satisfy the following criteria individually:
 - i. General construction experience for the period of years stated in Tender document (Instructions to Tenderers: **The intending Tenderer/firm/company/ joint venture shall provide evidence that it has been actively engaged in "Any Bridge work involving open/pile/well foundation and superstructure of I Girder / Open Web Girder / Semi – through Girder / Through Girder / bow string**

girder” for at least a period of 5 years prior to the submission of tender. (From FY: 17-18 to FY: 21-22)

- ii. Adequate sources to meet financial commitments on the other contracts (Sub clause 3.5: Accessed available Tender capacity).
- iii. **Financial Soundness (Instructions to Tenderers:** The intending Tenderer/firm/company shall provide the audited balance sheets or other financial statements acceptable to the employer for the last five years and must demonstrate the current soundness of the applicant's financial position and indicate its prospective long-term profitability. If deemed necessary, the employer shall have the authority to make enquiries with the applicants' bankers).
- iv. **Litigation History (Instructions to Tenderers:** The intending Tenderer/firm/company/ joint venture shall provide accurate information on the related application form about any litigation or Arbitration resulting from contracts completed or on going under its execution over the last five years. The consisting history of awards against the tenderer or any partner of a joint venture may result in failure of the application).
- v. In accordance with the above, the Application shall include all related information required for individual partners in the joint venture
- d. **Joint venture is restricted to 3 (Three) number of partners.** One of the partners, who is responsible for performing a key function in contract management or is executing a major component of the proposed contract, shall be nominated as being in charge during the tendering periods and, in the event of a successful tender, during contract execution. The partner in charge shall be authorized to incur liabilities and receive instructions for and on behalf of any and all partners of the joint venture; this authorization shall be evidenced by submitting a power of attorney signed by legally authorized signatories of all the partners.
- e. All partners of the joint venture shall be legally liable, jointly and severally, during the tendering process and for the execution of the contract in accordance with the contract terms, and a statement to this effect shall be included in the authorization mentioned under Sub-Clause 2.2(d) above. **To enable the above, each of the partners of the joint venture shall meet not less than 25% of the qualifying criteria specified for Average annual turnover and Line of credit / liquid assets. All members of the joint venture must have experience in execution of similar work.**
- f. A copy of the Joint Venture Agreement (JVA) entered into by the partners shall be submitted with the tender. Pursuant to Sub-Clauses 2.2(c) to 2.2(f) above, the JVA shall include among other things: the JV's objectives; the proposed management structure; the contribution of each partner to the joint venture operations; the commitment of the partners to joint and several liability for due performance; recourse/sanctions within the JV in the event of default or withdrawal of any partner; and arrangements for providing the required indemnities. **The lead partner shall enter into a Joint Venture agreement of Rs. 200.00 stamp paper in the prescribed format** which shall be concluded prior to Tender and enclosed to the Tender document J.V. Partner shall not enter in to multiple JV's with different Tenderers of the same work.

SECTION:2: - INSTRUCTIONS TO TENDERERS (ITT)

g. The qualification of a joint venture does not necessarily qualify any of its partners to tender individually or as a partner in any other joint venture or association. In case of dissolution of a joint venture prior to the submission of tenders, any of the constituent firms may qualify if they meet all of the qualification requirements, subject to the return approval of the employer. Individual members of a dissolved joint venture may participate as sub-contractor to qualified applicants, subject to the provisions mentioned below:

- “No firm can be a sub-contractor while submitting a tender individually or as a partner of a joint venture in the same tendering process. A firm, if acting in the capacity of sub-contractor in any tender, may participate in more than one tender, but only in that capacity. A tenderer who submits, or participates in, more than one tender will cause all the proposals in which the tender has participated to be disqualified.”
- A firm shall submit only one Tender in the same Tendering process, either individually as a Tenderer or as partner of Joint Venture.
- The necessary certificates/documents in support of pre-qualification criteria fulfilled as stipulated shall be scanned and attached to e-tender document. Scanned signature of the Tenderer/authorized representatives of the Tenderer shall be attached while uploading the Tender document.

Any Tenderer who is otherwise technically qualified withdraws from the Tender process at any stage before a final decision is taken on the tender, the EMD of such Tenderer shall be forfeited, the name of such Tenderer shall be removed from the category list of contractors at least for a minimum period of one year in K-RIDE beside making such Tenderer liable for blacklisting.

- Tenders submitted by all Tenderers in the process of Tender evaluation will be opened even if the Tenderer withdraws from the Tender process by not submitting the original documents for verification or for any other reasons and the prices quoted by them will be looked into, to ascertain if there is collision amongst the Tenderers to determine the competitiveness of the L1 price quoted by other Tenderers, as per the decision by the K-RIDE.
- Prior to awarding of the work, the Lowest (L-1) Tenderer should produce the original documents in support of the uploaded documents to enter in to the agreement. If the lowest Tenderer (L-1) does not produce the original documents for entering into the agreement then his Tender can be treated as non-responsive Tender as per clause 26(4) of the KPPP Rules. The name of the Tenderers who do not produce the original documents shall be removed/debarred from the select list of K-RIDE enrollment and barred from participation in any of the tenders to be invited by K-RIDE a part from forfeiting the EMD paid through e-cash.
- The bidder, JV Partner shall not be under Corporate Debt Restructuring (CDE)/ Strategic Debt Restructuring (SDR) or Bureau of Industrial & financial reconstruction (BIFR) in last 5 years to bid submission date. In this regard, the bidder shall submit along with bid, a certificate with a declaration that, the bidder is not under CFR/SDR or BIFR.
- Further information about e-tendering can be had from Karnataka Public Procurement Portal <http://leproc.karnataka.gov.in>

3. QUALIFICATION OF THE TENDERER.

3.1 All the tenderers shall provide the requested information accurately and sufficient details in section 3: Qualification information. The Joint Venture to be formed prior to the Bidding.

Pre-qualification will be based on Applicants meeting all the following minimum pass–fail criteria regarding their general and particular construction experience, financial position, personnel and equipment capabilities, and other relevant information as demonstrated by the Applicant's responses in the Information Forms attached to the Letter of Application. Additional requirements for joint ventures are given in para 2.2

3.2 The following qualification criteria should be met by the intending Tenderers.

a) To qualify for award of this contract, each tenderer in its name should have in the last five financial years, i.e. from 2017-18 to 2021-22 should have achieved in atleast two financial years a minimum financial **turnover (in all classes of civil engineering construction work only) of Rs.33.88 Crores.**

NOTE: The Tenderers shall submit certificates to this effect which may be attested certificates from the concern departments/ Client or Audited balance sheet duly certified by the chartered accountant/ certificate from Chartered Accountant duly supported by audited balance sheet. The Turnover certificate duly certified by statutory Auditor should be uploaded. Financial turnover of previous years will be given a weightage of 10% per year as indicated in qualification information (Tender Forms) Form FIN-2 based on the rupee value to bring them to current FY: 2021-22 price value

b) The Tenderer/Firm/Company/JV should have satisfactorily completed at least one similar work such as **“Any Bridge work involving open/pile/well foundation and superstructure of I Girder / Open Web Girder / Semi – through Girder / Through Girder / bow string girder”** of value not less than **Rs. 11.29** Crores at current FY: 2021-22 price level in the last five financial years. (FY 2017-18 to FY 2021-22)

NOTE:

1. The criteria above apply to the Individual Tenderer/Firm/company/Joint venture also. The experience Certificate from the competent Govt./Semi Govt./Public Sector undertaking shall be furnished. The certificate should be issued by not below the rank of the Executive Engineer/Employer in case of Govt./Semi Govt. authorities, General Manager in case of Public Sector Undertaking, to be submitted along with the technical tender.
2. Similar work is defined as below:
“Any Bridge work involving open/pile/well foundation and superstructure of I Girder / Open Web Girder / Semi – through Girder / Through Girder / bow string girder”
3. The contract is considered as completed if 80% or more of the work is physically completed which is to be substantiated by a certificate from the Employer who has awarded the contract to the Bidder and the contract amount so received should be equal to or more than the minimum value as per eligibility criteria 3.2 (b).

SECTION:2: - INSTRUCTIONS TO TENDERERS (ITT)

4. For completed works, the value of work done shall be updated to FY 2021-22 price level assuming 10% inflation for Indian rupees every year. Credentials if submitted in foreign currency shall be converted into Indian currency i.e., Indian Rupee as under: Bids will be compared in Indian Rupees only. This will be achieved by conversion of the Foreign Currency portion of the Bid into Indian Rupees by using the Exchange Rates published by Financial Benchmarks India Pvt. Ltd (www.fbil.org.in) 28 (twenty-eight) days before the latest date of Bid submittal, and then adding the same to the Indian Rupee portion of the Bid. In case this particular day happens to be a holiday, the exchange rate published by Financial Benchmarks India Pvt. Ltd (www.fbil.org.in) on the next working day will be considered.
5. In case of JV/Consortium, full value of the work, if done by the same JV shall be considered. However, if qualifying work (s) done by them in JV/Consortium having different constituents, then the value of work as per their percentage participation in such JV/Consortium shall be considered.

c) The intending Tenderer / firm/ company / Joint Venture should have executed all the components within last five financial years, i.e. 2017-18 to 2021-22 and Each component should have been executed in any one year (Any continuous 12 months).

Component No.	Nature of Work	Minimum component of work
1	Cement concrete (including RCC)	4040 cum
2	Structural Steel fabrication and erection of open web steel bridge girder	272 MT
3	Structural Steel fabrication and erection of composite steel bridge girder	83 MT
4	Pre-cast concrete works	256 cum
5	The tenderer or his identified sub-contractor should possess valid electrical license for executing building electrification works and should have executed similar electrical works totalling	Rs. 45 Lakhs

NOTE: -

1. The above criteria apply to the Individual Tenderer/Firm/ company / Joint Venture also. The experience Certificate from the competent Govt./Semi Govt./Public Sector undertaking shall be furnished. The certificate should be issued by not below the rank of the Executive Engineer/Employer in case of Govt./Semi Govt. authorities, General Manager in case of Public Sector Undertaking, to be submitted along with the technical tender.
2. The qualifications, capacity, and resources of proposed subcontractors will not be taken into account in assessing those of individual or joint venture Applicants, unless they are named specialist subcontractors.

3.3 Each Tenderer should further demonstrate:

- 3.3 a) **KEY PLANT AND EQUIPMENT: Availability by owning/lease/hire of the required following key and critical equipment's deployed for this work, the relevant documents (Commitment agreements etc.,) regarding availability for this work are to be furnished:**

The intending Tenderer/firm/company/Joint venture should furnish details of ownership / lease certificates of the following minimum requirement of machineries:

PLANT AND EQUIPMENT

- (I) **KEY AND CRITICAL EQUIPMENTS**

SI No.	Type of Equipment required for the work	Proposed to be Deployed (Minimum)	Remarks
1.	JCB.	1 Nos	Own/ Lease/Hire
2.	Hydraulic excavator (1 cum bucket)	1 Nos	Own/Lease/Hire
3.	Hydra (20 T capacity)	2 Nos	Own/ Lease/Hire
4	Tippers/Trucks (10 cum capacity)	6 Nos	50% own+50% Lease/Hire
5	Water tankers	04 Nos	50% own+50% Lease/Hire
6	Concrete pump	1 no.	Own/Lease/Hire
7	Survey equipment: Total station	1 no.	Own
8	Survey equipment Auto level	1 no.	Own
9	RMC Plant with 30 cum/ Hr capacity	1 no.	Own/ Lease/Hire
10	Transit mixing @ 6 capacity	3 no	Own/ Lease/Hire
11	Agax Fiori (1.8 or 3.8 cum)	2 no	Own/ Lease/Hire

- 3.3 b) **LIQUID ASSETS: The Tenderer / firm/company/Joint Venture should furnish details of liquid assets and or availability of credit facilities of Rs. 2 Crores for the work mentioned above for meeting the required funds in the form of own funds /credit lines / certificate from scheduled Nationalized Bank.**

The Bidder should have access to or has available liquid assets, lines of credit and other financial means to meet cash flow. The audited balance sheet and/or banking reference

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certified by Chartered Accountant with their stamp, signature and membership number shall be submitted by the Tenderer along with the Tender.

Banking reference should contain in clear terms the amount that bank will be in position to lend for this work to the applicant/member of the joint venture/Consortium. In case the Net Current Assets (as seen from the balance sheet) are negative, only the banking references will be considered. Otherwise, the aggregate of Net Current Assets and submitted banking references will be considered for working out the Liquidity.

The banking reference should be, from a scheduled Bank in India it should not be more than three months old as on date of submission of Bids.

In case of JV firm's overall liquidity of JV firm shall be assessed by arithmetic sum of liquidity of all members of JV as specified in JV matrix.

- 3.3 c) **LIST OF MINIMUM KEY TECHNICAL PERSONNEL:** List of Minimum Key Technical personnel required for the work are as under and should be enrolled in company/firm/Joint Venture under Employment register and document should be uploaded. The Contractor shall have a competent team of Managers, Engineers, Technical staff etc. so as to complete the work satisfactorily as per various requirements of the contract. The Key Positions not limited to and corresponding qualification and experience are as under:

Sl. No.	Designation	Qualification	Experience level (For similar works)	Min. No. Required
1	Project Manager (Team Leader)	Bachelor's Degree/Post Graduate Degree in Civil Engineering	Minimum 12 years total experience and 5-year experience in the role of Project Manager in the execution of similar type of work.	1
2	QA & QC Manager.	Bachelor's Degree in Civil Engineering	Minimum 8 years total experience and 5-year experience in the role of QA&QC Manager in the execution of similar type of work.	1
3	Civil Engineer	Bachelor's Degree in Civil Engineering	Total minimum experience 5 Years (Minimum 02 years in Building construction works)	1
4	Junior Civil Engineer	Diploma in Civil Engineering	Total minimum experience 4 Years.	2
5	Sr. Surveyor	Diploma in Civil Engineering	Total minimum experience 5 Years.	1

Note: The CV's to be given for Serial No. 1 as per Form-6 of Section-3 and Serial No. 2, 3 & 4 the details to be given as per Form-5 of Section-3 (Qualification information /Bidding Forms).

3.4 To qualify for a package of contracts made up of this and other contracts for which tenders are invited in this IFT, the Tenderer must demonstrate having experience and resources to meet the aggregate of the qualifying criteria for the individual contracts.

3.5 Sub-contractors' experience and resources shall not be taken into account in determining the Tenderer's compliance with the Qualifying Criteria.

3.6 BID CAPACITY: Tenderers who meet the above specified minimum qualifying criteria, will only be qualified, if their available tender capacity is more than the total tender value. The available tender capacity will be calculated as under:

Assessed available tender capacity = (A*N*1.5 - B) Where

A = Maximum value of civil engineering works executed in any one year during the last five Financial years ending 31.03.2021 taking into account the completed as well as works in progress.

N = Number of years prescribed for completion of the works for which tenders are invited.

B = Value at current price level (updated to FY 2021-22 price level) of existing commitments and on-going works to be completed during the next two and half years (*period of completion of the works for which Tenders are invited*).

Note: Updation of Price Level shall be done at 10% per year.

The statements showing the value of existing commitments and on-going works as well as the stipulated period of completion remaining for each of the works listed should be countersigned by the Employer in charge, not below the rank of an Executive Engineer or equivalent.

3.7 NETWORTH: The Bidder's net worth for the last Financial Year calculated as the difference between total assets and total liabilities **should be Positive.**

3.8 Even though the Tenderers meet the above criteria, they are subject to be disqualified if they have:

- made misleading or false representations in the forms, statements and attachments submitted in proof of the qualification requirements; and/or
- record of poor performance such as abandoning the works, not properly completing the contract, inordinate delays in completion, litigation history, or financial failures etc.; and/or
- participated in the previous Tender for the same work and had quoted unreasonably high tender prices and could not furnish rational justification.

3.9 ELIGIBILITY CRITERIA TABLE/MATRIX:

Requirement	Single Entity	Joint Venture			Submission Requirements
		Lead Partner	Other Partners	All partners combined	
Clause: 3.2.(a) (Annual construction)	Must meet the requirement	Must meet 50% of the requirement	Must meet 25% of the requirement	Must meet the requirement	Form FIN-2

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turnover in at least two out of five financial years)					
Clause: 3.2 (b) One Similar work	Must meet the requirement	Must meet the requirement	Must have experience in similar work.	Must meet the requirement	Form at para 1.3/section:3
Clause: 3.2 (c) 1 Cement concrete (including RCC and PSC)	Must meet the requirement	All Partners Combined Must Meet requirement			Form at para 1.4/Section:3
Clause: 3.2 (c) 2 Earthwork in excavation and embankment (combined quantities)	Must meet the requirement	Must Meet requirement by any JV partner. Or through Nominated sub-contractor.			Form at para 1.4/Section:3
Clause: 3.2(c) 3 Structural Steel works	Must meet the requirement	All Partners Combined Must Meet requirement. Or through Nominated sub-contractor.			Form at para 1.4/section:3
Clause: 3.2(c) 4 Pre-cast concrete works	Must meet the requirement	All Partners Combined Must Meet requirement			Form at para 1.4/section:3
Clause: 3.3 a (I) Key and Critical Equipment's	Must meet the requirement	All Partners Combined Must Meet requirement.			Form at para 1.6/section:3
Clause: 3.3(b) Liquid Asset	Must meet the requirement	Must meet 50% of the requirement	Must meet 25% of the requirement	Must meet the requirement	Form at para 1.10/section:3
Clause: 3.3(c) Minimum Key Technical Staff	Must meet the requirement	All Partners Combined Must Meet requirement			Form No.5 & 6 of Section 3
Clause: 3.6 Bid capacity	Must meet the requirement	All Partners Combined Must Meet requirement			Form at para 1.5/section:3 and Form FIN-3/ section:3
Clause: 3.7 Net worth	Must meet the requirement	Must meet the requirement	Must meet the requirement	Must meet the requirement	Form FIN-1/ section:3

3.10 The applicant must attach with their application, a note giving a general description on the approach to the construction methods, technologies, quality assurance schemes proposed, deployment schedule of equipment proposed to be used, etc., for ensuring completion of the work as per specifications within the desired time-frame.

4. ONE TENDER PER TENDERER:

4.1 Each tenderer shall submit only one tender for one package. A tenderer who submits or participates in more than one Tender (other than as a sub-contractor or in cases of alternatives that have been permitted or requested) will cause all the proposals with the Tenderer's participation to be disqualified.

5. COST OF TENDERING:

5.1 The tenderer shall bear all costs associated with the preparation and submission of his tender, and the Employer will in no case be responsible and liable for those costs.

6. SITE VISIT:

6.1 The Tenderer at his own responsibility and risk is encouraged to visit and examine the Site of Works and its surroundings and obtain all information that may be necessary for preparing the Tender and entering into a contract for construction of the Works. The cost of visiting the Site shall be at the Tenderer's own expense.

B -TENDER DOCUMENTS

7. CONTENT OF TENDER DOCUMENTS

7.1 The set of tender documents shall have all the Sections given in content page.

8. CLARIFICATION OF TENDER DOCUMENTS

8.1 A prospective tenderer requiring any clarification of the tender documents may notify the Employer in writing or by cable (hereinafter "cable" includes telex, E-Mail and facsimile) at the Employer's address indicated in the invitation to tender. The Employer will respond to any request for clarification which he receives earlier than 15 days prior to the deadline for submission of tenders. Copies of the Employer's response will be forwarded to all purchasers of the tender documents, including a description of the enquiry but without identifying its source.

8.2 Pre-tender meeting:

8.2.1 The tenderer or his authorized representative is invited to attend a pre-tender meeting which will take place at office of **K-RIDE Bangalore.**

Venue: #8, 1st Floor, Samparka Soudha, Dr. Rajkumar Road,
Opposite Orion Mall, Rajajinagar 1st Block,
Bengaluru-560010
Tel +91-6364890811

Date: 19.05.2022, Time: IST 15.30 Hrs.

8.2.2 If the tenderer wishes to attend Pre-Bid meeting through VC. The bidder is requested to submit his request in the above said mail by 16.05.2022 by 16.30 hrs

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

8.2.4 The tenderer is requested to submit any questions in mail-on-mail id praveen.kumar.kride@ka.gov.in or by cable to reach the Employer not later than 16.05.2022

8.2.5 Minutes of the meeting, including the text of the questions raised (without identifying the source of enquiry) and the responses given will be published without delay to all purchasers of the tender documents. Any modification of the tender documents listed in Sub-Clause 7.1 which may become necessary as a result of the pre-tender meeting shall be made by the Employer exclusively through the issue of an Addendum pursuant to Clause 9 and not through the minutes of the pre-tender meeting.

8.2.6 Non-attendance at the Pre-Tender meeting will not be a cause for disqualification of a Tenderer.

9. AMENDMENT OF TENDER DOCUMENTS

9.1 Before the deadline for submission of Tenders, the Employer may modify the tender documents by issuing addendum

9.2 Any corrigendum / addendum issued shall be part of the tender documents and shall be made available on the website or e-portal. The Provisions in corrigendum /addenda shall take priority over the Tender Documents issued previously.

9.3 To give prospective Tenderers reasonable time in which to take an addendum into account in preparing their tenders, the Employer shall extend as necessary the deadline for submission of Tenders, in accordance with Sub-Clause 16.2 below.

C. PREPARATION OF TENDERS

10. DOCUMENTS COMPRISING THE TENDER

- 10.1 The Tender shall be submitted in two covers
- (as per Karnataka Public Procurement Portal) and shall contain the documents as follows.

10.1.1 First Cover (Document):

- Earnest Money Deposit;
- Qualification Information as per formats given in Section 3;

10.1.2 Second Cover (Document):

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- The Tender (in the format indicated in Section: 4) (as per Karnataka Public Procurement Portal)
- **Price Schedule (Section 9); online through Karnataka Public Procurement Portal, no hardcopy of commercials should be attached or disclosed. (as per Karnataka Public Procurement Portal)**

And any other materials required to be completing and submitting by Tenderers in accordance with these instructions. The documents listed under Sections 3, 4, 6 and 9 shall be filled in without exception.

- 10.2 Tenderers submitting tenders together with other contracts stated in the IFT to form a package will so indicate in the tender together with any discounts offered for the award of more than one contract.

11. TENDER PRICES

- 11.1 The contract shall be for the whole works as described in Sub-Clause 1.1, based on the Price Schedule submitted by the Tenderer.
- 11.2 Deleted
- 11.3 All duties, taxes, and other levies payable by the contractor under the contract, or for any other cause, shall be included in the Price schedule, prices and total Tender Price submitted by the Tenderer.
- 11.4 The amount quoted by the Tenderer shall be subject to adjustment during the performance of the Contract in accordance with the provisions of Clause of the Conditions of Contract.

12. TENDER VALIDITY

- 12.1 Tenders shall remain valid for a period not less than **one hundred and twenty days** after the deadline date for tender submission specified in Clause 16. A tender valid for a shorter period **shall be rejected by the Employer as non-responsive.**
- 12.2 In exceptional circumstances, prior to expiry of the original time limit, the Employer may request that the Tenderers may extend the period of validity for a specified additional period. The request and the Tenderers' responses shall be made in writing or by cable. A Tenderer may refuse the request without forfeiting his earnest money deposit. A Tenderer agreeing to the request will not be required or permitted to modify his tender, but will be required to extend the validity of his earnest money deposit for a period of the extension, and in compliance with Clause 13 in all respects.

13. EARNEST MONEY DEPOSIT (TENDER/BID SECURITY)

- 13.1 Earnest Money Deposit/ Tender security (as per Karnataka Public Procurement Portal): The Tenderer shall furnish, as part of his tender, Earnest Money Deposit (EMD) in the amount as shown in column 4 of the Table of IFT for this particular work. This Earnest Money Deposit shall be paid by e-payment through Credit card/ Debit Card/Net Banking/ Remittance at the Bank counter/ NEFT/RTGS only as specified in the e-procurement portal (e-proc help line desk no. 8046010000, 8068948777 to be contacted for any query).
- 13.2 Deleted

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- 13.3 Any tender not accompanied by an acceptable earnest money deposit and not secured as indicated in Sub-Clauses 13.1 and 13.2 above shall be rejected by the Employer as non-responsive.
- 13.4 The earnest money deposit of unsuccessful Tenderers will be returned within 30 days of the end of the tender validity period specified in Sub-Clause 12.1.
- 13.5 The earnest money deposit of the successful Tenderer will be discharged when the Tenderer has signed the Agreement and furnished the required Performance Security.
- 13.6 The earnest money deposit may be forfeited:
- (A) If the Tenderer withdraws the Tender after tender opening during the period of tender validity;
 - (B) If the Tenderer does not accept the correction of the Tender Price, pursuant to Clause 24; or
 - (C) In the case of a successful Tenderer, if the Tenderer fails within the specified time limit to
 - (i) sign the Agreement; or
 - (ii) furnish the required Performance Security.

14. FORMAT AND SIGNING OF TENDER

Tenderer shall submit the Tender electronically before the submission date and time published in Karnataka Public Procurement Portal. The Tenderer must submit Technical and Financial Tender as described in ITT.

All pages of the tender where entries or amendments have been made shall be initialed by the person signing the tender. The Tender shall contain no alterations or additions, except those to comply with instructions issued by the Employer, or as necessary to correct errors made by the Tenderer, in which case such corrections shall be initialed by the person signing the Tender.

Language of Tender	The language of the Tender: English
Technical Tender	Alternative technical solutions are not permitted.
Technical Tender Documents	All the Forms of Section 3: Qualification Information/Bidding Forms.
Alternative Bids/Tenders	Alternative Bids are not permitted.
Currencies of Tender and Payment	The amount (Lumpsum Price) shall be quoted by the Tenderer entirely in Indian Rupees (INR). For Evaluation and comparison purposes, the currencies of the Tender shall be converted in to Indian Rupees.
Any amendments such as interlineations,	The written confirmation of authorization to sign on behalf of the Tenderer shall consist of: a) In case of Private/Public Companies, a POA from the Director of the

<p>erasures, or overwriting shall be valid only if they are signed or initialed by the Person signing the Tender</p>	<p>Company who has been authorized by the Board of Directors through resolution to sign on behalf of the Company. Copy of Board Resolution shall also be submitted.</p> <p>b) In case of proprietorship Tenderers, Power of Attorney by the Proprietors.</p> <p>c) In case of partnership Tenderers, Power of Attorney duly signed by all the partners.</p> <p>d) In case of Limited Liability Partnership (LLP), a POA from the Director of the Company who has been authorized by the Board of Directors through resolution to sign on behalf of the Company. Copy of Board Resolution shall also be submitted.</p> <p>e) In case of Joint Venture, Power of Attorney duly signed by individual partners to the Lead partner as per the form given in Section-4 with stipulated documents.</p>
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The Bid shall be digitally signed by using class-III digital signature of a person who is duly authorized to sign on behalf of the bidder. This authorization shall consist of a written confirmation as specified in the BDS and shall be attached to the bid. The name and position held by each person signing the authorization must be typed or printed below the signature. **If the Letter of Technical Bid is not signed, the Bid shall be rejected.** All pages of the bid, except for un-amended printed literature, shall be signed or initialed by the person signing the bid.

- I. If the Tender is submitted by proprietary firm, it shall be signed by the proprietor above his full name, full name of his firm with his current address.
- II. If the Tender is submitted by a firm in partnership, it shall be signed by a partner holding the power of Attorney for the firm. A certified copy of the Partnership deed and power of attorney shall accompany the Tender; Alternatively, it shall be signed by all the partners.
- III. If the Tender is submitted by a limited company or a limited corporation, it shall be signed by a duly authorized person holding the power of attorney for the firm. A certified copy of the power of attorney shall accompany the Tender.
- IV. If a Tender is submitted by a Joint venture/Consortium, each firm in the Joint venture/Consortium shall furnish the evidence admissible in law /Power of Attorney to sign the Form of Tender and Lead member as stated in JV Agreement shall sign the Tender documents for submission of Tender.

Any amendments such as interlineations, erasures, or overwriting shall be valid only if they are signed or initialed by the person signing the Tender

D. SUBMISSION OF TENDERS

15. SEALING AND MARKING OF TENDERS

Tenderer shall submit the Tender electronically before the submission date and time published.

16. DEADLINE FOR SUBMISSION OF THE TENDERS

- 16.1 Tenders must be submitted online through Karnataka Public Procurement Portal to the Employer on or before the date as specified in the Karnataka Public Procurement Portal and the submission of tender is the responsibility of the Tenderer.
- 16.2 The Employer may extend the deadline for submission of tenders by issuing an amendment in accordance with Clause 9, in which case all rights and obligations of the Employer and the Tenderers previously subject to the original deadline will then be subject to the new deadline.

17. LATE TENDERS

- 17.1 In online e-procurement system, the Tenderer shall not be able to submit the Tender after the Tender submission time and date as the icon for the task in the Karnataka Public Procurement Portal will not be available. Any Tender received by the Employer after the deadline prescribed in Clause 16 will be rejected.
- 17.2 "It shall be the responsibility of the tenderers to ensure that their tender is submitted in the Karnataka public procurement portal within the last date and time specified for the receipt of the tenders

18. MODIFICATION AND WITHDRAWAL OF TENDERS

- 18.1 Tenderer may modify and correct or upload any relevant document in the portal till Tender submission date and time, as published in the Karnataka Public Procurement Portal.
- 18.2 No Tender may be modified after the deadline for submission of Tenders.
- 18.3 Withdrawal or modification of a Tender between the deadline for submission of Tenders and the expiration of the original period of Tender validity specified in Clause 12.1 above or as extended pursuant to Clause 12.2 may result in the forfeiture of the earnest money deposit pursuant to Clause 13.
- 18.4 Tenderers may only offer discounts to, or otherwise modify the prices of their Tenders by submitting Tender modifications in accordance with this clause, or included in the original Tender submission.

E. TENDER OPENING AND EVALUATION

19. OPENING OF FIRST COVER (Document): Opening of First Cover (Document) of all Tenders and evaluation to determine qualified Tenderers:

- 19.1 The Employer will open the First Covers (Document) of all the Tenders received (except those received late or withdrawn), including modifications for First Cover (Document) made pursuant to Clause 18, in the presence of the Tenderers or their representatives who choose to attend as per Karnataka Public Procurement Portal on the date and the place specified in Clause 16. In the event of the specified date of Tender opening being declared a holiday for the Employer, the Tender will be opened at the appointed time and location on the next working day.

The following procedure shall be followed at the tender opening: -

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- (a) List of submitted tenders termed as RECEIVED and list of incomplete tenders termed as DRAFT shall be displayed.
- (b) All tender payments successfully received shall be displayed.
- (c) The tenders which have been submitted in Karnataka Public Procurement Portal and whose tender payments were successfully received shall be opened. (d) The name of the tenderers shall be published in the Karnataka Public Procurement Portal.

19.2 DELETED

19.3 The Tenderer name, the presence or absence of Earnest Money Deposit (amount, format and validity), the submission of qualification information and such other information as the Employer may consider appropriate will be announced by the Employer at the opening.

19.4 The Employer shall prepare minutes of the Tender opening, including the information disclosed to those present in accordance with Sub-Clause 19.3.

19.5 DELETED

19.6 The Employer will evaluate and determine whether each tender (a) meets the eligibility criteria defined in ITT Clause 2 is accompanied by the required earnest money deposit as per stipulations in ITT Clause 13 and meets the minimum qualification criteria stipulated in ITT Clause 3. The Employer will draw out a list of qualified Tenderers.

20. OPENING OF SECOND COVER (DOCUMENT) OF QUALIFIED TENDERERS AND EVALUATION:

20.1 The Employer will inform all the Qualified Tenderers the time, date and venue fixed for the opening of the Second Cover (Document) containing the priced Tenders published in Karnataka Public Procurement Portal. The Employer will open the Second Covers (Document) of Qualified Tenderers at the appointed time and date in the presence of the Tenderers or their representatives who choose to attend. In the event of the specified date of financial Tender opening being declared a holiday for the Employer, the Second Covers (Document) will be opened at the appointed time and location on the next working day.

20.2 DELETED

20.3 The Tenderers' names, the Tender prices, the total amount of each Tender, any discounts, Tender modifications and withdrawals, and such other details as the Employer may consider appropriate, will be announced by the Employer at the opening. No Tender shall be rejected at Tender opening.

20.4 The Employer shall prepare minutes of the Second Cover (Document) Tender opening, including the information disclosed to those present in accordance with Sub-Clause 20.3.

21. PROCESS TO BE CONFIDENTIAL

- 21.1 Information relating to the examination, clarification, evaluation, and comparison of Tenders and recommendations for the award of a contract shall not be disclosed to Tenderers or any other persons not officially concerned with such process until the award to the successful Tenderer has been announced. Any effort by a Tenderer to influence the Employer's processing of Tenders or award decisions may result in the rejection of his Tender.

22. CLARIFICATION OF TENDERS

- 22.1 To assist in the examination, evaluation, and comparison of Tenders, the Employer may, at his discretion, ask any Tenderer for clarification of his Tender, including breakdowns of Lumpsum Price. The request for clarification and the response shall be in writing or by cable, but no change in the price or substance of the Tender shall be sought, offered, or permitted except as required to confirm the correction of arithmetic errors discovered by the Employer in the evaluation of the Tenders in accordance with Clause 24.
- 22.2 No Tenderer shall contact the Employer on any matter relating to its Tender from the time of the Tender opening to the time the contract is awarded.

If they have any query/clarification related to e-Procurement on the Karnataka Public Procurement Portal, contact e-Procurement Help desk from 10:00 AM to 5:00 PM. Ph. No.: +91-8046010000/ 8068948777 or support@eprochelpdesk.com Karnataka Public Procurement Portal through query option on or before specified time.

- 22.3 Any effort by the Tenderer to influence the Employer in the Employer's Tender evaluation, Tender comparison or contract award decisions may result in the rejection of the Tenderers' Tender.

23. EXAMINATION OF TENDERS AND DETERMINATION OF RESPONSIVENESS

- 23.1 Prior to the detailed evaluation of Tenders, the Employer will determine whether each Tender; (a) has been properly signed; and; (b) is substantially responsive to the requirements of the Tender documents.
- 23.2 A Substantially responsive Tender is one which conforms to all the terms, conditions, and specifications of the Tender documents, without material deviation or reservation. A material deviation or reservation is one (a) which affects in any substantial way the scope, quality, or performance of the Works; (b) which limits in any substantial way, inconsistent with the Tender documents, the Employer's rights or the Tenderer's obligations under the Contract; or (c) whose rectification would affect unfairly the competitive position of other Tenderers presenting substantially responsive Tenders.
- 23.3 If a Tender is not substantially responsive, it will be rejected by the Employer, and may not subsequently be made responsive by correction or withdrawal of the nonconforming deviation or reservation.

24. CORRECTION OF ERRORS

- 24.1 Tenders determined to be substantially responsive will be checked by the Employer for any arithmetic errors. Errors will be corrected by the Employer as follows:

- where there is a discrepancy between the amount in figures and in words, the lower of the two will govern and
- Deleted.

24.2 The amount stated in the Tender will be adjusted by the Employer in accordance with the above procedure for the correction of errors and, with the concurrence of the Tenderer, shall be considered as binding upon the Tenderer. If the Tenderer does not accept the corrected amount the Tender will be rejected, and the earnest money deposit may be forfeited in accordance with Sub-Clause 13.6 (b).

25. EVALUATION AND COMPARISON OF TENDERS

25.1 The Employer will evaluate and compare only the Tenders determined to be substantially responsive in accordance with Clause 23.

25.2 In evaluating the Tenders, the Employer will determine for each Tender the evaluated Tender Price by adjusting the Tender Price as follows:

(a) Making any correction for errors pursuant to Clause 24; and

(b) Making appropriate adjustments to reflect discounts or other price modifications offered in accordance with Sub Clause 18.5.

25.3 The Employer reserves the right to accept or reject any variation, deviation, or alternative offer. Variations, deviations, and alternative offers and other factors which are in excess of the requirements of the Tender documents or otherwise result in unsolicited benefits for the Employer shall not be taken into account in Tender evaluation.

25.4 The estimated effect of the price adjustment conditions under Clause 40 of the Conditions of Contract, during the implementation of the Contract, will not be taken into account in tender Evaluation

25.5 If the tender of the successful tenderer is seriously unbalanced in relation to the Employer's estimate of the cost of the work to be performed under the contract, the Employer may require the Tenderer to produce detailed price analyses for any or all items of Priced Schedule, 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 29 be increased at the expense of the successful Tenderer to a level sufficient to protect the Employer against financial loss in the event of default of the successful Tenderer under the contract.

F. AWARD OF CONTRACT

26. AWARD CRITERIA

26.1 Subject to Clause 27, the Employer will award the Contract to the Tenderer whose Tender has been determined to be substantially responsive to the Tender documents and who has offered the lowest evaluated Tender Price, provided that such Tenderer has been determined to be (a) eligible in accordance with the provisions of Clause 2, and qualified in accordance with the provisions of Clause 3.

27. EMPLOYER'S RIGHT TO ACCEPT ANY TENDER AND TO REJECT ANY OR ALL TENDERS

27.1 Notwithstanding Clause 26, the Employer reserves the right to accept or reject any Tender, and to cancel the Tender process and reject all Tenders, at any time prior to the award of Contract, without thereby incurring any liability to the affected Tenderer or Tenderers or any obligation to inform the affected Tenderer or Tenderers of the grounds for the Employer's action.

28. NOTIFICATION OF AWARD AND SIGNING OF AGREEMENT

28.1 The Tenderer whose Tender has been accepted will be notified of the award by the Employer prior to expiration of the Tender validity period by cable, telex, e-mail or facsimile confirmed by registered letter. This letter (hereinafter and in the *Conditions of Contract* called the "Letter of Acceptance") will state the sum that the Employer will pay 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").

28.2 The notification of award will constitute the formation of the Contract, subject only to the furnishing of Performance Security in accordance with the provisions of Clause 29. Until a formal contract is prepared and executed, the notification of award shall constitute a binding Contract.

28.3 The Agreement will incorporate all agreements between the Employer and the successful Tenderer. It will be kept ready for signature of the successful Tenderer in the office of Employer within 30 days following the notification of award along with the Letter of Acceptance. Within 20 days of receipt, the successful Tenderer will sign the Agreement and deliver it to the Employer.

28.4 Upon the furnishing by the successful Tenderer of the Performance Security, the Employer will promptly notify the other Tenderers that their Tenders have been unsuccessful.

29. PERFORMANCE SECURITY

29.1 Within 20 days of receipt of the Letter of Acceptance, the successful Tenderer shall deliver to the Employer a Performance Security in any of the forms given below for an amount equivalent to **3% of the Contract price plus additional security for unbalanced tenders (additional security at 50% of the estimated cost of the unbalanced component)** in accordance with Clause 25.5 of ITT and Clause 43 of the Conditions of Contract.

- Banker's cheque/Demand draft, /Pay Order/ BG in favour of K-RIDE, Bangalore or
- A bank guarantee in the form given in Section 10; or
- Specified Small Savings Instruments pledged to K-RIDE, Bangalore.

29.2 If the Performance Security deposit is provided by the successful tenderer in the form of Bank Guarantee, it shall be issued either by a Nationalized / Scheduled bank.

29.3 The Performance Security deposit if furnished in cash or demand draft can, if requested, be converted to interest bearing securities at the cost of the contractor.

- 29.4 Failure of the successful tenderer to comply with the requirements of sub-clause 29.1 and clause 29 of additional ITT, shall constitute sufficient grounds for cancellation of the Tender award and forfeiture of the Earnest Money Deposit.

30. ADVANCE PAYMENT AND SECURITY:

- 30.1 The Employer will provide an advance payment on the contract price as stipulated In the condition of contract subject to the maximum as stated In the contract data.

31. CORRUPT OR FRAUDULENT PRACTICES

- 31.1 "corrupt practice" means the offering, giving, receiving or soliciting of anything of value to influence the action of the 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 Procurement Entity, and includes collusive practice among the tenderers either prior to or after tender submission, designed to establish tender prices at artificial non-competitive levels and to deprive the Procurement Entity of the benefits of free and open competition;". The debarment action shall be taken as per KTPP Act.

- 31.2 The K-RIDE requires that the Tenderers/Suppliers/Contractors, observe the highest standard of ethics during the procurement and execution of such contracts. In pursuance of this policy, K-RIDE:

- a) will reject a proposal for award if it determines that the Tenderer recommended for award has engaged in corrupt or fraudulent practices in competing for the contract in question;
- b) will declare a firm ineligible, either indefinitely or for a stated period of time, to be awarded a K-RIDE contract if it at any time determines that the firm has engaged in corrupt or fraudulent practices in competing for, or in executing, a K-RIDE contract.

- 31.3 Furthermore, Tenderers shall be aware of the provision stated in sub-clause 50.2 of the Conditions of Contract.

32. PURCHASE PREFERENCE TO MAKE IN INDIA:

The provisions of revised 'Public Procurement (Preference to Make in India) Order 2017' issued by Department of Industrial Policy and Promotion under Ministry of Commerce and Industry vide letter no. P-45021/2/2017-PP (BE-II) dated 28.05.2018 shall be applicable to the tendering process and award of the contract shall be done accordingly. In this connection, the minimum local content shall be 50% and the margin of purchase preference shall be 20%. For award of contract, para 3.c. of the revised 'Public Procurement (Preference to Make in India) Order 2017' shall be applicable in addition to the other provisions in the tendering documents in this regard.

- 33. APPEAL:** The Tenderer shall submit online appeal within 30 days period from the date of receipt of order to the Employer through the Karnataka Public Procurement Portal. The Employer may after giving opportunity to the parties pass such order as it deems fit and such order shall be final.

ADDITIONAL INSTRUCTIONS TO TENDERERS
(THIS SHOULD BE READ IN CONTINUATION OF ITT)

ITT Clause Ref.	Description
2.3	<p>The following paras are added:</p> <p>Wherever the word JV is mentioned, it should be read as JV/Consortium.</p> <p>For any purpose herein, 'Joint Venture' means an ad hoc association of firms that pool their resources and skills to undertake a large or complex contract in the role of "Contractor," with all firms (partners in the JV) being legally liable, jointly and severally, for the execution of the Contract in the event of a partner's withdrawal.</p> <p>A Tenderer may be a natural person, private entity, government-owned entity, or any combination of them with a format intent to enter into an agreement or under an existing agreement in the form of a Joint venture or consortium. The Tenderer must ensure the following</p> <p>(a) In case of Single Entity:</p> <p style="padding-left: 20px;">(i) Submit Power of Attorney authorizing the signatory of the Tender to commit the Tenderer.</p> <p>(b) In case of Joint Venture/ Consortium:</p> <p style="padding-left: 20px;">(i) The number of partners in the JV/ Consortium shall not be more than three.</p> <p style="padding-left: 20px;">(ii) At the time of bidding, the tenderer (JV) to submit the JV Agreement, as per the form given in Section 3: Qualification and Information/Bidding Forms. On issue of LOA, the JV/Consortium Agreement should be registered and shall be submitted along with the performance security.</p> <p style="padding-left: 20px;">(iii) The JV/ Consortium shall nominate a Representative through Power of Attorney (Form given in Section 3) who shall have the authority to conduct all business for and on behalf of any and all the parties of the JV/ Consortium during the Tendering process and, in the event the JV/ Consortium is awarded the Contract, during contract execution.</p> <p style="padding-left: 20px;">(iv) Submit Power of Attorney by individual partners to lead partners as per the form given in Section 3.</p> <p style="padding-left: 20px;">(v) In case a Joint Venture/ Consortium is the successful Tenderer, the appropriate Joint Venture/ Consortium Agreement for execution of work should be entered by the Joint Venture/ Consortium partners. The duly signed Joint Venture/ Consortium Agreement should be submitted along with the tender submission.</p> <p style="padding-left: 20px;">(vi) The lead member as aforesaid shall be authorized to incur liabilities and receive instructions for and on behalf of any and all the partners of the Joint venture/Consortium and the entire execution of the contract.</p> <p style="padding-left: 20px;">(vii) All members of the Joint venture/Consortium shall be Jointly and severally responsible for the execution of the Contract.</p> <p style="padding-left: 20px;">(viii) Change in constitution or percentage participation of JV/Consortium shall not be permitted at any stage after submission of Tenders</p> <p>(c) Only firms that are registered or incorporated in India are eligible to compete. Any Tenderer from a country which shares a land with India will be eligible to Tender in this tender only if the Tenderer is registered with the Competent Authority.</p>

(d) "Tenderer from a country which share a land border with India" for the purpose of this Order means: -

1. An entity incorporated, established or registered in such a country; or
2. A subsidiary of an entity incorporated, established or registered in such a country; or
3. An entity substantially controlled through entities incorporated, established or registered in such a country; or
4. An entity whose beneficial owner is situated in such a country; or
5. An Indian (or other) agent of such an entity; or
6. A natural person who is a citizen of such a country; or,
7. A consortium or joint venture where any member of the consortium or joint venture falls under any of the above

(e) The beneficial owner for the purpose of above clause will be as under:

- (i) In case of a company or Limited Liability Partnership, the beneficial owner is the natural person(s), who, whether acting alone or together, or through one or more juridical person(s), has a controlling ownership interest or who exercises control through other means.

Explanation-

- a. "Controlling ownership interest" means ownership of or entitlement to more than twenty-five percent of share or capital or profits of the company;
 - b. "Control" shall include the right to appoint majority of the directors or to control the management or policy decisions including by virtue their shareholding or management rights or shareholders agreements or voting agreements;
- (ii) In case of a partnership firm, the beneficial owner is the natural person(s) who, whether acting alone or together, or through one or more juridical person, has ownership of entitlement to more than fifteen percent of capital or profits of the partnership;
- (iii) In case of an unincorporated association or body of individuals, the beneficial owner is the natural person(s), who, whether acting alone or together, or through one or more juridical person, has ownership of or entitlement to more than fifteen percent of the property or capital or profit of such association or body of individuals;
- (iv) Where no natural person is identified under (i) or (ii) or (iii) above, the beneficial owner is the relevant natural person who holds the position of senior managing official;
- (v) In case of a trust, the identification of beneficial owner(s) shall include identification of the author of the trust, the trustee, the beneficiaries with fifteen percent or more interest in the trust and any other natural person exercising ultimate effective control over the trust through a chain of control or ownership.

2.4

The Tenderer shall submit a Certificate stating that they have read the above clause using the appropriate Performa given in Section 3 - Form 3C1 & 3C2.

Tenderer having a conflict of interest shall be disqualified. The conflict of interest is detailed below.

A Tenderer or any of its constituents shall not have conflict of interest. All Tenderers found to have a conflict of interest shall be disqualified. A Tenderer may be considered to be in a conflict of interest with one or more parties in this Tendering process, if, including but not limited to::

- (a) they have controlling shareholders in common; or
- (b) they receive or have received any direct or indirect subsidy from any of them; or
- (c) they have the same legal representative for purposes of this Tender; or
- (d) they have a relationship with each other, directly or through common third parties, that puts them in a position to have access to information about or influence on the Tender of another Tenderer, or
- (e) any firm, either individually or in Joint Venture (JV)/ Consortium, submits more than one offer irrespective of whether the firm is quoting against this Tender. The Tenders submitted by two different Tenderers, having any common participant in JV/ Consortium formation or any common partner in partnership firms, or an individual will be treated as having conflict of interest or
- (f) a Tenderer who is Sub-contractor to another Tenderer will be treated as having conflict of interest. However, this does not limit the inclusion of the same sub-contractor in more than one Tender.
- (g) a Tenderer participated as a consultant in the preparation of the design or specifications of the contract that is the subject of the Tender; or
- (h) A Tenderer was affiliated for any period(s) during last two years before the date of issue of Invitation for Tenders with a firm or entity that has been hired (or is proposed to be hired) by the Employer as Engineer for the contract.

The Tenderer shall be disqualified if:

2.5

- (a) The Tenderer or any of its constituents has been blacklisted/ banned from business dealings with all Government Departments by the Government of Karnataka or by Ministry of Railways or by K-RIDE at any time till finalization of Tenders, except in cases where such blacklisting/ banning has been withdrawn by Competent Authority or has ceased or expired on the deadline for submission of the Tenders, for which satisfactory evidence is to be produced.
- (b) Any previous contract of the Tenderer or any of its constituents had been fully terminated or part terminated for its failure as a JV/ Consortium partner with forfeiture of its full Performance Security, by Rail Infrastructure Development Company (Karnataka) Ltd.(K-RIDE) at any time starting from 3 years before the deadline for submission of Tenders and up to one day before the date of opening of price Tenders;

Provided, however, there is no stay order or declaration by any Court against such termination of the contract by Rail Infrastructure Development Company (Karnataka) Ltd. or such termination of the contract has not been revoked by Rail Infrastructure Development Company (Karnataka) Ltd or competent authority of K-RIDE has not passed an order of non-applicability of disqualification of the Tenderer or any of its constituents despite such termination.

- (c) The Tenderer or any of its constituents has been imposed delay damages of 5% or more of contract value by K-RIDE due to delay in the implementation of any previous contract within the period of last 2 years before the deadline for submission of Tenders (Period of 2 years shall be reckoned from the date on which the total accrued amount of Delay Damages has reached 5% or more of the contract price) or such accrued delay damages has not been fully recovered before the deadline for submission of Tenders on account of contractor's request for deferring recovery to maintain cash flow and K-RIDE has acceded to the same in the interest of the project or the work

	<p>under the previous contract in question has not been completed before the deadline for submission of Tenders, unless imposition of such delay damages has been set aside by the Competent Authority.</p> <p>(d) The Tenderer or any of its constituents:</p> <p>(i) has suffered bankruptcy/insolvency or</p> <p>(ii) has any ongoing case of insolvency before the NCLT/ any applicable Court where Interim Resolution Professional (IRP) has been appointed or is at any later stage of the insolvency process, as on the deadline of submission of Tenders or thereafter till finalization of Tenders.</p> <p>(e) The Tenderer is found ineligible by the Employer, in accordance with ITB-3.</p> <p>(f) The Tenderer or its constituent(s) has been declared by K-RIDE to be a poor performer and the period of poor performance is still in force on the deadline for submission of Tenders.</p> <p style="text-align: center;">OR</p> <p>The Tenderer or its constituent(s) has been declared by K-RIDE to be a poor performer at any time after the deadline for submission of Tenders and upto one day before the date of opening of price Tenders.</p> <p>(g) The Tenderer or any of its constituents has changed its name or created a new business entity as covered by the definition of "Allied Firm" under para 1102 (iii) of Chapter XI of Vigilance Manual of Indian Railways (available on website of Indian Railways), consequent to having been banned from business dealings or suspended from business dealings or having been declared poor performer.</p> <p>The Tenderer shall submit an affidavit stating that they are not liable to be disqualified as per this sub clause using the Form PS3 given in Section-3: Qualification and Information/Bidding Forms. Non-submission of an affidavit by the Tenderer shall result in summary rejection of his Tender.</p> <p>Tenderers shall immediately inform the Employer in case they cease to fulfil eligibility in terms of ITT clause 2 above. In case the Tenderer fails to inform the Employer or submits a false affidavit, his Tender shall be summarily rejected and Tender security shall be forfeited. The Tenderer shall also be liable for Banning of Business dealings for a period up to five years</p>
2.6	<p>PARTNERS IN CASE OF JV/CONSORTIUM</p> <p>(i) Lead partner must have a minimum of 50% participation in the JV/Consortium.</p> <p>(ii) Partners having 25% or more percentage participation shall be termed as substantial partner/other Partners.</p> <p>(iii) In case of JV/Consortium, change in constitution or percentage participation shall not be permitted at any stage after the bid submission.</p> <p>The bidder, in case of JV/Consortium, shall clearly and unambiguously define the role and responsibilities for each partner in the JV agreement submitted as per Form JV/4 of Section-3, providing clearly that any abrogation/subsequent re-assignment of any responsibility by any partner of JV/Consortium in favor of other JV/Consortium partner or any change in constitution of partners of JV/Consortium (without written approval of Client) from the one given in JV agreement at tender stage, will be treated, as 'breach of contract condition' and/or 'concealment of facts' as the case may be and acted accordingly. All Members of the JV/ Consortium must have experience in execution of similar work.</p>

3.3(a)	<p>The following para is added:</p> <p>Materials, Equipment and Services</p> <p>The materials, equipment and services to be supplied under the Contract shall be from the approved sources as specified in Section 8: Works Requirements and Price Schedule Section-9.</p>
7.3	<p>The following para is added:</p> <p>The Employer is not responsible for the completeness of the Bidding Document and their Addenda, if they were not obtained directly from the source stated by the Employer in the Invitation for Bids.</p> <p>The Bidder is expected to examine all instructions, forms, terms, and specifications in the Bidding Document. Failure to furnish all information or documentation required by the Bidding Document may result in the rejection of the bid.</p>
8.3	<p>The following para is added:</p> <p>The Pre-Tender meeting may also be attended through video conferencing (VC). Those Tenderers who wish to join the Video Conferencing shall send a request email on the email id (i.e. praveen.kumar.kride@ka.gov.in) by 16.05.2022 up to 16:30 hours IST, so that a link for Video Conferencing can be sent by K-RIDE.</p> <p>Please note that the request received from the Tenderers (With details of the Company, its address, and the name and designation of the person attending the VC) will only be entertained. They should also mention the email id through which VC is desired to be joined.</p> <p>K-RIDE may allow maximum of two email ids for one company to participate in the VC. Any request for VC received after the given date and time for sending the link for VC will not be entertained.</p> <p>Prospective Tenderers will be able to join the VC through the link provided to them on Email ID. During this pre- Proposal meeting, prospective Tenderers may request for clarifications.</p>
10.3	<p>The following para is added:</p> <p>Documents Comprising the Tender</p> <ul style="list-style-type: none"> • The Tender shall comprise of Tender Security/Tender Security Declaration, Technical Tender and Price Tender. The Tenderer shall submit the Tender through Karnataka Public Procurement Portal. • On the stipulated date of opening of Tenders, initially, only the Technical Tenders are opened through Karnataka Public Procurement Portal. The Technical Tenders shall be evaluated by the Employer in accordance with the stipulated Qualification and Evaluation criteria. No amendments or changes to the Technical Tenders would be permitted after the opening of technical Tenders. • Tenderers who are qualified in the technical evaluation their price Tender shall be opened at a date and time advised by the Employer(K-RIDE) through e-tendering portal. The Price Tenders are evaluated and the Contract is awarded to the Tenderer whose Tender has been determined to be the lowest evaluated substantially responsive Tender. <p>The Technical Tender shall contain the following:</p> <ul style="list-style-type: none"> • All the Forms of Section-3: Qualification Information/Bidding Forms including letter of technical Bid (LTB) shall be scanned and uploaded. • The Tenderer shall furnish a commitment in Letter of Technical Bid (LTB) for deployment of

equipment and personnel as stipulated in Section 8A: Employers Work's Requirement.

- The Tenderer shall furnish commitment in LTB for submitting construction method statement for all major activities of work and get this approved from the engineer prior to the commencement of work on that activity in case of award of contract.
- The Tenderer shall furnish a commitment in Letter of Technical Bid (LTB) for adhering to mobilisation and construction schedule as stipulated in Section 8A: Employers Work's Requirement.
- **Tenderer should note that non-submission of the Letter of Technical Bid (LTB) by the Tenderer shall result in summary rejection of his Tender.**
- Tenderer shall submit the Approach and Methodology for performing the assignment by using appropriate Performa given in Section 3: Qualification Information/Bidding Forms.
- Scanned copy of Tender Security/Tender Security Declaration form (Section 3), in accordance with ITT Clause 13;
- Scanned copy of written confirmation authorizing the signatory of the Tender to commit the Tenderer, any amendments such as interlineations, erasures, or overwriting shall be valid only if they are signed or initialled by the person signing the Tender.
- Scanned copy of documentary evidence with establishing the Tenderer's qualifications to perform the contract; To establish its qualifications to perform the Contract in accordance with Section 2: ITT the Tenderer shall submit as part of its technical Tender the information requested in the corresponding information sheets included in Section 3: Qualification Information/Bidding Forms.

Domestic Tenderers, individually or in joint ventures, applying for eligibility for domestic preference shall supply all information required to satisfy the criteria for eligibility

- Scanned copy of Approach and Methodology - Performa given in Section-3: Qualification Information/Bidding Forms
- Scanned copy of Joint Venture Agreement entered into by all partners

The Price Tender shall contain the following:

- All Section-3 Documents shall be scanned and submitted.
- Filled/completed schedules as required including Price Schedule in accordance with ITT Clauses should be submitted through Karnataka Public Procurement Portal only;
- The Tenderer shall submit through Karnataka Public Procurement Portal, separate Technical Proposal and Price Proposal for each individual contract package, using the appropriate Submission Sheets furnished in Section-3: Qualification Information/Bidding Forms. These Forms must be completed without any alterations to their format, and no substitutes shall be accepted. All blank spaces shall be filled in with the information requested.
- The Tenderer shall submit, as part of the Price Tender, the Schedules, including the Price Schedule through Karnataka Public Procurement Portal only.

11.5

The following para is added:

Tender Prices and Discounts

- The prices and discounts quoted by the Tenderer in the Letter of Price Tender (LPB) and in the Price Schedule shall conform to the requirements specified below.
- In the Price Schedule, the amount against each schedule are to be quoted. From this, price of such schedules has been worked out and indicated in the summary sheet in the Price Schedule. The Tenderer shall quote lumpsum amount in figures and words as per format for such schedule in the summary sheet. **If any Tenderer quotes more than one Amount for such schedules, its Tender shall be summarily rejected.**
- The Tenderer shall fill in the amount against each schedule of the price schedule.. **Items against which no amount or price is entered by the Tenderer will not be paid for by the Employer when executed and shall be deemed to be covered by the lumpsum amount quoted in the Price Schedule.**
- The price to be quoted in the Letter of Price Tender, in accordance with ITT, shall be the total price of the Tender, excluding any discounts offered.
- The Tenderer shall quote any unconditional discounts and the methodology for their application (the discounts, and the methodology of their application, should be quoted on prices quoted in the Tender so that the discounts can be evaluated by simple arithmetic calculation during financial evaluation of the Tenders, to arrive at the net total price of the Tender. If the net total price cannot be calculated after application of the methodology of the discount(s) quoted, the Tender shall be considered as incomplete and will be rejected) in the Letter of Price Tender, in accordance with ITT. However, any conditional discount if any offered for award of contract package has to be quoted separately as applicable in Letter of Price Tenders. If Tenderer is not offering any discount for award of combination of contract package, then Tenderer has to quote NIL (zero) discount offered.
- The Tenderer can modify his/her Tender and resubmit it any number of times through Karnataka Public Procurement Portal before the deadline for submission of Tenders. Any other correspondence in connection with the Tender is not permissible and shall not be considered in Tender evaluation.
- Unless otherwise provided in the ITT and the Contract, the lumpsum amount quoted by the Tenderer are subject to adjustment during the performance of the Contract in accordance with the provisions of the Conditions of Contract. In such a case, the indices and weightages for the price adjustment formulae shall be as specified in the Tables of Adjustment Data included in Contract Data.
- If so, indicated in ITT 1, Tenders are being invited for individual contracts or for any combination of contracts (packages). Tenderers wishing to offer any price reduction for the award of more than one Contract shall specify in their Tender the price reductions applicable to each package, or alternatively, to individual Contracts within the package. Price reductions or discounts shall be submitted in accordance with ITT, provided the Tenders for all contracts are submitted and opened at the same time.
- All duties, taxes including GST, royalties, cess and other levies payable by the Contractor under the Contract, or for any other cause (including standard specifications), as of the date 28 days prior to the deadline for submission of Tenders, **shall be included in the lumpsum amount of Price Schedule and the total Tender Price submitted by the Tenderer.** GST shall be paid by the Tenderer as applicable in accordance with the prevailing rules of Government of India.
- Tenderers should note that during the progress of the works, the foreign currency requirements of the outstanding balance of the Contract Price may be adjusted by agreement between the Employer and the Contractor in order to reflect any changes in foreign currency requirements for the Contract, in accordance with Sub-Clause 14/ITT (Currencies of Bid and Payment) of the

SECTION:2: - INSTRUCTIONS TO TENDERERS (ITT)

	<p>Conditions of Contract. Any such adjustment shall be affected by comparing the percentages quoted in the Tender with the amounts already used in the Works and the Contractor's future needs for imported items.</p> <ul style="list-style-type: none"> • Online alternative Price Tender corresponding to the alternative Technical Tender, if permissible, in accordance with ITT Clause 14;
13.7	<p>The following para is added:</p> <p>In this tender, the tender security/ EMD need not be paid.</p> <p>Earnest Money Deposit/ Tender security (as per Karnataka Public Procurement Portal): The Tenderer shall furnish, as part of his tender, Earnest Money Deposit (EMD) in the amount as shown in column 4 of the Table of IFT for this particular work. This Earnest Money Deposit shall be paid by e-payment through Credit card/ Debit Card/Net Banking/ Remittance at the Bank counter/ NEFT/RTGS only as specified in the e-procurement portal (e-proc help line desk no. 8046010000, 8068948777 to be contacted for any query.</p>
14	<p>The following para is added:</p> <p>The Tender, as well as all correspondence and documents relating to the Tender exchanged by the Tenderer and the Employer, shall be written in English. Supporting documents and printed literature that are part of the Tender may be in another language provided they are accompanied by an accurate translation of the relevant passages in English in which case, for purposes of interpretation of the Tender, such translation shall govern</p>
15	<p>The following para is added:</p> <p>Sealing and Marking of Tenders</p> <p>The Tenderer shall submit the technical Tender, Price Tender and the Tender Security/Tender Security Declaration through Karnataka Public Procurement Portal i.e., https://eproc.karnataka.gov.in. The original of the Technical Proposal, which will contain all Forms of Section 3 except Forms PS 2 and Price Schedule Section 9 and all other relevant data specified in the Tender document.</p> <p>The Price Bid, shall be submitted through Karnataka Public Procurement Portal only. This "PRICE BID" will contain only Forms PS 2 of Section 3 & Price Schedule and all other relevant data specified in this Tender document. All forms should be typed on the Tenderer's' letter head as per the exact format of the Forms.</p> <p>The above forms should be scanned and submitted through Karnataka Public Procurement Portal.</p> <p>No details about price proposal shall be disclosed directly or indirectly in the technical proposal failing which the Tender shall be rejected. Only Electronic Tender submission and opening procedure permitted.</p>
19.7	<p>The following para is added:</p> <p>Tender Opening</p> <ul style="list-style-type: none"> • The Employer shall conduct the opening of Technical Tenders through Karnataka Public Procurement Portal i.e., https://eproc.karnataka.gov.in on the date and at the time mentioned. • The date and time of the opening of Price Tenders will be announced through Karnataka Public Procurement Portal • At the end of the evaluation of the Technical Tenders, the Employer will intimate Tenderers who have submitted substantially responsive technical proposals and who have been determined as being qualified for award to attend the opening of the price Proposals. The date and time, of the opening of Price Tenders will be advised through email/e-procurement. Tenderers shall be given reasonable notice for the opening of Price Tenders.

	<ul style="list-style-type: none"> The Employer will notify Tenderers in writing who have been rejected on the grounds of being substantially non-responsive to the requirements of the Tendering Document and who have been determined as being not qualified as a result of evaluation of technical proposal and their Price Tender shall not be opened. The Tender security of the Tenderers shall be returned as per due process. The Employer shall conduct the opening of Price Tenders through Karnataka Public Procurement Portal i.e., https://eproc.karnataka.gov.in of all Tenderers who have submitted substantially responsive Technical Tenders and who have been determined qualified as a result of technical evaluation.
23.4	<p>The following para is added:</p> <p>Deviations, Reservations, and Omissions</p> <p>During the evaluation of Tenders, the following definitions apply:</p> <p>(a) "Deviation" is a departure from the requirements specified in the Tendering Document;</p> <p>(b) "Reservation" is the setting of limiting conditions or withholding from complete acceptance of the requirements specified in the Tendering Document; and</p> <p>(c) "Omission" is the failure to submit part or all of the information or documentation required in the Tendering Document.</p>
24.3	<p>The following para is added:</p> <p>Nonconformities, Errors, and Omissions</p> <ul style="list-style-type: none"> Provided that a Tender is substantially responsive, the Employer may waive any nonconformities in the Tender that do not constitute a material deviation, reservation or omission. Provided that a Tender is substantially responsive, the Employer may request the Tenderer to submit the necessary information or documentation, within a reasonable period of time, to rectify nonmaterial nonconformities in the Tender related to documentation requirements. Requesting information or documentation on such nonconformities shall not be related to any aspect of the price of the Tender. Failure of the Tenderer to comply with the request may result in the rejection of its Tender.
24.4	<p>The following para is added:</p> <p>Correction of Arithmetical Errors and Omissions in Tender and Evaluation of Tender Price</p> <p>1. Provided that the Tender is substantially responsive, the Employer shall correct arithmetical errors and omissions in the Tender and then arrive at the Evaluated Tender Price on the following basis:</p> <p>(a) If there is a discrepancy between the price mentioned in the summary sheet of the Price Schedule and the price that is obtained by calculation i.e. addition of each schedule in the summary sheet of Price Schedule, then the quoted amount of each schedule shall prevail and the price shall be corrected accordingly.</p> <p>(b) if the amount has been quoted both in words and in figures and there is a discrepancy in such amount, then the lower of the two shall prevail and shall be considered for evaluation of the price of the schedule.</p> <p>(c) If the amount has been quoted either in words or in figures only, then the same shall be considered for evaluation of the price of the schedule.</p> <p>(d) If no amount has been indicated for any particular schedule in words, as well as in figures,</p>

	<p>irrespective of the fact whether the Tenderer has written or not written, in such cases, the lumpsum amount of the schedule shall be considered as zero and shall be calculated accordingly;</p> <p>(e) if there is an error in a total corresponding to the addition or subtraction of subtotals, the subtotals shall prevail and the total shall be corrected.</p> <p>(f) The amount for each schedule shall first be calculated after applying discount(s) to the Schedule and the net amount shall be rounded off to a Rupee. Thereafter, evaluated price of the schedules shall be added as the sum of amounts in grand summary sheet and sum of evaluated prices of all schedules shall be the overall Evaluated Tender Price.</p> <p>2. If the Tenderer has submitted the lowest evaluated Tender does not accept the correction of errors and omissions as per above provisions, its Tender shall be disqualified and its Tender security shall be forfeited or its Tender-Securing Declaration executed.</p>
25.6	<p>The following para is added:</p> <p>Conversion to Single Currency</p> <p>For evaluation and comparison purposes the currencies of the Tender shall be converted into Indian Rupees as stated in BDS.</p> <p>An Abnormally Low Tender is one in which the Tender price, in combination with other elements of the Tender, appears so low that it raises material concerns as to the capability of the Tenderer to perform the contract at the offered price. The Employer may in such cases seek written clarifications from the Tenderer, including detailed price analysis of its Tender price in relation to scope, schedule, allocation of risks and responsibilities, and any other requirements of the Tender document. If, after evaluating the price analyses, the Employer determines that the Tenderer has substantially failed to demonstrate its capability to deliver the contract at the offered price, the Employer may reject the Tender/ proposal.</p> <p>Additional Performance Security in case of abnormally low Tenders will have to be submitted.</p> <p>The calculation sheet is as below:</p> <p>If the bid, which results in the lowest Evaluated Bid Price is substantially on lower side and/or seriously unbalanced in the opinion of the Employer as per criteria defined below, the Employer may require the bidder to submit additional performance security as under:-</p> <p>a) If overall price quoted by the L1 bidder is below the engineer's estimated price by more than 10% and the difference between overall price quoted by the L1 and L2 is more than 5% of the estimated price, then the bid price of L1 bidder shall be treated as substantially on lower side and such bidder shall be bound to furnish additional performance security equal to the $(0.9 \times \text{engineer's estimated price} - \text{L1 price})$ or $(0.95 \times \text{L2 price} - \text{L1 price})$ whichever is lower, on this account. Example below demonstrates the method of calculation to arrive at additional performance security:</p> <p>Suppose overall price quoted by the L1 bidder is 17% below the estimated price and the overall price quoted by L2 bidder is 8% below the estimated price. In this case the overall price quoted by the L1 bidder is lower by more than 10% of the estimated price and also the difference between overall price quoted by the L2 and L1 bidder is more than 5% of the estimated price, hence the L1 bidder shall be required to furnish additional performance security for an amount equal to $\{0.9 \times \text{engineer's estimated price} - (1-17/100) \times \text{engineer's estimated price}\} = \{0.07 \times \text{engineer's estimated price}\} = 7\%$ of engineer's estimated price or $\{0.95 \times (1-8/100) \times \text{engineer's estimated price} - (1-17/100) \times \text{engineer's estimated price}\} = \{0.044 \times \text{engineer's estimated price}\} = 4.4\%$ of engineer's estimated price; whichever is lower.</p>

SECTION:2: - INSTRUCTIONS TO TENDERERS (ITT)

	<p>As per the above L1 bidder shall be required to submit additional performance security of 4.4% of engineer's estimated price.</p> <p>b) If for any bill/ schedule of quantities % age above or below quoted by the bidder on the estimated price is beyond 15% below the overall % age difference between the quoted contract price and the engineers estimated price, then the price for that particular schedule shall be treated as seriously unbalanced and bidder shall be bound to furnish additional performance security for such unbalanced price. Example below demonstrates the method of calculation to arrive at unbalanced price and additional performance security:</p> <p>Suppose for the L1 bidder overall % age difference between quoted contract price and the engineers estimated price;</p> <p>(Overall contract price – Overall estimated price) x 100 ÷ overall estimated price = + 4 %</p> <p>Maximum % age below permitted over estimated price of any bill / schedule in this case = +4 – 15 = -11%</p> <p>Suppose for the L1 bidder has quoted 20% below estimated price then the pricing shall be treated as unbalanced and the bidder shall be required to furnish additional performance security for an amount equal to (20 – 11) % of the estimated price..</p>
<p>26.2</p>	<p>The following para is added:</p> <p>Award Criteria</p> <ul style="list-style-type: none"> • The Employer shall award the Contract to the Tenderer whose Tender is substantially responsive to the Tendering Document, provided further that the Tenderer is determined to be qualified to perform the Contract satisfactorily and whose offer has been determined to be the lowest evaluated subject to ITT below. In case of more than one Tenders are evaluated to be lowest, Contract shall be awarded to the Tenderer having higher average annual construction turnover (calculated as total certified payments received for contracts in progress or completed) in equivalent INR within the last Two financial years. • The Employer has the right to review at any time prior to award of contract that the qualification criteria as specified in Section-3: Qualification Information and Bidding Forms are still being met by the Tenderer whose offer has been determined to be the lowest evaluated Tender. A Tender shall be rejected if the qualification criteria as specified in Section-3: Qualification Information and Bidding Forms are no longer met by the Tenderer whose offer has been determined to be the lowest evaluated Tender. In this event the Employer shall proceed to the next lowest evaluated Tender to make a similar reassessment of that Tenderer's capabilities to perform satisfactorily.
<p>29.5</p>	<p>The following para is added:</p> <p>Performance Security</p> <p>The successful Tenderers shall have to submit a Performance Guarantee (PG) Within twenty (20) days from the date of issue of Letter of Acceptance (LOA). Extension of time for submission of PG beyond 20 days up to 60 days from the date of issue of LOA may be given by the authority who is competent to sign the contract agreement. However, a penal interest of 12% of per annum shall be charged for the delay beyond 20 days, i.e. From 21nd day after the date of issue of LOA. Further if the 60th day happens to be declared holiday in the office of K-RIDE, submission of PG can be accepted on the next working day.</p> <p>In all other cases if the contractor fails to submit the requisite PG even after 60 days from the date of issue of LOA, the contract is liable to be terminate. In case contract is terminated K-RIDE shall be</p>

SECTION:2: - INSTRUCTIONS TO TENDERERS (ITT)

	<p>entitled to forfeit the Tender security and other dues payable against the contract. In case the tenderer has not submitted by security on the strength of their registration as a start-up recognized by the Department of Industrial Policy and Promotion (DIPP) under Ministry of Commerce and Industry, DIPP shall be informed to this effect. The failed contractor shall be debarred from participating in re-tender for that work.</p> <p>Failure of the successful Tenderer to submit the above-mentioned Performance Security or to sign the Contract Agreement shall constitute sufficient grounds for the annulment of the award and forfeiture of the Tender security or execution of the Tender-Securing Declaration.</p> <p>The above provision shall also not apply to the furnishing of a Domestic Preference Security, if so required.</p>
New Clause-1	<p>LITIGATION HISTORY: (Please see Annexure Tendering Forms).</p> <p>The Tenderer/Tenderers should provide accurate information on any litigation or arbitration resulting from contracts completed or under its execution over the last five years as on date of submission of this tender.</p> <p>If the litigation started by the Tenderer without recourse to measures of Dispute Resolution and Arbitration as provided in the Contract or the litigation in respect of challenge of award of Arbitration by the Tenderer, will be treated as Litigation case indulged by the Tenderer for this Para of Litigation History. A consistent history of awards against the Applicant or any partner of a joint venture may result in failure of the application.</p> <p>Note: Tenderers including each of the partners of a Joint Venture, should provide information on any history of litigation or Arbitration resulting from contracts executed in the last 5 years as on date of submission of this tender. A separate sheet should be used for each partner of a Joint Venture</p>
New Clause-2	<p>Jurisdiction of Courts</p> <p>The Tendering process shall be governed by and construed in accordance with the laws of India and the Courts as indicated in Tender Data Sheet shall have exclusive jurisdiction over all the disputes/issues arising under, pursuant to and/ or in connection with the Tendering process. The Jurisdiction of Courts is Bengaluru, Karnataka</p>

SECTION-3

QUALIFICATION INFORMATION/BIDDING FORMS

INDEX**SECTION-3: QUALIFICATION INFORMATION/BIDDING FORMS**

This Section contains the forms which are to be completed by the Bidder and to be submitted as part of this Bid.

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	A) Qualification Information/Bidding Forms		
1.	Legal status of Tenderer	Para No. 1.1	43-49
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3.	Similar Work Experience	Para No. 1.3	
4.	Quantities of Work executed in Last 5 years	Para No. 1.4	
5.	Information on Works (Existing, Ongoing and Works for which Tenders already submitted)	Para No. 1.5	
6.	Availability of Plant and Equipment Details	Para No. 1.6	
7.	Reports of Financial Standing (Profit and Loss Statements)	Para No. 1.7	
8.	Qualification and Experience of Key Personnel	Para No. 1.8	
9.	Tenderers bankers Details	Para No. 1.9	
10.	Evidence of access to Financial Resources	Para No. 1.10	
11.	Proposed Subcontracting components	Para No. 1.11	
12.	Information on Litigation History	Para No. 1.12	
13.	Proposed Methodology and Program of construction	Para No. 1.13	
	B) Additional Qualification Information/Bidding Forms		50-66
14.	Letter of Technical Bid	Form PS 1	50-66
15.	Letter of Price Bid	Form PS 2	
16.	Format for Affidavit (along with Bid)	Form PS 3	
17.	Bid Security Declaration Form	Form BDF/1	
18.	Letter of participation from Each partner of Joint Venture (JV)/ Consortium	Form JV/Consortium/1	
19.	Power of attorney for authorized signatory of Joint Venture (JV)/ Consortium partners	Form JV/Consortium/2	
20.	Power of attorney to Lead partner of joint venture (JV)/ Consortium	Form JV/Consortium/3	
21.	Draft Joint Venture Agreement	Form JV/Consortium/4	
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26.	Current Contract Commitment	Form FIN - 3	
27.	Deleted	Form No 1	
28.	Checklist for clauses pertaining to Summary Rejection of bid	Form No 2	
29.	Format for certificate to be submitted by bidder along with the bid	Form 3 C1	
30.	Format for certificate to be submitted by Bidder along with the bid for subcontracting	Form 3 C2	
31.	Deleted	Form 4	
32.	Key Personnel for the work	Form 5	
33.	Format of Curriculum Vitae (cv) for proposed key professional staff	Form 6	
34.	Undertaking from specialist sub-contractor	Form CL-2	
35.	Availability of Financial Resources	Form CL-3	
36.	Evidence of Availability of Credit Line Financial Resources	Form CL-4	
37.	Work Experience Certificate	Form EXP-1	

A) QUALIFICATION INFORMATION/BIDDING FORMS

1. QUALIFICATION INFORMATION

The information to be filled in by the Tenderer hereunder will be used for purposes of computing Tender capacity as provided for in Clause 2 of the Instructions to Tenderers. This information will not be incorporated in the Contract.

1.1. Constitution or legal status of Tenderer

Place of Registration: _____ [Attach copy]

Principal place of business: _____ [Attach Copy]

1.2. Total value of construction works executed and payments received in the preceding five Financial Years. (Rs. In Crores) (attach certificate from Statutory Auditors)

2017-2018: -----

2018-2019: -----

2019-2020: -----

2020-2021: -----

2021-2022: -----

K-RIDE

1.3. Work performed as Contractor (in the same name) on works of similar nature over during the five financial years specified in 1.2 above.

Project Name	Name of Employer	Description of Work	Contract Number	Value of contract Rs. Cr.	Date of Issue of work order	Specified period of completion	Actual date of completion	If partner in a JV/ Consortium, specify participation in total contract amount	Remarks explaining reasons for delay in completion of work
1	2	3	4	5	6	7	8	9	10

Note:

- (1) If the qualifying work of similar nature is done by a joint venture/consortium, then Value shall be considered as per percentage participation by the member(s) in that joint venture/consortium.
- (2) Value of *similar nature of work completed shall be updated up to date of submission as per table given below:

Financial year	2017-18	2018-19	2019-20	2020-21	2021-22
Indian Currency	1.22	1.16	1.10	1.05	1.00
Foreign Currency					

- (3) Updated value of completed work in foreign currency shall be converted to Equivalent INR, calculated using the selling exchange rate of Reserve Bank of India as on 28th day prior to the last date of submission of bids. In case publication is not available on 28th day, previous working day published exchange rate shall be considered for evaluation.

The bidder shall attach a copy of the Certificate(s) issued by the employer in support of the information being furnished in the above form, failing which the claim of the bidder shall be liable to be rejected (in case of experience as a sub-contractor, the employer shall be the owner of the Project who has engaged the main Contractor).

SEAL AND SIGNATURE

1.4. Quantities of work executed as contractor (in the same name) during the last five years.

Year	Name of Work	Name of Employer	Quantity of work performed (As mentioned in Qualification of the Tenderer Clause 3.2)				Remarks (Indicate contract reference No., Date, Completion date, Role in contract, total contract amount, JV participation proportion)
			Cement concrete (including RCC)	Structural Steel fabrication of steel bridge girders	Erection/launching of steel bridge girders	Pre-stressed concrete in Bridges	
2017-18							
2018-19							
2019-20							
2020-21							
2021-22							

Note:

- Copy of Certificate(s) issued by the employer in support of the information being furnished above, shall be attached with each respective form, as per detailed requirements indicated in clause 3.2 (c) of Section 2 failing which the claim of the bidder shall be liable to be rejected (in case of experience as a sub-contractor, the employer shall be the owner of the Project who has engaged the main Contractor).

SEAL AND SIGNATURE

1.5. Information on works for which Tenders have been submitted and works which are yet to be completed as on the date of this Tender.

(A) Existing commitments and on-going works:

Description of Work	Place & State	Contract No. & Date	Name and Address of Employer	Value of Contract (Rs. In Crores)	Stipulated period of completion	Value of works remaining to be completed (Rs. In Crores) (Attach certificate from Engineer in charge)	Anticipated date of completion
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)

(B) Works for which Tenders already submitted:

Description of Work	Place & State	Name and Address of Employer	Estimated value of works (Rs. In Crores)	Stipulated period of completion	Date when decision is expected	Remarks if any
(1)	(2)	(3)	(4)	(5)	(6)	(7)

- 1.6. The following items of equipment are considered essential for successfully carrying out the works. The Tenderer should furnish all the information listed below. (The item of the equipment required nos and capacity should match with those specified in ITT clause 3.3(a))

Item of Equipment	Requirement		Owned and available nos/Age/Capacity/ Condition	Remarks (The details of hired/leased equipment details to be indicated)
	Nos	Owned		
JCB.	1 Nos			
Hydraulic excavator (1 cum bucket)	1 Nos			
Hydra (20 T capacity)	2 Nos			
Tippers/Trucks (10 cum capacity)	6 Nos	3		
Water tankers	04 Nos	2		
Concrete pump	2 no.			
Survey equipment: Total station	1 no.	1		
Survey equipment Auto level	1 no.	1		
RMC Plant with 30 cum/ Hr capacity	1 no.			
Transit mixer @ 6 cum capacity	3 no			
Fiori (Minimum capacity 3.8 cum)	2 no			

- 1.7. Reports on the financial standing of the tenderer, such as profit and loss statements and auditor's reports for the last five years;
- 1.8. Qualification and experience of the key technical and management personnel in permanent employment with the tenderer and those that are proposed to be deployed on this contract, if awarded.

- 1.9. Name, address, and telephone, telex, and fax numbers of the Tenderers' bankers who may provide references if contacted by the Employer.
- 1.10. Evidence of access to financial resources to meet the qualification requirement specified in ITT Clause 3.3 (b): Cash in hand, Letter of Credit etc. List them and attach certificate from the Banker in the suggested format given in Section 3, Form No.CL3 & CL4.
- 1.11. Proposals for subcontracting components of works amounting to more than 20% of the contract price.

Item of Work	Value of Sub-Contract	Identified Sub-Contractor (Name and Address)	Experience of similar works (Attach Certificates from the respective Employers)	Remarks (Undertaking from Specialist subcontractors to be provided as per Form CL-2)

- 1.12. Information on litigations in which the Tenderer is involved:

Litigation History

(This has reference to Eligibility cum Qualification Criteria document.)

Name of Tenderer or member of Joint Venture: -
--

Sl. No.	Name of the Employer/ Client	Name of the work	No. of cases in the work	cause of Litigation/ arbitration/ details of disputes	Year	Litigation/ arbitration initiated by	Award in favor of Tenderer/ Client	Disputed Amount	Remarks showing present status

Note: Tenderers including each of the partners of a Joint Venture, should provide information on any history of litigation or Arbitration resulting from contracts executed in the last 10 years as on date of submission of this tender. A separate sheet should be used for each partner of a Joint Venture.

- 1.13. **The proposed methodology and program of construction, backed with equipment planning and deployment, duly supported with broad calculations and quality control procedures proposed to be adopted, justifying their capability of execution and completion of the work as per technical specifications within the stipulated period of completion as per milestones.**

APPROACH & METHODOLOGY PROPOSED FOR PERFORMING THE ASSIGNMENT

Name of Project: “

The approach and methodology will be detailed precisely under the following topics:

1. Understanding of the assignment
2. Work Breakdown structure/ Work plan.
3. Composition of the Team
4. Organizational set up/ Construction methodology for execution of the work as outline in Section 8A
5. Documentation and procedures to be prepared, adopted and furnished to K-RIDE (Rail Infrastructure Company (Karnataka) Limited).
6. Reporting Procedure
7. Sourcing of Material

Note:

- i. **The approach and methodology should be precise and relevant to the assignment. Include Bar charts.**

B) ADDITIONAL QUALIFICATION INFORMATION/BIDDING FORMS

Form: PS1

LETTER OF TECHNICAL BID

(Seperately for each Package)
Date.....

Invitation for Bid No.:.....

To,
.....

We, the undersigned, declare that:

- (a) We have examined and have no reservations to the Bidding Documents, including Addenda issued in accordance with Instructions to Tenderer (ITT);
- (b) We offer to execute the Works in conformity with the Bidding Documents;
- (c) Our bid shall be valid for a period of 180 days from the date fixed for the bid submission deadline in accordance with the Bidding Documents, and it shall remain binding upon us and may be accepted at any time before the expiration of that period;
- (d) If our bid is accepted, we commit to obtain a performance security in accordance with the Bidding Documents;
- (e) If our bid is accepted, we commit to deploy key equipment and key personnel consistent with the requirements stipulated in Section 8A: Works Requirements.
- (f) If our bid is accepted, we commit to submit work method statements for all major activities and get these approved from the engineer prior to commencing work on such activities. We also understand that the work shall be executed as per the approved method statements and KEY DATES without any deviations and delay in completion.
- (g) We, including any subcontractors or suppliers for any part of the contract, do not have any conflict of interest in accordance with ITT clause 2.4;
- (h) We declare that we are not participating, as a Bidder or as a subcontractor, in more than one bid in this bidding process in accordance with ITT clause 2.2, other than alternative offers submitted in accordance with ITT clause 14;
- (i) We declare that we are not liable to be disqualified in Accordance with ITT clause 2.5, and we are enclosing the affidavit for the same as per the Performa given in the bid document.

- (j) We understand that this bid, together with your written acceptance thereof included in your notification of award, shall constitute a binding contract between us, until a formal contract is prepared and executed; and
- (k) We have not made any deviations from the requirement of the bidding document and we have also not made any tampering or changes in the bidding documents on which the bid is being submitted and if any tampering or changes are detected at any stage, we understand the bid will invite summary rejection and invocation of bid security declaration, the contract will be liable to be terminated along with forfeiture of performance security, even if LOA has been issued.
- (l) We understand that we will be considered for participating for which we have submitted the bid security(ies) declaration form and we will be considered for award, subject to fulfilling the eligibility criteria as given in bidding document;
- (m) If our bid is accepted, we opt to take payment into the bank account, nominated by us.
- (n) We declare that the submission of this bid confirms that no agent, middleman or any intermediary has been, or will be engaged to provide any services or any other item of work related to the award and performance of this contract. We further confirm and declare that no agency commission or any payment which may be construed as an agency commission has been, or will be, paid and that the bid price does not include any such amount. We acknowledge the right of the Employer, if he finds to the contrary, to declare our bid to be noncompliant and if the contract has been awarded to declare the contract null and void
- (o) We understand that you are not bound to accept the lowest evaluated bid or any other bid that you may receive.
- (p) A Power of Attorney to sign and submit this letter is attached.
- (q) Having inspected the site, examined the complete bid document including Employer's requirements, Conditions of Contract, Special Conditions of Contract, particular conditions of Contract, Technical Specifications, Safety, Health & Environment (SHE) manual, Eligibility Cum Qualification Criteria, Instructions to Bidder and Addenda/Corrigendum etc., thereto (if any) for above mentioned work and prepared the bid entirely in accordance with all the requirements of the bid document and agree entirely with them.
- (r) We here by confirm that we have visited the sites of work and have become conversant with the local conditions of working.
- (s) For the purpose of your evaluation, study, review and decision-making we are ready to let you inspect our business premises / site, etc.
- (t) We authorize K-RIDE or any of their authorized representative to approach, enquire, verify and check the matter furnished in our submission with the concerned client / owner of the Project / Contract and the concerned Banker of reference provided by us.

- (u) We undertake to hold in confidence all documents and information whether Technical or Commercial supplied to us at any time by or on behalf of K-RIDE in connection with this bid and without your written authority or as otherwise required by law not to publish or otherwise disclose the same.
- (v) If our bid is accepted, we agree to establish our project office in Bangalore.
- (w) We have submitted the Statement of Integrity, Eligibility, Social, and Environmental Responsibility signed and abide by the same.
- (x) We understand that this Bid shall be governed by and construed in all respects according to the laws for the time being force in India. The courts at Bangalore will have exclusive jurisdiction in the matter.
- (y) We undertake that, in competing for (and, if the award is made to us, in executing) the above contract, we will strictly observe the laws against fraud and corruption in force in India namely "Prevention of Corruption Act 1988".

We hereby confirm that this Tender complies with the Tender validity and Earnest money deposit required by the Tender documents.

- (z) We confirm and declare that by virtue of our signature below, to the best of knowledge and belief that the information provided by us as required in this Bid Document, all supporting and explanatory information is truthful and exact.

Name.....

..... In the capacity

of.....

.....

Signed

.....

.....

Duly authorized to sign the Bid for and on behalf of

.....

Date

.....

.....

(SEAL AND SIGNATURE OF THE BIDDER)

LETTER OF PRICE BID

DELETED

K-RIDE

Form: PS 3**FORMAT FOR AFFIDAVIT TO BE SUBMITTED BY BIDDER ALONGWITH THE BID**

(To be separately given for each package)

*(To be executed in presence of Public Notary on non-judicial stamp paper of the appropriate value in accordance with relevant stamp Act. The stamp paper has to be in the name of the bidder) ***

I **(Name and designation)** ** appointed as the attorney/authorized signatory of the bidder (including its constituents), M/s. _____ (hereinafter called the bidder) for the purpose of the Bid for the work of _____ as per the bid No. _____ of K-RIDE, do hereby solemnly affirm and state on behalf of the bidder including its constituents as under:

- *1. That the bidder or any of its constituents has not been Blacklisted/ banned for business dealings for all Government Departments or by Ministry of Railways or by K-RIDE at any time and/or no such blacklisting is in force as on the deadline for submission of bids.
- *2. That none of the previous contracts of the bidder or any of its constituents had been terminated/rescinded for Contractor's failure or part terminated for its failure as a JV/ Consortium partner with forfeiture of its full Performance Security, by Rail Infrastructure Development Company (Karnataka) Ltd. during the period of last 3 years before the deadline for submission of bids.

(Add Proviso of Clause 2, (ITT) suitably, if any Contract was so terminated).

- *3. The bidder or any of its constituents has not been imposed liquidated damages of 5% or more of contract value by any Government Department or by Ministry of Railways or by K-RIDE due to delay in the implementation of any previous contract (either in the capacity of a single entity or as constituent of any other JV/ Consortium) within the period of last 2 years before the deadline for submission of bid [2 years shall be reckoned from the date on which imposed L.D. has exceeded 5% of the contract price] and there are no such accrued delay damages which has not been fully recovered before the deadline for submission of bids on account of contractor's request for deferring recovery to maintain cash flow and K-RIDE has acceded to the same in the interest of the project and the work under the previous contract in question has been completed before the deadline for submission of bid, unless imposition of such delay damages has been set aside by the Competent Authority.
- 4. That the Bidder or any of its constituents is neither Bankrupt/Insolvent nor is in the process of winding-up nor is such a case pending before any Court on the deadline of submission of the bid.
- *5. That the name of the Bidder or any of its constituents is not on the list of "Poor Performer" of any Government Department or by Ministry of Railways or by K-RIDE as on the deadline for submission of bid.
- 6. We declare that the bidder or any of its constituents have not either changed their name or created a new business entity. Consequent to having been banned business dealings for specified period which is not over or suspended business dealings or having been declared as poor performer.

7. We declare and certify that balance sheets for last five financial years including that for the latest concluded financial year are being submitted.

OR

We declare and certify that balance sheet for the latest concluded financial year has not been finalized till date and that is why we are furnishing financial data for last five financial years ignoring the latest concluded financial year.

*(# - Delete whichever is not applicable) **.*

8. We declare and certify that we have not made any misleading or false representation in the forms, statements and attachments in proof of the qualification requirements.
9. We declare that the information and documents submitted along with the bid by us are correct and we are fully responsible for the correctness of the information and documents, submitted by us.
10. We understand that in case we cease to fulfil the requirements of qualifying and eligibility criteria at any time after opening of bids and till finalization of bids, it will be our bounden duty to inform the Employer of our changed status immediately and in case of our failure to do so, our bid shall be rejected and bid security declaration form shall be forfeited. In case such failure comes to the notice of Employer at any time after award of the contract, it will lead to termination of the contract and forfeiture of Bid or Performance Security. We shall also be liable for Banning of Business dealings up to a period of five years.
11. We understand that if the contents of the affidavit are found to be false at any stage during bid evaluation, it will lead to rejection of our bid and forfeiture of the bid security. Further, we ***[insert name of the bidder]*** **** _____** and all our constituents understand that we shall be liable for banning of business dealings up to a period of five years.
12. We declare and certify that we have not made any misleading or false representation in the forms, statements and attachments in proof of the qualification requirements.
13. We also understand that our offer will be evaluated based on the documents/credentials submitted along with the offer and same shall be binding upon us.
14. We declare that the information and the document submitted along with the tender by us are correct and we are fully responsible for the correctness of the information and documents, submitted by us.
15. We undersigned that if the certificate regarding Eligibility Criteria submitted by us are found to be forged/false or incorrect at any time during process for evaluation of tenders, it shall lead to forfeiture of the tender EMD besides banning of business for five years in K-RIDE. Further, we (Insert name of the Tenderer)** and all our constituents understand that our offer shall be summarily rejected.
16. We also understand that if the certificate submitted by us are found to be false/forged or incorrect at any time after the award of contract, it will lead to termination of the contract, along with forfeiture of EMD/SD and performance guarantee besides any other action provided in the contract including banning of business for five years in K-RIDE.

(SEAL AND SIGNATURE OF THE BIDDER)

Verification:

We above named tenderer do hereby solemnly affirm and verify that the contents of our above affidavit are true and correct. Nothing has been concealed and no part of it is false.

(SEAL AND SIGNATURE OF THE BIDDER)

*Modify the contents wherever necessary, in terms of sub-clause 2 ITT.

** The contents in Italics are only for guidance purpose and details as appropriate, are to be filled in suitably by Bidder.

Attestation before Magistrate/Public Notary

K-RIDE

Form – BDF/1

BID SECURITY DECLARATION FORM

DELETED

K-RIDE

Form: JV/Consortium/1

**PRO-FORMA LETTER OF PARTICIPATION FROM EACH PARTNER OF JOINT VENTURE (JV)/
CONSORTIUM**

(On each Firm's Letter Head)

No.....

Dated:.....

From,

.....
.....

To,

The General Manager,
Rail Infrastructure Development Company (Karnataka) Limited,
"Samparka Soudha", 1st Floor,
B.E.P Premises (Opp. Orion Mall),
Rajajinagar 1st Block,
Bangalore - 560 010.

Gentlemen,

Re: ... "[Insert name of work]"

Ref: Your notice for Invitation for Bid (IFB)

1. We wish to confirm that our company/firm (delete as appropriate) has formed a Joint Venture/ Consortium by name of with for the purposes associated with IFB referred to above.
*(Members who are not the lead partner of the JV/ Consortium should add the following paragraph) **
2. 'The JV/ Consortium is led by ... whom we hereby authorize to act on our behalf for the purposes of submission of Bid for and authorize to incur liabilities and receive instructions for and on behalf of any and all the partners or constituents of the Joint Venture/ Consortium.'

OR

*(Member(s) being the lead member of the group should add the following paragraph) **

2. 'In this group we act as leader and, for the purposes of applying for qualification, represent the Joint Venture/ Consortium.'
3. In the event of our group being awarded the contract, we agree to be jointly with..... (names of other members of our JV/ Consortium) and severally liable to the (K-RIDE) Rail Infrastructure Development Company (Karnataka) Limited, Bangalore, its successors and assigns for all obligations, duties and responsibilities arising from or imposed by the contract subsequently entered into between Rail Infrastructure Development Company (Karnataka) Limited, Bangalore and our JV/ Consortium.

4. *I/We, further agree that entire execution of the contract shall be carried out exclusively through the lead partner.

Yours faithfully,

(Signature)

(Name of Signatory)

(Capacity of Signatory)

Seal

* Delete as applicable

K-RIDE

Form: JV/Consortium/2

**FORMAT FOR POWER OF ATTORNEY FOR AUTHORISED
SIGNATORY OF JOINT VENTURE (JV)/ CONSORTIUM PARTNERS**

POWER OF ATTORNEY

(To be executed on non-judicial stamp paper of the appropriate value in accordance with relevant stamp Act. The stamp paper to be in the name of the company who is issuing the power of Attorney)

Know all men by these presents, we ... do hereby constitute, appoint and authorize Mr/Ms. who is presently employed with us and holding the position ofas our attorney, to do in our name and on our behalf, all such acts, deeds and things necessary in connection with or incidental to our bid for the work of ...Including signing and submission of all documents and providing information/responses to Rail Infrastructure Development Company (Karnataka) Limited, Bangalore, representing us in all matters, dealing with Rail Infrastructure Development Company (Karnataka) Limited, Bangalore, in all matters in connection with our bid for the said project and if successful, till the whole of the bid process.

We hereby agree to ratify all acts, deeds and things lawfully done by our said attorney pursuant to this Power of Attorney and that all acts, deeds and things done by our aforesaid attorney shall and shall always be deemed to have been done by us.

Dated this the day of 2022

(Signature of authorized Signatory)

.....

(Signature and Name in Block letters of Signatory)

Seal of Company

Witness

Witness 1:

Name:

Address:

Occupation:

Witness 2:

Name:

Address:

Occupation:

*Notes:

- i. To be executed by all the partners individually, in case of a Joint Venture/ Consortium.
- ii. The mode of execution of the Power of Attorney should be in accordance with the procedure, if any, laid down by the applicable law and the charter documents of the executant(s) and when it is so required the same should be under common seal affixed in accordance with the required procedure.
- iii. Also wherever required, the executants(s) should submit for verification the extract of the charter documents and documents such as resolution/ power of attorney in favour of the person executing this power of attorney for the designation of power hereunder on behalf of the bidder.

Form: JV/Consortium/3

**FORMAT FOR POWER OF ATTORNEY TO
LEAD PARTNER OF JOINT VENTURE (JV) CONSORTIUM**

*(To be executed on non-judicial stamp paper of the appropriate value in accordance with relevant stamp Act.
The stamp paper to be in the name of the company who is issuing the power of Attorney)*

POWER OF ATTORNEY

Whereas Rail Infrastructure Development Company (Karnataka) Limited Bangalore, has invited Bids for the work of

Whereas, the members of the Joint Venture/ Consortium comprising of M/s. ..., M/s., and M/s. are interested in submission of bid for the work of ... *[Insert name of work]* ... in accordance with the terms and conditions contained in the bidding documents.

Whereas, it is necessary for the members of the Joint Venture/ Consortium to designate one of them as the Lead Partner, with all necessary power and authority to do, for and on behalf of the Joint Venture/ Consortium, all acts, deeds and things as may be necessary in connection with the Joint Venture's/ Consortium's bid for the project, as may be necessary in connection the Joint Venture's/ Consortium's bid for the project.

NOW THIS POWER OF ATTORNEY WITNESSETH THAT:

We, M/s., hereby designate M/s., being one of the partners of the Joint Venture/ Consortium, as the lead partner of the Joint Venture/ Consortium, to do on behalf of the Joint Venture/ Consortium, all or any of the acts, deeds or things necessary or incidental to the Joint Venture's/ Consortium's bid for the contract, including submission of bid, participating in conferences, responding to queries, submission of information/ documents and generally to represent the Joint Venture/ Consortium in all its dealings with K-RIDE/ Railway or any other Government Agency or any person, in connection with the contract for the said work until culmination of the process of bidding till the contract agreement is entered into with the Rail Infrastructure Development Company (Karnataka) Limited, Bangalore and thereafter till the expiry of the contract agreement.

We hereby agree to ratify all acts, deeds and things lawfully done by lead member, our said attorney, pursuant to this power of attorney and that all acts deeds and things done by our aforesaid attorney shall and shall always be deemed to have been done by us/ Joint Venture/ Consortium.

Dated this the Day of 2022

.....

(Signature)

.....

(Name in Block letters of Executant)

Seal of Company

Witness 1:

Name:

Address:

Occupation:

Witness 2:

Name:

Address:

Occupation:

Notes:

1. To be executed by all the Partners of the JV/Consortium except the lead Partner.
2. The mode of execution of the Power of Attorney should be in accordance with the procedure, if any, laid down by the applicable law and the charter documents of the executant(s) and when it is so required the same should be under common seal affixed in accordance with the required procedure.

K-RIDE

Form: JV/Consortium/4**DRAFT FORMAT OF JOINT VENTURE/CONSORTIUM AGREEMENT**

M/s having its registered office at (hereinafter referred to as)
acting as the Lead Partner of the first part,

and

M/s having its registered office at (here in after referred to as
.....) in the capacity of a Joint Partner of the other part.

The expressions of and shall wherever the context admit, mean and include their respective legal representatives, successors-in-interest and assigns and shall collectively be referred to as “the Parties” and individually as “the Party”

WHEREAS:

Rail Infrastructure Development Company (Karnataka) Limited (K-RIDE) [hereinafter referred to as “Employer”] has invited bids for ... “[Insert name of work]” Vide LOA No.....awarded contract.

NOW, THEREFORE, THE PARTIES AGREE AS FOLLOWS:

1. The following documents shall be deemed to form and be read and construed as an integral part of this AGREEMENT.
 - i. Notice for Bid, and
 - ii. Bidding document
 - iii. Any Addendum/Corrigendum issued by Rail Infrastructure Development Company (Karnataka) Limited
 - iv. The bid submitted on our behalf jointly by the Lead Partner.
 - v. Letter of Acceptance issued by Rail Infrastructure Development Company (Karnataka) Ltd.
2. The ‘Parties’ have studied the documents and LOA issued to enter into Joint Venture/ Consortium as under and have agreed to participate.
3. M/s shall be the lead member of the JV/ Consortium for all intents and purpose and shall represent the Joint Venture/ Consortium in its dealing with the Employer. For the purpose of execution, the parties agree to nominate as the leader duly authorized to sign and submit all documents and enter into correspondence with the Employer.
4. The ‘Parties’ have resolved that the distribution of share and responsibilities between the JV/Consortium partners is as under
 - (a) Lead Partner Share %

Responsibilities

(I) Key Activities and %age execution assigned

 - i.

(II) BOQ Schedule/Bill No. and %age execution assigned

- i.
- ii.
- iii.

(b) Joint Venture/ Consortium Partner Share.....%

Responsibilities

(I) Key Activities and %age execution assigned

- i.

(II) BOQ Schedule/Bill No. and %age execution assigned

- i.
- ii.
- iii.

(c) Joint Venture/ Consortium Partner Share.....%

Responsibilities

(I) Key Activities and %age execution assigned

- i.

(II) BOQ Schedule/Bill No. and %age execution assigned

- i.
- ii.
- iii.

Note: In case any Bill or items of a Bill are proposed to be executed by more than one JV/ Consortium partner then indicate the breakup of that Item/Bill no. for each JV/ Consortium partner.

5. JOINT AND SEVERAL RESPONSIBILITIES

The Parties undertake that they shall be jointly and severally liable to the Employer in the discharge of all the obligations and liabilities as per the contract with the Employer and for the performance of contract awarded to their JV/Consortium.

6. ASSIGNMENT AND THIRD PARTIES

The parties shall co-operate throughout the entire period of this AGREEMENT on the basis of exclusivity and neither of the Parties shall make arrangement or enter into agreement either directly or indirectly with any other party or group of parties on matters relating to the Project except with prior written consent of the other party and the Employer.

7. EXECUTIVE AUTHORITY

The said Joint Venture/ Consortium through its authorized representative shall receive instructions, payments from the Employer. The management structure for the project shall be prepared by mutual consultations to enable completion of project to quality requirements within permitted cost and time.

8. GUARANTEES AND BONDS

Performance Security and other Securities of a JV/ Consortium shall be in the name of the JV/ Consortium that submits the bid.

9. BID SUBMISSION

Each Party shall bear its own cost and expenses for preparation and submission of the bid and all costs until conclusion of a contract with the Employer for the Project. Common expenses shall be shared by both the parties in the ratio of their actual participation.

10. INDEMNITY

Each party hereto agrees to indemnify the other party against its respective parts in case of breach/default of the respective party of the contract works of any liabilities sustained by the Joint Venture/ Consortium.

11. For the execution of the respective portions of works, the parties shall make their own arrangements to bring the required finance, plants and equipment, materials, manpower and other resources.

12. DOCUMENTS & CONFIDENTIALITY

Each Party shall maintain in confidence and not use for any purpose related to the Project all commercial and technical information received or generated in the course of preparation and submission of the bid.

13. ARBITRATION

Any dispute, controversy or claim arising out of or relating to this agreement shall be settled in the first instance amicably between the parties. If an amicable settlement cannot be reached as above, it will be settled by arbitration in accordance with the Indian Arbitration and Conciliation Act 1996 or any amendments thereof. The venue of the arbitration shall be Bangalore.

14. VALIDITY

This Agreement shall remain in force till the defect liability period is over and Securities are released.

15. This AGREEMENT is drawn in number of copies with equal legal strength and status. One copy is held by M/s and the other by M/s. &M/s and a copy submitted with the Bid.

16. This AGREEMENT shall be construed under the laws of India.

17. NOTICES BETWEEN JV/ CONSORTIUM PARTNERS

Notices shall be given in writing by fax confirmed by registered mail or commercial courier to the following fax numbers and addresses:

Lead Partner

Other Partner

.....

.....

.....

.....

(Name & Address)

(Name & Address)

IN WITNESS WHEREOF THE PARTIES, have executed this AGREEMENT the day, month and year first before written.

M/s.....

M/s.....

.....

.....

(Seal)

(Seal)

Witness

1.....(Name & Address)

2..... (Name & Address)

K-RIDE

Bidders Qualification

To establish its qualifications to perform the contract in accordance with Section 2 (Qualification Information) the Bidder shall provide the information requested in the corresponding Information Sheets included hereunder.

To establish its qualifications to perform the contract in accordance with Section 2 (Qualification Criteria) the Bidder shall provide the information requested in the corresponding Information Sheets included hereunder.

Form ELI - 1: Bidder's Information Sheet

Bidder's Information	
Bidder's legal name	
Bidder's country of constitution	
Bidder's year of constitution	
Bidder's legal address in country of constitution	
Bidder's authorized representative (name, address, telephone numbers, fax numbers, e-mail address)	

The bidder shall attach copies of the following original documents with the form:

1. In case of single entity, articles of incorporation or constitution of the legal entity named above, in accordance with ITT clause 2.
2. Authorization to represent the firm or JV/ Consortium named in above, in accordance with ITT clause 14.
3. In case of JV/ Consortium, JV/ Consortium agreement, in accordance with ITT clause 2.

SEAL AND SIGNATURE

Form ELI - 2: JV/ Consortium Information Sheet

Each member of a JV/ Consortium must fill in this form separately

JV / Consortium Information	
Bidder's legal name	
JV/ Consortium Partner's legal name	
JV/ Consortium Partner's country of constitution	
JV/ Consortium Partner's year of constitution	
JV/ Consortium Partner's legal address in country of constitution	
JV/ Consortium Partner's authorized representative information (name, address, telephone numbers, fax numbers, e-mail address)	
Bidder's Bank Details: (a) Name of the Bank and branch: (b) Account Number: (c) IFSC code: (d) Bank's Contact Number and Fax Number: (e) PAN: (f) GST Registration No:	

The bidder shall attach copies of the following original documents with the form:

1. Articles of incorporation or constitution of the legal entity named above, in accordance with ITT clause 2.
2. Authorization to represent the firm named above, in accordance with ITT clause 14.

Note: Following needs to be submitted by the bidder;

- (a) Affidavit in case of Proprietary firm.
- (b) Partnership Deed in case of partnership firm.
- (c) Memorandum & Article of Association in case of Public/Private limited company.
- (d) Authorization/POA in favour of authorised signatory of bidder to sign the bid.

SEAL AND SIGNATURE

Form FIN-1: Financial Situation

(Each Bidder or each member of a JV/Consortium must fill in this form separately)

NAME OF BIDDER/JV/CONSORTIUM PARTNER

	Financial Data for Last 5 Years [Indian National Rupees]				
	Year 1:	Year 2:	Year 3:	Year 4:	Year 5:
1. Total Assets					
2. Current Assets					
3. Total Liabilities					
Current Liabilities					
5. Net Worth [= 1 – 3]					
6. Working Capital [= 2 - 4]					
7. Profit Before Tax (PBT)					

1. The bidder shall attach copies of the following original documents with the form

Copies of the audited balance sheets, including all related notes, and income statements for the last five years, as indicated above, complying with the following conditions.

- i. All such documents reflect the financial situation of the Bidder or partner to a JV/ Consortium, and not sister or parent companies.
- ii. Historic financial statements must be audited by a certified accountant.
- iii. Historic financial statements must be complete, including all notes to the financial statements.
- iv. Historic financial statements must correspond to accounting periods already completed and audited (no statements for partial periods shall be requested or accepted).

2. Contents of this form should be certified by a Statutory Auditor

- i. In the event that the audited accounts for the latest concluded Financial Year are not available, the Bidder shall furnish information pertaining to the last five financial years after ignoring the latest concluded financial year. In case, the bidder submits audited financial information for the last six or more years, only the figures for the latest five years shall be considered for evaluation.
- ii. Financial data for last five financial years has to be submitted by the bidder along with audited balance sheets. The financial information of the Bidder must be certified either by the Independent Financial Auditor (statutory Auditor) of the company appointed under the companies' Act.

- iii. In case any discrepancy in data is found between the balance sheet and the financial information submitted, the data as available in the balance sheet will be considered.
- iv. In case the audited balance sheet of the last financial year is not made available by the Bidder, he has to submit an affidavit certifying that 'The Balance Sheet has actually not been audited so far'. In such a case the financial data of previous '4' audited financial years will be taken into consideration for evaluation. If audited balance sheet of any year other than the last financial year is not submitted, then the bid will be considered as non-responsive
- v. In case the company's financial year is from Jan 19 to Dec 19, then it will be considered under financial year 2019 - 20 similar procedure will be applicable for other financial years also.

SEAL AND SIGNATURE OF THE BIDDER

Certified that all figures and facts submitted in this form have been furnished after full consideration of all observations/notes in Auditor's reports.

(Signature of Statutory Auditor)

Name of Statutory Auditor : _____

Registration No: _____

(Seal)

Form FIN-2: Annual Construction Turnover for the last 5 years

Each Bidder or each member of a JV/ Consortium must fill in this form separately:

NAME OF BIDDER/JV/CONSORTIUM PARTNER:

Sl.No.	Year	Annual Turnover	Multiplying factor	Updated Annual turnover
		INR	INR	INR
1	2017-2018		1.22	
2	2018-2019		1.16	
3	2019-2020		1.10	
4	2020-2021		1.05	
5	2021-2022		1.00	

Annual Turnover Data for the Last 5 Years (Construction only)			
Year	Amount Currency	Exchange Rate	Indian National Rupees Equivalent
Average Annual Construction Turnover for last 5 Financial Years			
Minimum Financial Turnover for any last 2 Financial Years as per clause 3.2(a)			

1. The information supplied shall be substantiated by data in the audited balance sheets and profit and loss accounts for the relevant years and submitted as attachments to form Fin-1 in respect of the bidder or all partners constituting the bidder.
2. Contents of this form should be certified by a Statutory Auditor.
3. In the event that the audited accounts for the latest Financial Year are not available, the Bidder shall furnish information pertaining to last three financial years after ignoring the latest financial year. In case the bidder submits audited financial information for the last four or more years, only the figures for the latest three years shall be considered for evaluation.

SEAL AND SIGNATURE

Form FIN-3: Current Contract Commitments / Works in Progress

Bidders and each partner to a JV/Consortium should provide information on their current commitments on all contract that have been awarded, or which a letter of intent or acceptance has been received, or for contracts approaching completion, but for which an unqualified, full completion certificate has yet to be issued.

Contract Commitments

Sl. No.	Description of work	Contract No. & date	Name & address of Employer, Tel./Fax/ Email	Value of Contract in INR	Stipulated Period of completion	Value of Balance work	Anticipated date of Completion
1							
2							
3							
4							
5							
Total							

1. For calculation of 'Updated contract value" in column 5 above, assume inflation as per multiplying Factors given in FIN-2.
2. Bidder should provide information on their current commitments or all contracts that have been awarded or for which a letter of intent or acceptance has been received or for contracts approaching completion but for which a completion certificate is yet to be issued.
3. Total Equivalent INR should be calculated using the selling exchange rate of Reserve Bank of India as on 28th day prior to the last date of submission of bids. In case publication is not available on 28th day, previous working day published exchange rate shall be considered for evaluation.

Note: Enclose Certificate(s) from Engineer(s) Incharge (not below the rank of Executive Engineer) for Value of outstanding work. In case it is not feasible to furnish certificate from all the units the bidder should record the following certificate on Fin 3:

"Certified that current commitments on all the contracts that have been awarded or for which a letter of intent or acceptance has been received or for the works in progress or the works approaching completion, value of outstanding work has been indicated in the above table correctly. It is further certified that if later on the employer discovers that information provided in the table is incorrect then the employer will treat our bid invalid and it will be liable for rejection"

SEAL AND SIGNATURE

FORM NO. 1

DELETED

K-RIDE

FORM NO. 2

**CHECKLIST FOR CLAUSES PERTAINING TO SUMMARY
REJECTION OF BID**

We, the undersigned, declare that we have read and understood the content of ITT clauses section:2 mentioned below. We also understand that our bid shall be summarily rejected in case we fail to comply the requirements of undermentioned clauses:

ITT Clause No. Section 2	Reason for Summary Rejection
2.5	Non-submission of Affidavit- (Form PS-3)
2.5	Non-submission of immediate information to the Employer in case Bidder ceases to fulfill eligibility in terms of ITT clause 2
10.3	ITT clause No. 10.3 of Section 2 for Non submission of Letter of Technical Bid (LTB)
13.1	Bid not accompanied with EMD
14	Bid not accompanied with power of attorney/General power of Attorney to sign on behalf of the bidders

SEAL AND SIGNATURE OF THE BIDDER

Form: 3 C 1

FORMAT FOR CERTIFICATE TO BE SUBMITTED BY BIDDER ALONGWITH THE BID

(On the letter head of the Firm)

We/I, _____, having registered office at _____ do hereby certify that "I have read the clause regarding restrictions on procurement from a bidder of a country which shares a land border with India; I certify that this bidder is not from such country or, if from such a country, has been registered with the Competent Authority. I hereby certify that this bidder fulfils all requirements in this regard and is eligible to be considered. (Where applicable, evidence of valid registration by the competent Authority shall be attached.)"

Dated this _____ day of _____, 2022

For- _____

Authorized Signatory Signature _____

Full Name: _____

Place: _____

(SEAL AND SIGNATURE OF THE BIDDER)

**FORMAT FOR CERTIFICATE TO BE SUBMITTED BY
BIDDER ALONGWITH THE BID FOR SUB CONTRACTING**

(On the letter head of the Firm)

We/I, _____, having registered office at _____ do hereby certify that “I have read the clause regarding restrictions on procurement from a bidder of a country which shares a land border with India and on sub-contracting to contractors from such countries; I certify that this bidder is not from such a country or, if from such a country, has been registered with the competent Authority and will not sub-contractor any work to a contractor from such countries unless such contractor is registered with the competent Authority. I hereby certify that his bidder fulfils all requirements in this regard and is eligible to be considered. (Where applicable, evidence of valid registration the Competent Authority shall be attached.)”

Dated this _____ day of _____, 2022

For- _____

Authorized Signatory Signature _____

Full Name: _____

Place: _____

K-RIDE

(SEAL AND SIGNATURE OF THE BIDDER)

Form 5

Key Personnel for the work

MINIMUM QUALIFICATION AND EXPERIENCE REQUIRED FOR KEY PERSONNEL TO BE DEPLOYED FOR THE WORK

Sl. No.	Key Personnel	Qualifications & Total Experience	Particular Experience (Minimum requirement)	Minimum Number of Personnel Required	Name of the key personnel proposed	Qualification	Total number of years of experience	Number of Years in similar works experience
1	Project Manager (Team Leader)	Bachelor's Degree/Post Graduate Degree in Civil Engineering	Minimum 12 years total experience and 5-year experience in the role of Project Manager in the execution of similar type of work.	1				

Note: Further details to be updated as per clause 3.3 (c) of section 2 ITT.

(Signature)

(Name of Signatory)

(Capacity of Signatory)

Seal.....

Format of Curriculum Vitae (cv) for proposed key professional staff

Proposed Position:

Name of Firm:

Name of Staff:

Profession:

Date of Birth:

Years with Firm/Entity: Nationality:

Membership in Professional Societies:

Detailed Tasks Assigned:

Key Qualifications:

[Give an outline of staff member's experience and training most pertinent to tasks on assignment. Describe degree of responsibility held by staff member on relevant previous assignments and give dates and locations.]

Education:

[Summarize college/university and other specialized education of staff member and degrees obtained.]

Employment Record:

[Starting with present position, list in reverse order every employment held. List all positions held by staff member since graduation, giving dates, names of employing organizations, titles of positions held, and locations of assignments. Also give types of activities performed and client references, where appropriate.]

Period	Name of Employing Organization	Name of the Project	Title / Position	Activity performed	Location of the Assignment

Languages:

[For each language, indicate proficiency: excellent, good, fair, or poor; in speaking, reading, and writing]

Certification:

I, the undersigned, certify that to the best of my knowledge and belief, these data correctly describe me, my qualifications, and my experience.

Date:

[Signature of staff member and authorized representative of the Firm] Day/Month/Year

Full name of staff member: _____

Full name of the authorized representative: _____

FORM CL-2

UNDERTAKING FROM SPECIALIST SUB-CONTRACTOR

(Refer Clause of EQC)

(On the Letterhead of specialist sub-contractor)

I/We,.....(Legal Name of Specialist Subcontractor) hereby confirm that we are associating with(Legal name of the bidder) for the work of(Name of work as stated in Invitation for Bids {IFB}), for the key activity stated in clause 3.2 (c) of ITT (if applicable).

I/We hereby undertake that in case M/s.....(Legal name of the bidder) are awarded the work of(Name of work as stated in Invitation for Bids {IFB}),the key activity stated in clause 3.2 (c) of ITT shall be undertaken by us as per bid conditions (if applicable).

**STAMP & SIGNATURE OF AUTHORISED
SIGNATORY OF SPECIALIST SUB CONTRACTOR**

**STAMP & SIGNATURE OF AUTHORISED
SIGNATORY OF BIDDER**

Form CL-3

Availability of Financial Resources
(Section-2, ITT clause 3.3 (b))

Bidders must demonstrate sufficient financial resources, comprising of Working Capital supplemented by credit line statements or overdraft facilities to meet the Bidder's financial requirements for

- a) its current contract commitments, and
- b) the subject contract.

In case of a Joint Venture, each Joint Venture Partner must fill out this form separately and provide the Joint Venture Partner's name:

Joint Venture Partner: _____

Financial Resources		
No.	Source of financing	Amount (equivalent)
1	Working Capital	
2	Credit Line	
Total Available Financial Resources		

^aTo be considered, Credit Line must be substantiated by a letter from the bank issuing the line of credit, specific for the subject contract, as prescribed. Any letter or document not complying with this requirement shall not be considered as supplementary financial resources.

Note:

In case the financial statement data is other than Indian Rupees, the equivalent Indian Rupees with the exchange rates as defined in the Section-2, ITT.

Evidence of Availability of Credit Line Financial Resources

(Section-2 ITT, Clause:3(b))

[Each Bidder must fill out this form to demonstrate financial resources comprising credit line statements or overdraft facilities.]

Project Name:

Bidding Package Name and Identification Number: (to be filled in as indicated in ITT 1) ...

BANK CERTIFICATE

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

If the contract 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.

___Sd. ___

Name of Bank: _____

Senior Bank Manager _____

Address of the Bank _____

[In case of Joint Venture, change the text as follows:]

This is to certify that M/s who has formed a Joint Venture with M/s and M/s for participating in this bid, is a reputed company with a good financial standing.

If the contract for the work, namely..... is awarded to the above joint venture, we shall be able to provide overdraft / credit facilities to the extent of Rs..... to M/s to meet their working capital requirements for executing the above contract.

Form EXP-1**WORK EXPERIENCE CERTIFICATE**

To whom so ever it may concern
(Issued for the purpose of Quoting in K-RIDE tenders)

M/s/Sri (Name and address of the contractor) is a working contractor of this unit and was awarded the following work. The relevant details of the work are as under: -

Sl.No	Description	Details
1	Name of work	
2	Acceptance Letter No and Date	
3	Agreement Number, date and name of the agency	
4	Agreement value in Rupees (in words and figures)	
5	Due date of completion	
6	Actual date of completion of work	
7	Value of Final Bill if passed (in words)	
8	Work completed but Final measurements not recorded. a) Amount paid so far as in CC bill No.	
9	Work completed. Final measurements recorded with negative variation a) Amount so far paid as in CC bill No.	
10	Work completed. If Final measurements recorded with Positive variation which is not sanctioned yet. Original agreement value of Last sanctioned agreement value whichever is lower.	
11	Scope of work (Broad category of works i.e., the name of the work in the agreement on which work is	
12	Details of values of major components/ works executed in the completed work.	

Note:

The Certificate to satisfy similar work should be signed by an officer not lower than JAG officer in Railways and Executive Engineer rank or equivalent grade in other department of Govt. of India/State Government/PSUs of Government of India / State Undertaking and Competent Authority of Public Listed Company.

Signature :.....

Name of officer.....

Designation:

Address:

Office seal:

.....

Phone/FAX No.:

.....

Date :

--00--00--00--

SECTION-4

**FORM OF TENDER, LETTER OF ACCEPTANCE,
NOTICE TO PROCEED WITH THE WORK AND
AGREEMENT FORM ETC.,**

FORM OF TENDER, LETTER OF ACCEPTANCE, NOTICE TO PROCEED WITH THE WORK AND AGREEMENT FORM ETC.,

SL. NO.	TITLE	FORM NUMBER	PAGE NO.
1	LETTER OF ACCEPTANCE	FORM-1	86
2	ISSUE OF NOTICE TO PROCEED WITH THE WORK	FORM-2	87
3	AGREEMENT FORM	FORM-3	88

K-RIDE

FORM OF TENDER (DELETED)

Please refer Form PS-1 of Section 3: Qualification Information/Bidding Forms.

FORM-1

LETTER OF ACCEPTANCE

(Letter head paper of the Employer)

_____ [date]

To: _____ [name and address of the Contractor]

Dear Sirs,

This is to notify you that your Tender dated _____ for execution of the “[Name of the work]”. [Tender No: & Date] for the Contract Price of Rupees _____. (_____ [amount in words and figures]), as corrected and modified in accordance with the Instructions to Tenderers is hereby accepted by our Agency.

You are hereby requested to furnish Security deposit (Performance Security) plus additional security for unbalanced tenders in accordance with of Clause 25.5 of ITT, in the form detailed in Clause 29.1 of ITT and clause 43 of the conditions of contract for an amount of Rs. _____ (As defined in contract data) within 20 days of the receipt of this letter of acceptance valid up to 30 days from the date of expiry of Defects Liability Period i.e. up to and sign the contract.

Yours faithfully,

Authorized Signature

Name and Title of Signatory

Name of Agency.

ISSUE OF NOTICE TO PROCEED WITH THE WORK

(Letter head of the Employer)

_____ (Date)

To

_____ (name and address of the Contractor)

Dear Sirs:

With reference to LOA, for the construction of “[Name of the work]” Tender Price of Rs. _____, you are hereby instructed to proceed with the execution of the said works in accordance with the contract documents.

Yours faithfully,

(Signature, name and title of signatory authorized to sign on behalf of Employer)

K-RIDE

AGREEMENT FORM

This agreement, made the _____ day of _____ 20_____,
 between _____
 _____ (Name and Address of Employer) (herein after called "the
 Employer") of the one part and _____ [name
 and address of contractor] (herein after called "the Contractor") of the other part.

Whereas the Employer is desirous that the Contractor execute, "[Name of the work]" [Tender No & Date] for (herein after called "The Works") and the Employer has accepted the Tender by the Contractor for the execution and completion of such Works and the remedying of any defects therein at a contract price of Rupees.....

NOW THIS AGREEMENT WITNESSETH as follows:

1. In this Agreement, words and expression shall have the same meanings as are respectively assigned to them in the Conditions of Contract hereinafter referred to, and they shall be deemed to form and be read and construed as part of this Agreement.
2. 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 aspects with the provisions of the Contract.
3. The Employer hereby covenants to pay the Contractor in consideration of the execution and completion of the Works and the remedying the defects wherein 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.
4. The following documents shall be deemed to form and be read and construed as part of this Agreement, viz:
 - i) Letter of Acceptance;
 - ii) Notice to proceed with the works;
 - iii) Contractor's Tender;
 - iv) Contract Data;
 - v) Conditions of contract (including Special Conditions of Contract and Particular Condition of Contract)
 - vi) Specifications;
 - vii) Drawings;
 - viii) Bill of Quantities; and
 - ix) Any other document listed in the Contract Data as forming part of the contract.

In witness whereof the parties thereto have caused this Agreement to be executed the day and year first before written.

The Common Seal of _____

was hereunto affixed in the presence of:

Signed, Sealed and Delivered by the said _____

in the presence of:

Binding Signature of Employer _____

Binding Signature of Contractor _____

SECTION – 5

CONDITIONS OF CONTRACT(CC) AND SPECIAL CONDITIONS OF CONTRACT (SCC)

CONDITIONS OF CONTRACT

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K-RIDE

CONDITIONS OF CONTRACT

A. GENERAL

1. DEFINITIONS

- 1.1 Terms which are defined in the Contract Data are not also defined in the Conditions of Contract but keep their defined meanings. Bold letters are used to identify defined terms.

Bill of Quantities means the priced and completed Bill of Quantities forming part of the Tender.

Compensation Events are those defined in Clause 38 hereunder.

The **Completion Date** is the date of completion of the Works as certified by the Employer in accordance with Sub Clause 46.1.

The **Contract** is the contract between the Employer and the Contractor to execute, complete and maintain the Works. It consists of the documents listed in Clause 2.2 below.

The **Contract Data** defines the documents and other information which comprise the Contract.

The **Contractor** is a person or corporate body or Joint Venture whose Tender to carry out the Works has been accepted by the Employer.

The **Contractor's Tender** is the completed Tender document submitted by the Contractor to the Employer.

The **Contract Price** is the price stated in the Letter of Acceptance and thereafter as adjusted in accordance with the provisions of the Contract.

Days are calendar days; **months** are calendar months.

A **Defect** is any part of the Works not completed in accordance with the Contract.

The **Defects liability period** is the period named in the Contract Data and calculated from the Completion Date.

The **Employer** is the party who will employ the Contractor to carry out the Works.

Equipment is the Contractor's machinery and vehicles brought temporarily to the Site to construct the Works.

The **Initial Contract price** is the Contract Price listed in the Employer's Letter of Acceptance.

The **Intended Completion Date** is the date on which it is intended that the Contractor shall complete the Works. The Intended Completion Date is specified in the Contract Data. The Intended Completion Date may be revised only by the Employer by issuing an extension of time.

'**Joint Venture**' means an ad hoc association of firms that pool their resources and skills to undertake a large or complex contract in the role of "Contractor," with all firms (partners in the JV) being legally liable, jointly and severally, for the execution of the Contract in the event of a partner's withdrawal.

Materials are all supplies, including consumables, used by the contractor for incorporation in the Works.

Plant is any integral part of the Works which is to have a mechanical, electrical, electronic or chemical or biological function.

The **Site** is the area defined as such in the Contract Data.

Specification means the Specification of the Works included in the Contract and any modification or addition made or approved by the Employer.

The **Start Date** is given in the Contract Data. It is the date when the Contractor shall commence execution of the works. It does not necessarily coincide with any of the Site Possession Dates.

A Subcontractor is a person or corporate body who has a Contract with the Contractor to carry out a part of the work in the Contract which includes work on the Site.

A **Variation** is an instruction given by the Employer which varies the Works.

The **Works** are what the Contract requires the Contractor to construct, install, and turn over to the Employer, as defined in the Contract Data.

2. INTERPRETATION

2.1 In interpreting these Conditions of Contract, singular also means plural, male also means female or neuter, and the other way around. Headings have no significance. Words have their normal meaning under the language of the Contract unless specifically defined. The Employer will provide instructions clarifying queries about the Conditions of Contract.

2.2 The documents forming the Contract shall be interpreted in the following order of priority:

- (1) Agreement
- (2) Letter of Acceptance, notice to proceed with the works
- (3) Contractor's Tender
- (4) Contract Data
- (5) Conditions of Contract
- (6) Specifications
- (7) Drawings
- (8) Bill of quantities and
- (9) any other document listed in the Contract Data as forming part of the Contract.

3. LAW GOVERNING CONTRACT

3.1 The law governing the Contract is the Laws of India supplanted by the Karnataka Local Acts.

4. EMPLOYER'S DECISIONS

4.1 Except where otherwise specifically stated, the Employer will decide contractual matters between the Employer and the Contractor.

5. DELEGATION

5.1 The Employer may delegate any of his duties and responsibilities to other people after notifying the Contractor and may cancel any delegation after notifying the Contractor.

6. COMMUNICATIONS

6.1 Communications between parties which are referred to in the conditions are effective only when in writing. A notice shall be effective only when it is delivered (in terms of Indian Contract Act).

7. SUBCONTRACTING:

7.1 The Contractor may subcontract with the approval of the Employer but may not assign the Contract without the approval of the Employer in writing. Subcontracting does not alter the Contractor's obligations.

8. OTHER CONTRACTORS

8.1 The Contractor shall cooperate and share the Site with other contractors, public authorities, utilities, and the Employer.

9. PERSONNEL

9.1 The Contractor shall employ the technical personnel (of number and qualifications) as may be stipulated by K-RIDE from time to time during the execution of the work. The technical staff so employed shall be available at site as may be stipulated by the Employer.

9.2 If the Employer asks the Contractor to remove a person who is a member of the Contractor's staff or his work force stating the reasons, the Contractor shall ensure that the person leaves the Site within seven days and has no further connection with the work in the Contract.

10. EMPLOYER'S AND CONTRACTOR'S RISKS

10.1 The Employer carries the risks which this Contract states are Employer's risks, and the Contractor carries the risks which this Contract states are Contractor's risks.

11. EMPLOYER'S RISKS

11.1 The Employer is responsible for the excepted risks which are:

(a) Rebellion, riot commotion or disorder unless solely restricted to employees of the Contractor or his Sub Contractors arising from the conduct of the Works; or

(b) a cause due solely to the design of the Works, other than the Contractor's design; or

(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

12. CONTRACTOR'S RISKS

12.1 All risks of loss of or damage to physical property and of personal injury and death which arise during and in consequence of the performance of the Contract other than the excepted risks are the responsibility of the Contractor.

13. INSURANCE:

13.1 The Contractor shall prior to commencing the works, effect and thereafter maintain insurances, in the joint names of the Employer and the Contractor, (cover from the first working day after the Start Date to the end of Defects Liability Period), in the amounts stated in the Contract Data:

- (a) for loss of or damage to the Works, Plants and Materials and the Contractor's equipment;
- (b) for liability of both Parties for loss, damage, death and injury to third parties or their property arising out of the Contractor's performance of the Contract including the Contractor's liability for damage to the Employer's property other than the Works and
- (c) for liability of both Parties and of any Employer's representative for death and injury to the Contractor's personnel except to the extent that liability arises from the negligence of the Employer, any Employer's representative or their Employees.

13.2 Policies and certificates for insurance shall be delivered by the Contractor to the Employer for his approval before the Start Date. All such insurance shall provide for compensation to be payable to rectify the loss or damage incurred. All payments received from insurers relating to loss or damage shall be held jointly by the Parties and used for the repair of the loss or damage or as compensation for loss or damage that is not to be repaired.

13.3 If the Contractor fails to effect or keep in force any of the insurances referred to in the previous sub-clauses or fails to provide satisfactory evidence, policies or receipts, the Employer may without prejudice to any other right or remedy, effect insurance for the cover relevant to such default and pay the premiums due and recover the same as a deduction from any other monies due to the Contractor. If no payments is due, the payment of the premiums shall be a debt due.

13.4 Alterations to the terms of an insurance shall not be made without the approval of the Employer.

13.5 Both Parties shall comply with any conditions of the insurance policies.

14. SITE INVESTIGATION REPORTS:

14.1 The Contractor, in preparing the tender, shall rely on any site investigation reports referred to in the Contract data, supplemented by any information available to the Tenderer.

15. QUERIES ABOUT THE CONTRACT DATA

15.1 The Employer will clarify queries on the Contract Data.

16. CONTRACTOR TO CONSTRUCT THE WORKS

16.1 The Contractor shall construct the Works in accordance with the Specification and Drawings.

17. THE WORKS TO BE COMPLETED BY THE INTENDED COMPLETION DATE

SECTION – 5: CONDITIONS OF CONTRACT(CC) AND SPECIAL CONDITIONS OF CONTRACT (SCC)

17.1 The Contractor may commence execution of the Works on the Start Date and shall carry out the Works in accordance with the program submitted by the Contractor, as updated with the approval of the Employer, and complete them by the Intended Completion Date.

18. APPROVAL BY THE EMPLOYER:

18.1 The Contractor shall submit Specification and drawings showing the proposed Temporary Works to the Employer, who is to approve them if they comply with the Specifications and Drawings.

18.2 The Contractor shall be responsible for the design of Temporary Works

18.3 The Employer's approval shall not alter the Contractor's responsibility for design of the Temporary Works.

18.4 The Contractor shall obtain approval of third parties to design of the temporary Works where required.

18.5 All Drawings prepared by the Contractor for the execution of the temporary or permanent Works, are subject to prior approval by the Employer before their use.

19. SAFETY

19.1 The Contractor shall be responsible for the safety of all activities on the Site.

20 DISCOVERIES

20.1 Anything of historical or other interest or of significant value unexpectedly discovered on the Site is the property of the Employer. The Contractor is to notify the Employer of such discoveries and carry out the Employer's instructions for dealing with them.

21 POSSESSION OF THE SITE

21.1 The Employer shall give possession of all parts of the Site to the Contractor progressively, If possession of a part is not given by the date stated in the Contract Data the Employer is deemed to have delayed the start of the relevant activities and this will be compensation event.

22 ACCESS TO THE SITE

22.1 The Contractor shall allow the Employer and any person authorized by the Employer access to the Site, to any place where work in connection with the Contract is being carried out or is intended to be carried out and to any place where materials or plant are being manufactured / fabricated / assembled for the works.

23 INSTRUCTIONS

23.1 The Contractor shall carry out all instructions of the Employer which comply with the applicable laws where the Site is located.

24 PROCEDURE FOR RESOLUTION OF DISPUTES:

SECTION – 5: CONDITIONS OF CONTRACT(CC) AND SPECIAL CONDITIONS OF CONTRACT (SCC)

- 24.1 If the Contractor is not satisfied with the decision taken by the Employer, the dispute shall be referred by either party to Arbitration within 30 days of the notification of the Employer's decision.
- 24.2 If neither party refers the dispute to Arbitration within the above 30 days, the Employer's decision will be final and binding.
- 24.3 The Arbitration shall be conducted in accordance with the arbitration procedure stated in the Special Conditions of Contract.

B. TIME CONTROL

25. PROGRAM

- 25.1 Within the time stated in the Contract Data the Contractor shall submit to the Employer for approval a Program showing the general methods, arrangements, order, and timing for all the activities in the Works.
- 25.2 The Employer's approval of the Program shall not alter the Contractor's obligations. The Contractor may revise the Program and submit it to the Employer again at any time. A revised Program is to show the effect of Variations and Compensation Events.

26. EXTENSION OF THE INTENDED COMPLETION DATE

- 26.1 The Employer shall extend the Intended Completion Date if a Compensation Event occurs or a Variation is issued which makes it impossible for Completion to be achieved by the Intended Completion Date.
- 26.2 The Employer shall decide whether and by how much to extend the Intended Completion Date within 21 days of the Contractor asking the Employer for a decision upon the effect of a Compensation Event or Variation and submitting full supporting information.

27. DELAYS ORDERED BY THE EMPLOYER

- 27.1 The Employer may instruct the Contractor to delay the start or progress of any activity within the Works.

28. MANAGEMENT MEETINGS

- 28.1 The Employer may require the Contractor to attend a management meeting. The business of a management meeting shall be to review the progress achieved and the plans for remaining work.
- 28.2 The responsibility of the parties for actions to be taken is to be decided by the Employer either at the management meeting or after the management meeting and stated in writing to be distributed to all who attended the meeting.

C. QUALITY CONTROL

29. IDENTIFYING DEFECTS

- 29.1 The Employer shall check the Contractor's work and notify the Contractor of any Defects that are found. Such checking shall not affect the Contractor's responsibilities. The Employer may instruct the Contractor to search for a Defect and to uncover and test any work that the Employer considers may have a Defect.

30. TESTS

- 30.1 If the Employer instructs the Contractor to carry out a test not specified in the Specification to check whether any work has a Defect and the test shows that it does, the Contractor shall pay for the test and any samples. If there is no Defect the test shall be a Compensation Event.

31. CORRECTION OF DEFECTS

- 31.1 The Employer shall give notice to the Contractor of any Defects before the end of the Defects Liability Period, which begins at Completion and is defined in the Contract Data. The Defects Liability Period shall be extended for as long as Defects remain to be corrected.
- 31.2 Every time notice of a Defect is given, the Contractor shall correct the notified Defect within the length of time specified by the Employer's notice.

32. UNCORRECTED DEFECTS

- 32.1 If the Contractor has not corrected a Defect within the time specified in the Employer's notice, the Employer will assess the cost of having the Defect corrected, and the Contractor will pay this amount.

D. COST CONTROL

33. BILL OF QUANTITIES (BOQ)

- 33.1 The BOQ shall contain items for the construction, installation, testing, and commissioning work to be done by the Contractor.
- 33.2 The BOQ is used to calculate the Contract Price. The Contractor is paid for the quantity of the work done at the rate in the BOQ for each item.

34. VARIATIONS

- 34.1 The Employer shall have power to order the Contractor to do any or all of the following as considered necessary or advisable during the progress of the work by him
- (a) Increase or decrease of any item of work included in the Bill of Quantities (BOQ);
 - (b) Omit any item of work;
 - (c) Change the character or quality or kind of any item of work;
 - (d) Change the levels, lines, positions and dimensions of any part of the work;

SECTION – 5: CONDITIONS OF CONTRACT(CC) AND SPECIAL CONDITIONS OF CONTRACT (SCC)

- (e) Execute additional items of work of any kind necessary for the completion of the works; and
 - (f) Change in any specified sequence, methods or timing of construction of any part of the work.
- 34.2 The Contractor shall be bound to carry out the work in accordance with any instructions in this connection, which may be given to him in writing by the Employer and such alteration shall not vitiate or invalidate the contract.
- 34.3 Variations shall not be made by the Contractor without an order in writing by the Employer, provided that no order in writing shall be required for increase or decrease in the quantity of an item appearing in the BOQ so long as the work executed conforms to the approved drawings.
- 34.4 The Contractor shall promptly request in writing to the Employer to confirm verbal orders and the officer issuing oral instructions shall confirm it in writing within 30 days of request, failing which the work shall be carried out as through there is no variation. In case variation is approved it shall be accompanied with BOQ, failing which the contractor shall be responsible for deviation if any.
- 35. PAYMENTS FOR VARIATIONS**
- 35.1 **Payment for increase in the quantities of an item in the BOQ up to 25% of that provided in the Bill of Quantities shall be made at the rates quoted by the Contractor.**
- 35.2 For quantities in excess of 125% of the tendered quantity of an item as given in the BOQ, the Contractor shall be paid at the rate entered in or derived from in the Schedule of Rates (applicable for the area of the work and current at the time of award of contract) plus or minus the overall percentage of the original tendered rates over the current Schedule of Rates prevalent at the time of award of contract.
- 35.3 If there is no rate for the additional, substituted or altered item of the work in the BOQ, efforts would be made to derive the rates from those given in the BOQ or the Schedule of Rates (applicable for the area of the work and current at the time of award of contract) and if found feasible the payment would be made at the derived rate for the item plus or minus the overall percentage of the original tendered rates over the current Schedule of Rates prevalent at the time of award of contract.
- 35.4 If the rates for additional, substituted or altered item of work cannot be determined either as at 35.1 or 35.2 or 35.3 above, the Contractor shall be requested to submit his quotation for the items supported by analysis of the rate or rates claimed, within 7 days.
- 35.5 If the Contractor's quotation is determined unreasonable, the Employer may order the Variation and make a change to the Contract Price which shall be based on Employer's own forecast of the effects of the Variation on the Contractor's costs.
- 35.6 If the Employer decides that the urgency of varying the work would prevent a quotation being given and considered without delaying the work, no quotation shall be given and the Variation shall be treated as a Compensation Event.
- 35.7 Under no circumstances the Contractor shall suspend the work on the plea of non-settlement of rates for items falling under this Clause.

36. SUBMISSION OF BILLS FOR PAYMENT

SECTION – 5: CONDITIONS OF CONTRACT(CC) AND SPECIAL CONDITIONS OF CONTRACT (SCC)

- 36.1 The Contractor shall submit to the Employer monthly bills of the value of the work completed less the cumulative amount paid previously.
- 36.2 The Employer shall check the Contractor's bill and determine the value of the work executed which shall comprise of (i) value of the quantities of the items in the BOQ completed and (ii) valuation of Variations and Compensation Events.
- 36.3 The Employer may exclude any item paid in a previous bill or reduce the proportion of any item previously paid in the light of later information.

37. PAYMENTS

- 37.1 Payments shall be adjusted for deductions for advance payments other than recoveries in terms of contract and taxes, at source as applicable under law. **The Employer shall pay the Contractor within 60 days of submission of bill.** The Contractor shall be liable to pay liquidated damages for shortfall in progress.
- 37.2 Items of the Works for which no rate or price has been entered in will not be paid for by the Employer and shall be deemed covered by other rates and prices in the Contract.

38. COMPENSATION EVENTS:

- 38.1 The following are Compensation Events unless they are caused by the Contractor:
- (a) The Employer instructs the Contractor to uncover or to carry out additional tests upon work which is then found to have no Defects.
 - (b) The Employer gives an instruction for dealing with an unforeseen condition, caused by the Employer, or additional work required for safety or other reasons.
 - (c) The effect on the Contractor of any of the Employer's Risks.
 - (d) Other Compensation Events listed in the Contract Data or mentioned in the Contract.
- 38.2 If a Compensation Event would cause additional cost or would prevent the work being completed before the Intended Completion Date, the Contract Price shall be increased and/or the Intended Completion Date is extended. The Employer shall decide whether and by how much the Contract Price shall be increased and whether and by how much the Intended Completion Date shall be extended.
- 38.3 As soon as information demonstrating the effect of each Compensation event upon the Contractor's forecast cost has been provided by the Contractor, it is to be assessed by the Employer and the Contract Price shall be adjusted accordingly. If the Contractor's forecast is deemed unreasonable, the Employer shall adjust the Contract Price based on Employer's own forecast. The Employer will assume that the Contractor will react competently and promptly to the event.
- 38.4 The Contractor shall not be entitled to compensation to the extent that the Employer's interests are adversely affected by the Contractor not having given early warning or not having cooperated with the Employer.

39. TAX

- 39.1 The rates quoted by the Contractor shall be deemed to be inclusive of the sales, GST and other taxes that the Contractor will have to pay for the performance of this Contract. The Employer will perform such duties in regard to the deduction of such taxes at source as per applicable law.

40. PRICE ADJUSTMENT:

**CHANGE IN COSTS - PRICE ADJUSTMENT
PRICE ADJUSTMENT CLAUSE FOR WORKS CONTRACTS**

Contract price shall be adjusted for increase or decrease in rates and prices of labour, materials, fuels and lubricants in accordance with the following principles and procedures and as per formula given here under.

(a) The price Adjustment shall apply for the work done from the date of commencement up to the end of original period of completion and shall not apply to work carried out beyond the stipulated period of completion for reasons attributable to the Contractor.

(b) The Price adjustment shall be determined during each quarter from the formula given in contract data.

(c) Following expression and meanings are assigned to the work done during the quarter:

R - Total value of work done during the quarter. It would include the amount of secured advance for materials paid for (if any) during the quarter, less the amount of the secured advance recovered during the quarter. It will exclude value for works executed under variations for which price adjustment (if any) will be worked out separately based on the terms mutually agreed.

(d) 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 included in the contract shall be deemed to include amounts to cover the contingency of such other rise or fall in costs.

41. LIQUIDATED DAMAGES

- 41.1 The Contractor shall pay liquidated damages to the Employer at the rate per day stated in the Contract Data for each day that the Completion Date is later than the Intended Completion Date (for the whole of the works or the milestone as stated in the Contract Data). The total amount of liquidated damages shall not exceed the amount defined in the Contract Data. The Employer may deduct liquidated damages from payments due to the Contractor. Payment of liquidated damages does not affect the Contractor's liabilities.

- 41.2 If the Intended Completion Date is extended after liquidated damages have been paid, the Employer shall correct any overpayment of liquidated damages by the Contractor by adjusting the next payment of bill.

42. ADVANCE PAYMENTS:

- 42.1 The Employer shall make payment to the Contractor of the amounts stated in the Contract Data by the date stated in the Contract Data, against provision by the Contractor of an unconditional bank guarantee in a form acceptable to the Employer issued by a Nationalized/Scheduled Bank

in amounts equal to the advance payment. The guarantee shall remain effective until the advance payment has been repaid, but the amount of the guarantee shall be progressively reduced by the amounts repaid by the Contractor. The advance payments shall be repaid with prevailing bank interest.

42.2 The Contractor is to use the advance payment only to pay for Mobilization expenses required specifically for execution of the Works. The Contractor shall demonstrate that advance payment has been used in this way by supplying copies of invoices or other documents to the Employer

42.3 The advance payment shall be repaid by deducting proportionate amounts from payments otherwise due to the Contractor, following the schedule of completed percentages of the Works on a payment basis. No account shall be taken of the advance payment or its repayment in assessing valuation of the work done, variations, price adjustments, compensation events or liquidated damages

43. SECURITIES:

43.1 The Performance Security (including additional security for unbalanced tenders) shall be provided to the Employer no later than the date specified in the Letter of Acceptance and shall be issued in an amount and form and type of instrument acceptable to the Employer. The Performance Security as indicated in the contract data shall be valid until a date 30 days from the date of expiry of Defects Liability Period and the additional security for unbalanced tenders shall be valid until a date 30 days from the date of issue of the certificate of completion.

44. COST OF REPAIRS:

44.1 Loss or damage to the Works or Materials to be incorporated in the Works between the Start Date and the end of the Defects Correction periods shall be remedied by the Contractor at the Contractor's cost if the loss or damage arises from the Contractor's acts or omissions.

E. FINISHING THE CONTRACT

45. COMPLETION

45.1 The Contractor shall request the Employer to issue a Certificate of Completion of the Works and the Employer will do so upon deciding that the Work is completed.

46. TAKING OVER

46.1 The Employer shall take over the Site and the Works within seven days of issuing a certificate of Completion.

47. FINAL ACCOUNT

47.1 The Contractor shall supply to the Employer a detailed account of the total amount that the Contractor considers payable under the Contract before the end of the Defects Liability Period. The Employer shall issue a Defect Liability Certificate and certify any final payment that is due to the Contractor within 90 days of receiving the Contractor's account if it is correct and complete. If it is not, the Employer shall issue within 90 days a schedule that states the scope of the corrections or additions that are necessary. If the Final Account is still unsatisfactory after it has

been resubmitted, the Employer shall decide on the amount payable to the Contractor and make payment within 60 days of receiving the Contractor's revised account.

48. AS BUILT DRAWINGS AND /OR OPERATING AND MAINTENANCE MANUALS

- 48.1 If "As Built Drawings" (Completion Drawing) and/or operating and maintenance manuals are required, the Contractor shall supply them by the dates stated in the Contract Data.
- 48.2 If the Contractor does not supply the Drawings by the dates stated in the Contract Data, or they do not receive the Employer's approval, the Employer shall withhold the amount stated in the Contract Data from payments due to the Contractor.

49. TERMINATION

- 49.1 The Employer may terminate the Contract if the other party causes a fundamental breach of the Contract.
- 49.2 Fundamental breaches of Contract include, but shall not be limited to the following:
- (a) the Contractor stops work for 45 days when no stoppage of work is shown on the current Program and the stoppage has not been authorized by the Employer;
 - (b) - "DELETED"-
 - (c) The Contractor becomes bankrupt or goes into liquidation other than for a reconstruction or amalgamation;
 - (d) - "DELETED"-
 - (e) the Employer gives Notice that failure to correct a particular Defect is a fundamental breach of Contract and the Contractor fails to correct it within a reasonable period of time determined by the Employer;
 - (f) the Contractor does not maintain a security which is required;
 - (g) the Contractor has delayed the completion of works by the number of days for which the maximum amount of liquidated damages can be paid as defined in the Contract data; and
 - (h) if the Contractor, in the judgment of the Employer has engaged in corrupt or fraudulent practices in competing for or in the executing the Contract.

For the purpose of this paragraph: "corrupt practice" means the offering, giving, receiving or soliciting of anything 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 Borrower, and includes collusive practice among Tenderers (prior to or after Tender submission) designed to establish Tender prices at artificial non-competitive levels and to deprive the Borrower of the benefits of free and open competition."

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- 49.3 When either party to the Contract gives notice of a breach of contract to the Employer for a cause other than those listed under Sub Clause 49.2 above, the Employer shall decide whether the breach is fundamental or not.
- 49.4 Notwithstanding the above, the Employer may terminate the Contract for convenience.
- 49.5 If the Contract is terminated the Contractor shall stop work immediately, make the Site safe and secure and leave the Site as soon as reasonably possible.

50. PAYMENT UPON TERMINATION

- 50.1 If the Contract is terminated because of a fundamental breach of Contract by the Contractor, the Employer shall prepare bill for the value of the work done less advance payments received up to the date of the bill, less other recoveries due in terms of the contract, less taxes due to be deducted at source as per applicable law and less the percentage to apply to the work not completed as indicated in the Contract Data. Additional Liquidated Damages shall not apply. If the total amount due to the Employer exceeds any payment due to the Contractor, the difference shall be a debt payable to the Employer.
- 50.2 If the Contract is terminated at the Employer's convenience, the Employer shall prepare bill for the value of the work done, the reasonable cost of removal of Equipment, repatriation of the Contractor's personnel employed solely on the Works, and the Contractor's costs of protecting and securing the Works and less advance payments received up to the date of the certificate, less other recoveries due in terms of the contract, and less taxes due to be deducted at source as per applicable law and make payment accordingly.

51. PROPERTY

- 51.1 All materials on the Site, Plant, Equipment, Temporary Works and Works are deemed to be the property of the Employer, if the Contract is terminated because of a contractor's default.

52. RELEASE FROM PERFORMANCE

- 52.1 If the Contract is frustrated by any event entirely outside the control of either the Employer or the Contractor the Employer shall certify that the Contract has been frustrated. The Contractor shall make the Site safe and stop work as quickly as possible after receiving this certificate and shall be paid for all work carried out before receiving it and for any work carried out afterwards to which commitment was made.

F. SPECIAL CONDITIONS OF CONTRACT

1. 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.

The Contractor shall, if required by the Employer, deliver to the Employer a return in detail, in such form and at such intervals as the Employer 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 other information as the Employer may require.

2. COMPLIANCE WITH LABOUR REGULATIONS:

During continuance of the Contract, the Contractor and his sub-contractors shall abide at all times by all existing labour enactments and rules made there under, regulations, notifications and bye laws of the 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. 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 there under, 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, Employer shall have the right to deduct any money due to the Contractor including his amount of security deposit. 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 in no case shall be treated as the employees of the Employer at any point of time.

3. PROTECTION OF ENVIRONMENT:

The Contractor shall 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. 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 there under, 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.

4. CLAIMS, DISPUTES AND ARBITRATION

4.1 Contractor's Claims

If the Contractor considers himself to be entitled to any extension of the Time for Completion and/or any additional payment, under any Clause of these Conditions or otherwise in connection with the Contract, the Contractor shall give notice to the Engineer, describing the event or

SECTION – 5: CONDITIONS OF CONTRACT(CC) AND SPECIAL CONDITIONS OF CONTRACT (SCC)

circumstance giving rise to the claim. The notice shall be given as soon as practicable, and not later than 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.

The Contractor shall keep such contemporary records as may be necessary to substantiate any claim, either on the Site or at another location acceptable to the Engineer. Without admitting the Employer's liability, the Engineer may, after receiving any notice under this Sub-Clause, monitor the record-keeping and/or instruct the Contractor to keep and provide further contemporary records. The Contractor shall permit the Engineer to inspect all these records, and shall (if instructed) submit copies to the Engineer.

Within 45 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 45 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 such fixed period of time.

Each Payment Certificate shall include such amounts 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 Engineer shall proceed in accordance with Sub-Clause: [Determinations] to agree or determine (i) the extension (if any) of the Time for Completion (before or after its expiry) in accordance with Sub-Clause: [Extension of Time for Completion], and/or (ii) the additional payment (if any) to which the Contractor is entitled under the Contract.

The requirements of this Sub-Clause are in addition to those of any other Sub-Clause which may apply to a claim. If the Contractor fails to comply with this or another Sub-Clause in relation to any claim, any extension of time and/or additional payment shall take account of the extent

(if any) to which the failure has prevented or prejudiced proper investigation of the claim, unless the claim is excluded under the second paragraph of this Sub-Clause.

4.2 Amicable Settlement

In case any dispute between the Engineer and the Contractor for which claim has already been made by the contractor, remains unresolved, the Contractor shall, then, give notice of dissatisfaction and intention to commence arbitration to the Employer duly specifying the subject of the dispute or difference as also the amount of claim item wise. The Parties shall make attempts to settle the dispute amicably before the commencement of arbitration as per procedure set by K-RIDE. However, unless both Parties agree otherwise, demand for arbitration may be made by the Contractor after ninety days from the day on which a notice of dissatisfaction and intention to commence arbitration was given, even if no attempt at amicable settlement has been made.

Procedure for Amicable Settlement in contracts

1. Amicable Settlement Committee at senior management level shall make an attempt to resolve the issues/disputes within 90 days of request by the Contractor.
2. The committee shall comprise of the following: -
 - (i) GM /K-RIDE directly in-charge of the project;
 - (ii) Concerned finance officer, and
 - (iii) GM /K-RIDE (in the same order) directly in-charge of the project of other discipline(s) in case the issues involve other discipline(s) of the engineering
3. Whenever the Contractor submits a request for amicable settlement, MD/K-RIDE should forward the same to concerned GM /K-RIDE (in the same order) directly in-charge of the project. GM /K-RIDE on receipt of the same shall issue a note to the concerned finance officer and concerned GM/K-RIDE of other discipline in case the issues involved other discipline(s) of engineering, about the request for amicable settlement to be dealt by them and fix a date in consultation with them for a hearing. The date should then be communicated to the MD/K-RIDE, GM/ /K-RIDE of other department (if the issues involved their department) and Contractor for presenting their case before the Amicable Settlement Committee.
4. This being an additional workload like arbitration, the Committee members shall be paid fee by K-RIDE at the rates payable to the Arbitrators of K-RIDE.

4.3 Arbitration

Any dispute, in respect of which amicable settlement has not been reached, arising between the Employer and the Domestic or Foreign Contractor related to any matter arising out of or connected with this contract, then the contractor shall be entitled to demand in writing that the dispute or difference be referred to arbitration.

Only such dispute(s) or difference(s) in respect of which the demand had been made for amicable settlement under GCC 4.2 but could not be settled, shall be referred to arbitration subject to the condition that cumulative amount of claims in the Contract is not exceeding 20% of the Contract price. In case the cumulative amount of claims exceeds 20% of the Contract price, arbitration clause will not be applicable.

The Arbitration proceedings shall commence from the day, a written and duly quantified demand for arbitration is received by Managing Director, Rail Infrastructure Development Company (Karnataka) Limited, Bangalore /K-RIDE).

The disputes so referred to arbitration shall be settled in accordance with the Indian Arbitration & Conciliation Act, 1996 and any statutory modification or re-enactment thereof.

Any dispute or difference or claim arising out of, or in connection with, or relating to the present contract or the breach, termination or invalidity thereof shall be referred and settled under the Arbitration Centre – Karnataka (Domestic and International) Rules 2012, by one or more arbitrators appointed in accordance with its rules.

Further, it is agreed between the Parties as under.

4.3.1 Number of Arbitrators: The arbitral tribunal shall consist of three arbitrators.

4.3.2 Procedure for Appointment of Arbitrators: The arbitrators shall be appointed as per following procedure:

- (a) The Contractor, while invoking demand for arbitration, shall submit to MD/K-RIDE, claims duly quantified along with name and contact details of his nominee arbitrator. Thereafter, the Employer will nominate his nominee arbitrator within a period of 30 days from receipt of such demand from the Contractor and will issue letter of appointment to both the arbitrators appointed by the Parties with a copy of the same given to the Contractor.
- (b) The third Arbitrator shall be chosen by the two Arbitrators so appointed by the Parties and shall act as Presiding Arbitrator. In case of failure of the two Arbitrators appointed by the Parties to reach a consensus within a period of 30 days from the appointment of the said Arbitrators, then, upon the request of either or both Parties, the Presiding Arbitrator shall be appointed by the Managing Director, Rail Infrastructure Development Company (Karnataka) Limited, Bangalore.
- (c) If one or more of the arbitrators appointed as above refuses to act as arbitrator, withdraws from his office as arbitrator, or vacates his/their office/offices or is/are unable or unwilling to perform his functions as arbitrator for any reason whatsoever or dies or in the opinion of the concerned GM/K-RIDE fails to act without undue delay, the MD/K-RIDE shall appoint new arbitrator/arbitrators to act in his/their place except in case of new Presiding Arbitrator who shall be chosen following the same procedure as mentioned in para (b) above. Such re-constituted Tribunal may, at its discretion, proceed with the reference from the stage at which it was left by the previous arbitrator(s).

4.3.3 Qualification and Experience of Arbitrators (to be appointed as per sub-clause 4.3.2 above): The contract being of specialized nature requiring knowledge and experience of dealing with construction contracts, the arbitrators to be appointed shall have minimum qualification and experience as under:

Arbitrator shall be;

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a working/retired officer (not below E-9 grade and above in a PSU with which K-RIDE has no business relationship) of any discipline of Engineering or Accounts/Finance department, having experience in Contract Management of construction contracts; or

a retired officer (retired not below the HAG level) of any Engineering/Accounts Services of Central Government, having experience in Contract Management of construction contracts; or a retired officer who should have retired more than 3 years previously from the date of appointment as Arbitrator (retired not below E-9 grade in K-RIDE or a PSU with which K-RIDE has a business relationship) of any Engineering discipline or Accounts department, having experience in Contract Management of construction contracts.

- 4.3.4** No person other than the persons appointed as per above procedure and having above qualification and experience shall act as Arbitrator. In case any person having the qualification and experience other than that mentioned above is nominated as arbitrator, the arbitration clause shall cease to exist and shall not be applicable.

No new claim, except as otherwise mutually agreed by the Parties, shall be added during proceedings by either Party. However, a Party may amend or supplement the original claim or defence thereof during the course of arbitration proceedings subject to acceptance by Tribunal having due regard to the delay in making it.

- 4.3.5** Neither Party shall be limited in the proceedings before such arbitrators to the evidence nor the arguments previously put before during amicable settlement.

- 4.3.6** The reference to arbitration may proceed, notwithstanding that the Works shall not then be or be alleged to be complete, provided always that the obligations of the Employer, the Engineer and the Contractor shall not be altered by the reason of the arbitration being conducted during the progress of the Works. Neither Party shall be entitled to suspend the Works, nor shall payment to the Contractor be withheld on account of such proceedings

- 4.3.7** If the contractor(s) does/do not prefer his/their specific and final claims in writing, within a period of 90 days of receiving the intimation from the Employer/Engineer that the final bill is ready for signature of the Contractor(s), he/they will be deemed to have waived his/their claim(s) and the Employer shall be discharged and released of all liabilities under the contract in respect of these claims.

- 4.3.8** Arbitration proceedings shall be held at Bangalore, India or at a place where GM(CIVIL)/K-RIDE's (dealing the contract) office is located, and the language of the arbitration proceedings and that of all documents and communications between the Parties shall be in English.

- 4.3.9** The Arbitral Tribunal should record day to day proceedings. The proceedings shall normally be conducted on the basis of documents and written statements.

All arbitration awards shall be in writing and shall state item wise, the sum and detailed reasons upon which it is based.

- 4.3.10** Any ruling on award shall be made by a majority of members of Arbitral Tribunal. In the absence of such a majority, the views of the Presiding Arbitrator shall prevail.

A Party may apply for correction of any computational errors, any typographical or clerical errors or any other error of similar nature occurring in the award of a tribunal and interpretation of specific point of award to tribunal within 60 days of the receipt of award.

A Party may apply to Arbitral tribunal within 60 days of receipt of award to make an additional award as to claims presented in the arbitral proceedings but omitted from the arbitral award.

4.3.11 Where the Arbitral award is for the payment of money, no interest shall be payable on whole or any part of the money for any period till the date on which the award is made.

4.3.12 The fees and other charges of the conciliator/arbitrators shall be as per the fee structure fixed by the Employer as amended from time to time irrespective of the fact whether the Arbitrator(s) is/are appointed by the Parties or by the Court of law unless specifically directed by Hon'ble Court otherwise on the matter, and shall be shared equally by the Employer and the Contractor. However, the expenses incurred by each Party in connection with the preparation, presentation will be borne by itself.

4.3.13 Performance under the contract shall continue during the arbitration proceedings and payments due the Contractor by the Employer shall not be withheld, unless they are the subject matter of the arbitration proceeding.

4.3.14 Excepted matters:

The following are the list of excepted matters in arbitration.

- a. Assistance by Employer for the Stores to be obtained by the Contractor.
- b. Illegal Gratification.
- c. Meaning and intent of specifications and Drawings.
- d. Rates for Non-tendered items of works.
- e. Signing of "No claim Certificate"
- f. Measurement of works.
- g. Provisions of Payment of Wages Act 1936.
- h. Provisions of Contract Labour (Regulation and Abolition) Act, 1970.
- i. Provisions of Employees Compensation Act 1923.
- j. Provisions of Mines Act 1952.
- k. Right of Employer to determine the Contract
- l. Payment on determination of Contract by Employer.

5. JURISDICTION OF COURTS

The Contract Agreement shall be subject to exclusive jurisdiction of Courts as indicated in the Contract Data. **The Jurisdiction of Courts is Bengaluru, Karnataka**

6. If K-RIDE wishes to engage third party consultants for quality control assessment, apart from the K-RIDE quality control and field tests, the Contractor should co-operate with both Quality control authorities and the third party.
7. Defect liability period will be ONE Year from the date of commercial operations of the Section/Corridor.
8. Royalty Charges shall be recovered as per the prevailing rates by the Department of Mines & Geology, if not paid by the Contractor.
9. As per GO No. CD/300/ LET/ 2006: Dated 18-12-2007, 1% cess will be deducted from the bill as per labour welfare act.
10. All the works are to be carried out as per the Standard specification Issued from time to time.

SECTION – 6
CONTRACT DATA

DELETED

K-RIDE

SECTION-7
**PARTICULAR CONDITIONS OF
CONTRACT (PCC)**

PARTICULAR CONDITIONS OF CONTRACT (PCC)

The following Particular Conditions of Contract (PCC) shall supplement the Conditions of Contract (CC)/GCC/SCC/Contract Data. Whenever there is a conflict, the provisions herein shall prevail over those in the CC/GCC/SCC/Contract Data. The conditions indicated in PCC will be on priority as compared to the conditions of CC/GCC/SCC/Contract Data.

CC/SCC REFERANCE CLAUSE	DESCRIPTION
Clause-1/CC Definitions	<p>The following paras are added to the Existing CC Clauses.</p> <p>“Contract Agreement” The Parties shall enter into a Contract Agreement within 28 days after the Contractor receives the Letter of Acceptance, unless they agree otherwise.</p> <p>“Letter of Acceptance” means the letter of formal acceptance, signed by the Employer, of the Letter of Bid, including any annexed memoranda comprising agreements between and signed by both Parties. If there is no such letter of acceptance, the expression “Letter of Acceptance” means the Contract Agreement and the date of issuing or receiving the Letter of Acceptance means the date of signing the Contract Agreement.</p> <p>“Letter of Bid” means the document entitled letter of bid, which was completed by the Contractor and includes the signed offer to the Employer for the Works.</p> <p>“Drawings” means the drawings of the Works, as included in the Contract, and any additional and modified drawings issued by (or on behalf of) the Employer in accordance with the Contract.</p> <p>“Schedules” means the document(s) entitled schedules, completed by the Contractor and submitted with the Letter of Bid, as included in the Contract. Such document may include the Bill of Quantities, data, lists, and schedules of rates and/or prices.</p> <p>“Bid/Tender” means the Letter of Technical Bid and Letter of Price Bid and all other documents which the Contractor submitted with the Letter of Technical Bid and Letter of Price Bid, as included in the Contract.</p> <p>“Employer’s Requirements” means the document entitled ‘Employer’s Requirements’ as part of Works Requirements and as included in the Contract, and any additions and modifications to such document in accordance with the Contract. Such document specifies the purpose, scope, and/or design and/or other technical criteria, for the works.</p> <p>Parties and Persons</p> <p>“Party” means the Employer or the Contractor, as the context requires.</p> <p>“Engineer” means the person nominated by the Employer to act as the Engineer for the purposes of the Contract and named in the Contract Data, or other person appointed from time to time by the Employer and notified to the Contractor under New-Clause 3.4 [Replacement of the Engineer]. The person nominated to act as an engineer may be an employee of Rail Infrastructure Development Company (Karnataka) Ltd (K-RIDE) or an employee of a Project Management Consultancy firm engaged by K-RIDE for project management as per the discretion of the Employer.</p> <p>“Contractor’s Representative” means the person named by the Contractor in the Contract or appointed from time to time by the Contractor under New-Clause 4.3 [Contractor’s Representative], who acts on behalf of the Contractor.</p>

“Employer’s Representative” means the person named by the Employer in the Contract or appointed from time to time by the Employer who acts on behalf of the Employer.

“Employer’s Personnel” means the Engineer, the assistants referred to in New-Clause 3.2 [Delegation by the Engineer] and all other staff, labour and other employees of the Engineer and of the Employer; and any other personnel notified to the Contractor, by the Employer or the Engineer, as Employer’s Personnel.

“Contractor’s Personnel” means the Contractor’s Representative and all personnel whom the Contractor utilises on Site, who may include the staff, labour and other employees of the Contractor and of each Subcontractor; and any other personnel assisting the Contractor in the execution of the Works.

“Base Date” means the date 28 days prior to the deadline for submission of bids.

“Tests on Completion” means the tests which are specified in the Contract or agreed by both Parties or instructed as a Variation, and which are carried out under Clause 30 [Tests on Completion] before the Works or a Section (as the case may be) are taken over by the Employer.

“Day” means any (working or non-working) calendar day from 00:00 hrs. to 24:00 hrs.

“Time Periods” Any reference to time period commencing “from” the specified day or date “till” or “until” a specified day shall include both such days.

Any reference to **“Time”** shall be according to Indian Standard Time (IST).

Money and Payments

“Accepted Contract Amount” means the amount accepted in the Letter of Acceptance for the execution and completion of the Works and the remedying of any defects. In the Letter of Acceptance, the Accepted Contract Amount shall have two components i.e. (i) the base amount excluding GST (ii) GST component (calculated at the rate for works contract service as per GST Laws).

“Cost” means all expenditure reasonably incurred (or to be incurred) by the Contractor, whether on or off the Site, including overhead and similar charges, but does not include profit.

“Final Statement” means the statement defined in Sub-Clause 37.12 [Application for Final Payment Certificate].

“Foreign Currency” means a currency in which part (or all) of the Contract Price is payable, but not the Local Currency.

“Local Currency” means the currency in Indian Rupees.

“Statement” means a statement submitted by the Contractor as part of an application, under Clause 37 and 40 [Contract Price and Payment], for a payment certificate

Works and Goods

“Contractor’s Equipment” means all apparatus, machinery, vehicles and other things required for the execution and completion of the Works and the remedying of any defects. However, Contractor’s Equipment excludes Temporary Works, Employer’s Equipment (if

	<p>any), Plant, Materials and any other things intended to form or forming part of the Permanent Works.</p> <p>“Goods” means Contractor’s Equipment, Materials, Plant and Temporary Works, or any of them as appropriate.</p> <p>“Permanent Works” means the permanent works to be executed by the Contractor under the Contract.</p> <p>“Section” means a part of the Works specified in the Contract Data as a Section (if any).</p> <p>“Temporary Works” means all temporary works of every kind (other than Contractor’s Equipment) required on Site for the execution and completion of the Permanent Works and the remedying of any defects.</p> <p>Other Definitions</p> <p>“Contractor’s Documents” means the calculations, computer programs and other software, drawings, manuals, models and other documents of a technical nature (if any) supplied by the Contractor under the Contract.</p> <p>“Country” means India, the country in which the Site (or most of it) is located, where the Permanent Works are to be executed.</p> <p>“Employer’s Equipment” means the apparatus, machinery and vehicles (if any) made available by the Employer for the use of the Contractor in the execution of the Works, as stated in the Specification; but does not include Plant which has not been taken over by the Employer.</p> <p>“Laws” means all national (or state) legislation, statutes, ordinances and other laws, and regulations and by-laws of any legally constituted public authority.</p> <p>“Site” means the places where the Permanent Works are to be executed and to which Plant and Materials are to be delivered, and any other places as may be specified in the Contract as forming part of the Site.</p> <p>“Unforeseeable” means not reasonably foreseeable and against which adequate preventive precautions could not reasonably be taken by an experienced contractor by the date for submission of the Bid.</p> <p>“Railway” means a railway, or any portion of a railway for public carriage of passengers and goods as defined in the Railways ACT 1989. Any reference to railway means the Indian Railways and the respective Zonal Railway</p>
<p>Clause-1/CC</p>	<p>The following paras are added to the Existing CC Clauses.</p> <p>Employers Name and Address: K-RIDE (Rail Infrastructure Development Company (Karnataka) Limited) (A Joint venture of GoK and MoR) #8 , 1st Floor, Samparka Soudha, Dr. Rajkumar Road, Opposite Orion Mall Rajaji Nagar 1st Block Bangalore – 560010 Tele: +91 6364890811, 6364890808</p> <p>Employers Representative and address: General Manager/Civil /Projects / K-RIDE,</p>

	<p>K-RIDE (Rail Infrastructure Development Company (Karnataka) Limited) #8, 1st Floor, Samparka Soudha, Dr. Rajkumar Road, Opposite Orion Mall Rajaji Nagar 1st Block Bangalore – 560010 Tele: +91 6364890811, 6364890808 E – Mail: praveen.kumar.kride@ka.gov.in</p>
Clause -2.1/CC Interpretation.	<p>The following paras are added to the Existing CC Clauses.</p> <p>(a) provisions including the word “agree,” “agreed” or “agreement” require the agreement to be recorded in writing;</p> <p>(b) “written” or “in writing” means hand-written, type-written, printed or electronically made, and resulting in a permanent record; and</p> <p>(c) the word “tender” is synonymous with “bid”, and “tenderer” with “bidder” and the words “tender documents” with “bidding documents”</p>
Clause-2.2/CC. Priority of Documents	<p>Replace the existing sub clause 2.2 of CC</p> <p>The documents forming the Contract are to be taken as mutually explanatory of one another. For the purposes of interpretation, the priority of the documents shall be in accordance with the following sequence:</p> <ol style="list-style-type: none"> 1. Contract Agreement (if any), 2. Letter of Acceptance, notice to proceed to works, 3. Letter of bid/Contractor tender, 4. Addendum/Corrigendum including Reply to pre bid queries, 5. Schedules (including Priced Bill of Quantities), 6. Particular Conditions of Contract, 7. Conditions of Contract/SCC and Contract Data 8. Works/Employer’s Requirements, 9. Technical Specifications, 10. Drawings, 11. any other documents forming part of the Contract. <p>If an ambiguity or discrepancy is found in the documents, the Engineer shall issue necessary clarification or instruction.</p>
Clause-6.1/CC, Communications	<p>The following para is added to the existing CC clause:</p> <p>Wherever these Conditions provide for the giving or issuing of approvals, certificates, consents, determinations, notices, requests and discharges, these communications shall be: in writing and delivered by hand (against receipt), sent by mail or courier, or transmitted using any of the agreed systems of electronic transmission as stated in the Contract Data; and delivered, sent or transmitted to the address for the recipient’s communications as stated in the Contract Data.</p>
Clause- 7/CC	The following paras are added to the Existing CC Clauses.

7.1 Definition of nominated Subcontractor

In the Contract, "nominated Subcontractor" means a Subcontractor:

- (a) who is stated in the Contract as being a nominated Subcontractor, or
- (b) whom the Engineer, under Clause 7/CC [Sub-contracting], instructs the Contractor to employ as a Subcontractor.

Sub-contractors

The Contractor shall not subcontract the whole of the Works. The Contractor shall be responsible for the acts or defaults of any Subcontractor, his agents or employees, as if they were the acts or defaults of the Contractor.

Unless otherwise stated in the Conditions of Contract:

- (a) The Contractor shall not be required to obtain consent to suppliers solely of Materials, or to a subcontract for which the Subcontractor is named in the Contract or as specifically provided in the Contract data or value of any sub-contract for Works, provided that such works are not for the key activities.
- (b) The prior consent of the Engineer shall be obtained to other proposed Subcontractors and/or suppliers. While submitting his proposal in this regard, the Contractor shall ensure that;
 - (i) Total value of Works requiring such consent for subcontracting shall not be more than 50% (fifty per cent) of the Contract Price;
 - (ii) The proposed subcontractor must have executed works of 40% of value of the proposed subcontract through a single contract during last seven years; and
 - (iii) No banning/blacklisting/declaration as poor performer by K-RIDE is in force on the proposed subcontractor (on the date of grant of consent by the Engineer);
 - (iv) No contract of the proposed subcontractor has been terminated by K-RIDE during the last two years (to be reckoned from the date of grant of consent by the Engineer);
 - (v) The Contractor shall submit the proposal for subcontracting with the name, particulars and the relevant experience of the proposed subcontractor.
- (c) The Contractor shall give the Engineer not less than 28 days' notice of the intended date of the commencement of each Subcontractor's work, and of the commencement of such work on the Site;
- (d) Each subcontract shall include provisions which would entitle the Employer to require the subcontract to be assigned to the Employer under New-Clause 4.23/PCC [Assignment of Benefit of Subcontract] (if or when applicable) or in the event of termination under Sub-Clause 49.7/PCC. [Termination by Employer]; and
- (e) On getting consent from the Engineer, the Contractor shall provide to the Engineer copy of the agreement entered with such subcontractor.

The Contractor shall ensure that the requirements imposed on the Contractor by New-Clause 1.6/PCC [Confidential Details] apply equally to each Subcontractor.

Where practicable, the Contractor shall give fair and reasonable opportunity for contractors from the Country to be appointed as Subcontractors.

	<p>The Contractor shall endeavor to resolve all matters and payments amicably and speedily with the sub-contractors.</p> <p>The Contractor shall indemnify and hold the Employer harmless against and from any claim of subcontractors or suppliers of the materials.</p> <p>The Contractor shall release payment to the Sub-contractors/Suppliers promptly and shall endeavor to resolve all issues amicably and speedily with the Sub-contractors/Suppliers, so that the execution of work is not affected in any manner whatsoever.</p> <p>In case a Sub-contractor/Supplier represents to the Engineer in writing with supporting documents, stating that he has not received payment due as per the agreement/work or purchase order for the works executed by such Sub-contractor or supplies made by such Supplier, which have been covered in previous Payment Certificates and the Engineer finds such representation having merit, the Engineer, before issuing next Payment Certificate, may forward a copy of the representation to the Contractor requesting the Contractor to supply reasonable evidence that the amount stated to be outstanding by the Sub-contractor/Supplier for the works executed or supplies made, which have been covered in previous Payment Certificates has been paid and if not, why the same is not payable. The Engineer may recommend to make payment to the Sub-contractor/Supplier unless the Contractor submits reasonable evidence to the Engineer:</p> <ul style="list-style-type: none"> (i) that the amount claimed has been paid, or (ii) satisfying the Engineer in writing that the Contractor is entitled to withhold or that the amount is not payable. <p>On the recommendation of the Engineer, the Employer may (at his sole discretion) directly pay to the Sub-contractor/Supplier the amount due for and on behalf of the Contractor, part or all of such amounts previously certified (less applicable deductions) as are found due to the Sub-contractor/Supplier by the Engineer. The Employer shall adjust the amount paid directly to the Sub-contractor/Supplier from any amount due by it to the Contractor. The Contractor shall repay the amount, in case no amount is found due by the Employer to the Contractor.</p> <p>That the payment by Employer, on behalf of the Contractor to its Sub-contractor/Supplier, shall not alter any terms of agreement between the Employer and the Contractor and nor the same shall result in any privity of contract between the Employer and the Sub-contractor/Supplier.</p> <p>Assignment of Contractor's and Sub-contractor's Obligations:</p> <p>The Contractor shall not assign a right or benefit under the Contract without first obtaining Employer's prior written consent, otherwise than by:</p> <ul style="list-style-type: none"> A. a charge in favor of the Contractor's bankers of any money 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. <p>If a Subcontractor's obligations extend beyond the expiry date of Defects Liability Period, then the Contractor shall assign the benefits of such obligations to the Employer.</p> <p>In the event that a sub-contractor of any tier provides to the Contractor or any other sub-contractor a warranty in respect of Plant, Materials or services supplied in connection with</p>
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the Works, or undertakes a continuing obligation of any nature whatsoever in relation to such Plant, Materials or services (including without limitation an obligation to maintain stocks of spare parts) extending for a period exceeding that of the Defects Liability Period or where there is more than one Defects Liability Period exceeding that of the latest Defects Liability Period, and if the Engineer so directs in writing within 21 days of the expiry of the Defects Liability Period or the latest Defects Liability Period (as the case may be), the Contractor shall immediately assign or obtain the assignment of the benefit of such warranty or obligation to the Employer or at the direction of the Employer, to any third party.

Specialist Subcontracting

If an Applicant intends to subcontract any highly specialized elements of the Works to specialist subcontractors, such elements and the proposed subcontractors shall be clearly identified, and the experience and capacity of the subcontractors shall be described in the relevant Information Forms.

Acceptable Substitutes

With reference to subcontracting & specialist subcontracting, the Employer may require Applicants to provide more information about their proposals. If any proposed subcontractor is found ineligible or unsuitable to carry out an assigned task, the Employer may request the Applicant to propose an acceptable substitute, and may conditionally pre-qualify the Applicant accordingly, before issuing an invitation to tender.

7.2 Objection to Nomination

The Contractor shall not be under any obligation to employ a nominated Subcontractor against whom the Contractor raises reasonable objection by notice to the Engineer as soon as practicable, with supporting particulars. An objection shall be deemed reasonable if it arises from (among other things) any of the following matters, unless the Employer agrees to indemnify the Contractor against and from the consequences of the matter:

- (a) there are reasons to believe that the Subcontractor does not have sufficient competence, resources or financial strength;
- (b) the subcontract does not specify that the nominated Subcontractor shall indemnify the Contractor against and from any negligence or misuse of Goods by the nominated Subcontractor, his agents and employees; or
- (c) the subcontract does not specify that, for the subcontracted work (including design, if any), the nominated Subcontractor shall:
 - (i) undertake to the Contractor such obligations and liabilities as will enable the Contractor to discharge his obligations and liabilities under the Contract, and
 - (ii) Indemnify the Contractor against and from all obligations and liabilities arising under or in connection with the Contract and from the consequences of any failure by the Subcontractor to perform these obligations or to fulfil these liabilities.

7.3 Payments to nominated Subcontractors

The Contractor shall pay to the nominated Subcontractor the amounts which the Engineer certifies to be due in accordance with the subcontract. These amounts plus other charges shall be included in the Contract Price in accordance with sub-paragraph

	<p>(b) of Sub-Clause 34.5/PCC [Provisional Sums], except as stated in Sub-Clause 7.4/PCC [Evidence of Payments].</p> <p>7.4 Evidence of Payments</p> <p>Before issuing a Payment, Certificate which includes an amount payable to a nominated Subcontractor, the Engineer may request the Contractor to supply reasonable evidence that the nominated Subcontractor has received (Within 7 days of receipt of previous payment by the contractor) all amounts due in accordance with previous Payment Certificates, less applicable deductions for retention or otherwise. Unless the Contractor, submits this reasonable evidence to the Engineer, or</p> <ul style="list-style-type: none"> (i) satisfies the Engineer in writing that the Contractor is reasonably entitled to withhold or refuse to pay these amounts, and (ii) submits to the Engineer reasonable evidence that the nominated Subcontractor has been notified of the Contractor's entitlement, <p>then the Employer may (at his sole discretion) pay, direct to the nominated Subcontractor, part or all of such amounts previously certified (less applicable deductions) as are due to the nominated Subcontractor and for which the Contractor has failed to submit the evidence described in sub-paragraphs (a) or (b) above. The Contractor shall then repay, to the Employer, the amount which the nominated Subcontractor was directly paid by the Employer.</p> <p>7.5 Assignment of Benefit of Subcontract</p> <p>If a Subcontractor's obligations extend beyond the expiry date of the relevant Defects Notification Period and the Engineer, prior to this date, instructs the Contractor to assign the benefit of such obligations to the Employer, then the Contractor shall do so. Unless otherwise stated in the assignment, the Contractor shall have no liability to the Employer for the work carried out by the Subcontractor after the assignment takes effect.</p>
<p>Clause11/CC</p>	<p>The following paras are added to the Existing CC Clauses.</p> <p>Risk and Responsibility</p> <p>11.1 Indemnities</p> <p>The Contractor shall indemnify and hold harmless the Employer, the Employer's Personnel, Employers Representative and their respective agents, against and from all claims, damages, losses and expenses (including legal fees and expenses) in respect of:</p> <ul style="list-style-type: none"> (a) bodily injury, sickness, disease or death, of any person including railway user whatsoever arising out of or in the course of or by reason of the Contractor's design (if any), the execution and completion of the Works and the remedying of any defects, unless attributable to any negligence, wilful act or breach of the Contract by the Employer, the Employer's Personnel, or any of their respective agents, and (b) damage to or loss of any property, real or personal (other than the Works), to the extent that such damage or loss arises out of or in the course of or by reason of the Contractor's design (if any), the execution and completion of the Works and the remedying of any defects, unless and to the extent that any such damage or loss is attributable to any negligence, wilful act or breach of the Contract by the Employer, the Employer's Personnel,, their respective agents, or anyone directly or indirectly employed by any of them.

The Employer shall indemnify and hold harmless the Contractor, the Contractor's Personnel, and their respective agents, against and from all claims, damages, losses and expenses (including legal fees and expenses) in respect of (1) bodily injury, sickness, disease or death, which is attributable to any negligence, wilful act or breach of the Contract by the Employer, the Employer's Personnel, or any of their respective agents, and (2) the matters for which liability may be excluded from insurance cover, as described in sub-paragraphs (d)(i), (ii) and (iii) of Sub-Clause 13.8/PCC [Insurance Against Injury to Persons and Damage to Property].

11.2 Contractor's Care of the Works

The Contractor shall take full responsibility for the care of the Works and Goods from the Commencement Date until the Taking-Over Certificate is issued (or is deemed to be issued under Sub-Clause 46.1/PCC [Taking Over of the Works and Sections]) for the Works, when responsibility for the care of the Works shall pass to the Employer. If a Taking-Over Certificate is issued (or is so deemed to be issued) for any Section or part of the Works, responsibility for the care of the Section or part shall then pass to the Employer.

After responsibility has accordingly passed to the Employer, the Contractor shall take responsibility for the care of any work which is outstanding on the date stated in a Taking-Over Certificate, until this outstanding work has been completed.

If any loss or damage happens to the Works, Goods or Contractor's Documents during the period when the Contractor is responsible for their care, from any cause not listed in Sub-Clause 11.3/PCC [Employer's Risks], the Contractor shall rectify the loss or damage at the Contractor's risk and cost, so that the Works, Goods and Contractor's Documents conform with the Contract.

The Contractor shall be liable for any loss or damage caused by any actions performed by the Contractor after a Taking-Over Certificate has been issued. The Contractor shall also be liable for any loss or damage which occurs after a Taking-Over Certificate has been issued and which arose from a previous event for which the Contractor was liable.

11.3 Employer's Risks

Clause 11 of CC and clause 38 of CC are substituted with clause 11.3 of PCC as below:

The risks referred to herein below, in so far as they directly affect the execution of the works in the Country, are:

- (a) war, hostilities (whether war be declared or not), invasion, act of foreign enemies,
- (b) rebellion, terrorism, sabotage by persons other than the Contractor's Personnel, revolution, insurrection, military or usurped power, or civil war, within the Country,
- (c) riot, commotion or disorder within the Country by persons other than the Contractor's Personnel,

- (d) munitions of war, explosive materials, ionising radiation or contamination by radio-activity, within the Country, except as may be attributable to the Contractor's use of such munitions, explosives, radiation or radio-activity,
- (e) pressure waves caused by aircraft or other aerial devices travelling at sonic or supersonic speeds,
- (f) use or occupation by the Employer of any part of the Permanent Works, except as may be specified in the Contract, and
- (g) design of any part of the Works by the Employer's Personnel or by others for whom the Employer is responsible.

11.4 Consequences of Employer's Risks:

If and to the extent that any of the risks listed in Sub-Clause 11.3/PCC above results in loss or damage to the Works, Goods or Contractor's Documents, the Contractor shall promptly give notice to the Engineer and shall rectify this loss or damage to the extent required by the Engineer.

If the Contractor suffers delay and/or incurs Cost from rectifying this loss or damage, the Contractor shall give a further notice to the Engineer and shall be entitled subject to Sub-Clause 4.1/SCC [Contractor's Claims] to:

- (a) an extension of time for any such delay, if completion is or will be delayed, under Sub-Clause [Extension of Time for Completion], and
- (b) In the case of sub-paragraphs (f) and (g) of Sub-Clause 11.3/PCC [Employer's Risks], Cost shall be payable.

After receiving this further notice, the Engineer shall proceed in accordance with New-Clause 3.5/PCC [Determinations] to agree or determine these matters.

11.5 Intellectual and Industrial Property Rights

In this Sub-Clause, "infringement" means an infringement (or alleged infringement) of any patent, registered design, copyright, trade mark, trade name, trade secret or other intellectual or industrial property right relating to the Works; and "claim" means a claim (or proceedings pursuing a claim) alleging an infringement.

Whenever a Party does not give notice to the other Party of any claim within 28 days of receiving the claim, the first Party shall be deemed to have waived any right to indemnity under this Sub-Clause.

The Employer shall indemnify and hold the Contractor harmless against and from any claim alleging an infringement which is or was:

- (a) an unavoidable result of the Contractor's compliance with the Contract, or
- (b) a result of any Works being used by the Employer:
 - (i) for a purpose other than that indicated by, or reasonably to be inferred from, the Contract, or
 - (ii) in conjunction with anything not supplied by the Contractor, unless such use was disclosed to the Contractor prior to the Base Date or is stated in the Contract.

	<p>The Contractor shall indemnify and hold the Employer harmless against and from any other claim which arises out of or in relation to (i) the manufacture, use, sale or import of any Goods, or (ii) any design for which the Contractor is responsible.</p> <p>If a Party is entitled to be indemnified under this Sub-Clause, the indemnifying Party may (at its cost) conduct negotiations for the settlement of the claim, and any litigation or arbitration which may arise from it. The other Party shall, at the request and cost of the indemnifying Party, assist in contesting the claim. This other Party (and its Personnel) shall not make any admission which might be prejudicial to the indemnifying Party, unless the indemnifying Party failed to take over the conduct of any negotiations, litigation or arbitration upon being requested to do so by such other Party.</p> <p>11.6 Limitation of Liability</p> <p>Neither Party shall be liable to the other Party for loss of use of any Works, loss of profit, loss of any contract or for any indirect or consequential loss or damage which may be suffered by the other Party in connection with the Contract, provided that this exclusion shall not apply to any obligation of the Contractor to pay Delay Damages to the Employer under Sub-Clause 26.6/PCC [Delay Damages].</p> <p>The total liability of the Contractor to the Employer, under or in connection with the Contract other than under New-Clause 4.37/PCC [Electricity, Water and Gas], New Clause 4.38/PCC [Employer's Equipment and Free-Issue Material], Sub-Clause 11.1/PCC [Indemnities] and Sub-Clause 11.5/PCC [Intellectual and Industrial Property Rights], shall not exceed the sum as specified in the Contract Data or if nothing is specified in the Contract Data, the accepted Contract Amount.</p> <p>This Sub-Clause shall not limit liability in any case of fraud, deliberate default or reckless misconduct by the defaulting Party.</p> <p>Maximum total liability of Contractor is accepted contract amount.</p> <p>11.7 Use of Employer's Accommodation/ Facilities</p> <p>The Contractor shall take full responsibility for the care of the Employer provided accommodation and facilities, if any, as detailed in the Specification, from the respective dates of hand-over to the Contractor until cessation of occupation (where hand-over or cessation of occupation may take place after the date stated in the Taking-Over Certificate for the Works).</p> <p>If any loss or damage happens to any of the above items while the Contractor is responsible for their care arising from any cause whatsoever other than those for which the Employer is liable, the Contractor shall, at his own cost, rectify the loss or damage to the satisfaction of the Engineer.</p>
<p>Clause 13/CC</p>	<p>The following paras are added to the Existing CC Clauses.</p> <p>INSURANCE</p> <p>13.6 General Requirements for Insurances</p> <p>In this Clause, "insuring Party" means, for each type of insurance, the Party responsible for effecting and maintaining the insurance specified in the relevant Sub-Clause.</p>

Wherever the Contractor is the insuring Party, each insurance shall be effected with insurers and in terms approved by the Employer. These terms shall be consistent with any terms agreed by both Parties before the date of the Letter of Acceptance. This agreement of terms shall take precedence over the provisions of this Clause.

If a policy is required to indemnify joint insured, the cover shall apply separately to each insured as though a separate policy had been issued for each of the joint insured. If a policy indemnifies additional joint insured, namely in addition to the insured specified in this Clause, (i) the Contractor shall act under the policy on behalf of these additional joint insured except that the Employer shall act for Employer's Personnel, (ii) additional joint insured shall not be entitled to receive payments directly from the insurer or to have any other direct dealings with the insurer, and (iii) the insuring Party shall require all additional joint insured to comply with the conditions stipulated in the policy.

Periods for submission of insurance:

- a) evidence of insurance: Before start date of work.
- b) relevant policies: Before start date of work.

Each policy insuring against loss or damage shall provide for payments to be made in the currencies required to rectify the loss or damage. Payments received from insurers shall be used for the rectification of the loss or damage.

The relevant insuring Party shall, within the respective periods stated in the Contract Data (calculated from the Commencement Date), submit to the other Party:

- (a) evidence that the insurances described in this Clause have been effected, and
- (b) copies of the policies for the insurances described in Sub-Clause 13.7/PCC [Insurance for Works and Contractor's Equipment] and Sub-Clause 13.8/PCC [Insurance against Injury to Persons and Damage to Property].
- (c) If the contractor fails to submit evidence and copies of the policies as mentioned in (a) & (b) above to prove that the policies have been obtained within the period specified in the contract data, and submits the same later on and from the submitted evidence it is found that the policies have not been obtained within the period specified, the Employer shall recover double the cost of the premium for the period the policies have been delayed.

When each premium is paid, the insuring Party shall submit evidence of payment to the other Party. Whenever evidence or policies are submitted, the insuring Party shall also give notice to the Engineer.

Each Party shall comply with the conditions stipulated in each of the insurance policies. The insuring Party shall keep the insurers informed of any relevant changes to the execution of the Works and ensure that insurance is maintained in accordance with this Clause.

Neither Party shall make any material alteration to the terms of any insurance without the prior approval of the other Party. If an insurer makes (or attempts to make) any alteration, the Party first notified by the insurer shall promptly give notice to the other Party.

If the insuring Party fails to effect and keep in force any of the insurances it is required to effect and maintain under the Contract, or fails to provide satisfactory evidence and copies of policies in accordance with this Sub-Clause, the other Party may (at its option and without prejudice to any other right or remedy) effect insurance for the relevant coverage and pay the premiums due. The insuring Party shall pay double the amount of these premiums to the other Party, and the Contract Price shall be adjusted accordingly.

Nothing in this Clause limits the obligations, liabilities or responsibilities of the Contractor or the Employer, under the other terms of the Contract or otherwise. Any amounts not insured or not recovered from the insurers shall be borne by the Contractor and/or the Employer in accordance with these obligations, liabilities or responsibilities. However, if the insuring Party fails to effect and keep in force an insurance which is available and which it is required to effect and maintain under the Contract, and the other Party neither approves the omission nor effects insurance for the coverage relevant to this default, any moneys which should have been recoverable under this insurance shall be paid by the insuring Party.

Payments by one Party to the other Party shall be subject to New-Clause 2.4/PCC [Employer's Claims] or Sub-Clause 4.1/SCC [Contractor's Claims], as applicable.

The Contractor shall be entitled to place all insurance relating to the Contract (including, but not limited to the insurance referred to Clause 13/CC/PCC with insurers from any eligible source country.

13.7 Insurance for Works and Contractor's Equipment

The Contractor shall insure the Works, Plant, Materials, including those issued by the Employer and Contractor's Documents for not less than the full reinstatement cost including the costs of demolition, removal of debris and professional fees and profit, subject to a maximum value indicated in Contract Data. This insurance shall be effective from the date by which the evidence is to be submitted under sub-paragraph (a) of Sub-Clause 13.6/PCC [General Requirements for Insurances], until the date of issue of the Taking-Over Certificate for the Works.

The insuring Party shall maintain this insurance to provide cover until the date of issue of the Performance Certificate, for loss or damage for which the Contractor is liable arising from a cause occurring prior to the issue of the Taking-Over Certificate, and for loss or damage caused by the Contractor in the course of any other operations (including those under New-Clause 6/PCC [Defects Liability]).

The insuring Party shall insure the Contractor's Equipment for not less than the full replacement value, including delivery to Site. For each item of Contractor's Equipment, the insurance shall be effective while it is being transported to the Site and until it is no longer required as Contractor's Equipment.

Unless otherwise stated in the Conditions of Contract/SCC, insurances under this Sub-Clause:

- (a) shall be effected and maintained by the Contractor as insuring Party,
- (b) shall be in the joint names of the Parties, who shall be jointly entitled to receive payments from the insurers, payments being held or allocated between the Parties for the sole purpose of rectifying the loss or damage,

(c) shall cover all loss and damage from any cause not listed in Sub-Clause 11.3/PCC [Employer's Risks],

(d) shall also cover loss or damage to a part of the Works which is attributable to the use or occupation by the Employer of another part of the Works, and loss or damage from the risks listed in sub-paragraphs (c), (g) and (h) of Sub-Clause 11.3/PCC [Employer's Risks], excluding (in each case) risks which are not insurable at commercially reasonable terms, with deductibles per occurrence of not more than the amount stated in the Contract Data (if an amount is not so stated, this sub-paragraph (d) shall not apply), and

(e) may however exclude loss of, damage to, and reinstatement of:

- i) part of the Works which is in a defective condition due to a defect in its design, materials or workmanship (but cover shall include any other parts which are lost or damaged as a direct result of this defective condition and not as described in sub-paragraph (ii) below),
- ii) a part of the Works which is lost or damaged in order to reinstate any other part of the Works if this other part is in a defective condition due to a defect in its design, materials or workmanship,
- iii) a part of the Works which has been taken over by the Employer, except to the extent that the Contractor is liable for the loss or damage, and
- iv) [DELETED]

If, more than one year after the Base Date, the cover described in sub-paragraph (d) above ceases to be available at commercially reasonable terms, the Contractor shall (as insuring Party) give notice to the Employer, with supporting particulars. The Employer shall then (i) be entitled subject to New-Clause 2.4/PCC [Employer's Claims] to payment of an amount equivalent to such commercially reasonable terms as the Contractor should have expected to have paid for such cover, and (ii) be deemed, unless he obtains the cover at commercially reasonable terms, to have approved the omission under Sub-Clause 13.6/PCC [General Requirements for Insurances].

13.8 Insurance against injury to Persons and Damage to Property

The insuring Party shall insure against each Party's liability for any loss, damage, death or bodily injury which may occur to any physical property (except things insured under Sub-Clause 13.7/PCC [Insurance for Works and Contractor's Equipment]) or to any person (except persons insured under Sub-Clause 13.9/PCC [Insurance for Contractor's Personnel]), which may arise out of the Contractor's performance of the Contract and occurring before the issue of the Performance Certificate.

This insurance shall be for a limit per occurrence of not less than the amount stated in the Contract Data, with no limit on the number of occurrences. If an amount is not stated in the Contract Data, this Sub-Clause shall not apply.

Unless otherwise stated in the Special Conditions of Contract, the insurances specified in this Sub-Clause:

- (a) shall be effected and maintained by the Contractor as insuring Party,
- (b) shall be in the joint names of the Parties,

	<p>(c) shall be extended to cover liability for all loss and damage to the Employer's property including Railways Property (except things insured under Sub-Clause 13.7/PCC) arising out of the Contractor's performance of the Contract, and</p> <p>(d) may however exclude liability to the extent that it arises from:</p> <ul style="list-style-type: none"> (i) the Employer's right to have the Permanent Works executed on, over, under, in or through any land, and to occupy this land for the Permanent Works, (ii) damage which is an unavoidable result of the Contractor's obligations to execute the Works and remedy any defects, and (iii) a cause listed in Sub-Clause 11.3/PCC [Employer's Risks], except to the extent that cover is available at commercially reasonable terms. <p>13.9 Insurance for Contractor's Personnel</p> <p>The Contractor shall abide by the provisions of ESIC Act, 1948 (extended from time to time) to take care of insurance against liability for claims, damages, losses and expenses (including legal fees and expenses) arising from injury, sickness or disease. In addition, the contractor shall also maintain insurance against liability for claim of death of any person employed by the Contractor or any other of the Contractor's Personnel.</p> <p>The Employer and the Engineer shall also be indemnified under the policy of insurance, except that this insurance may exclude losses and claims to the extent that they arise from any act or neglect of the Employer or of the Employer's Personnel.</p> <p>The insurance shall be maintained in full force and effect during the whole time that these personnel are assisting in the execution of the Works. For a Subcontractor's employees, the insurance may be effected by the Subcontractor, but the Contractor shall be responsible for compliance with this Clause.</p> <p>Maximum number of deductibles for insurance of Employer's risks: Nil</p>
<p>Clause- 22/CC. Right of Access to the Site</p>	<p>The following para is added to the existing CC clause:</p> <p>The Employer shall give the Contractor right of access to, and possession of, all parts of the Site within the time (or times) stated in the Contract Data. The right and possession may not be exclusive to the Contractor. If, under the Contract, the Employer is required to give (to the Contractor) possession of any foundation, structure, plant or means of access, the Employer shall do so in the time and manner stated in the Specification. However, the Employer may withhold any such right or possession until the Performance Security has been received.</p> <p>If no such time is stated in the Contract Data, the Employer shall give the Contractor right of access to, and possession of, the Site within such times as may be required to enable the Contractor to proceed in accordance with the programme submitted under Sub-Clause 25.3/PCC [Programme].</p> <p>If the Contractor suffers delay as a result of a failure by the Employer to give any such right or possession within such time, the Contractor shall give notice to the Engineer and shall be entitled to:</p> <ul style="list-style-type: none"> (a) an extension of time for any such delay, if completion is or will be delayed, under Sub-Clause 26.5/PCC [Extension of Time for Completion], and

	<p>After receiving this notice, the Engineer shall proceed in accordance with New-Clause 3.5/PCC [Determinations] to agree or determine these matters.</p> <p>However, if and to the extent that the Employer's failure was caused by any error or delay by the Contractor, including an error in, or delay in the submission of, any of the Contractor's Documents, the Contractor shall not be entitled to such extension of time or new rates.</p> <p>Right of access to the work site will be provided to the successful Contractor. A minimum corridor of 9m will be available. The Contractor to note this while making Launching plans. The Contractor shall prepare, at his cost, approach roads to the site of work and this cost will not be reimbursed by the Employer. The Employer reserves the right to make use of these service roads for themselves or other Contractors working on the project, as and when necessary, without any payment to the Contractor. The barricading to the extent feasible subject to a maximum of 9m width (LHS+RHS) shall be permitted for carrying out the works and suitable barricading width for off-road structures in stages as per the approved sequence of construction. The employer shall grant the contractor right of access to, and/ or possession of the site progressively for the completion of works. The contractor will draw/ modify the schedule for completion of work according to progressive possession/ right of such sites.</p>
<p>Clause 25 of CC</p>	<p>The following paras are added to the Existing CC Clauses.</p> <p>25.3 Programme</p> <p>The Contractor shall submit a detailed time programme to the Engineer within 28 days after receiving the notice under Sub-Clause 26.3/PCC [Commencement of Works]. The program shall include the physical and Financial Progress vis-à-vis program and forecast cash flow adopting Project Management Software Primavera/Sure Track/MS Project or as mutually agreed. The program must identify the milestones, interface requirements and program reporting elements. The Contractor should submitted program chart and the soft copy to the Engineer in – charge. This shall be updated every month. The Contractor shall also submit a revised programme whenever the previous programme is inconsistent with actual progress or with the Contractor's obligations. Each programme shall include:</p> <ul style="list-style-type: none"> (a) the order in which the Contractor intends to carry out the Works, including the anticipated timing of each stage of design (if any), Contractor's Documents, procurement, manufacture of Plant, delivery to Site, construction, erection and testing, (b) each of these stages for work by each nominated Subcontractor (as defined in Clause 7/PCC [Nominated Subcontractors]), (c) the sequence and timing of inspections and tests specified in the Contract, and (d) a supporting report which includes: <ul style="list-style-type: none"> (i) a general description of the methods which the Contractor intends to adopt, and of the major stages, in the execution of the Works, and (ii) details showing the Contractor's reasonable estimate of the number of each class of Contractor's Personnel and of each type of Contractor's Equipment, required on the Site for each major stage.

	<p>Unless the Engineer, within 21 days after receiving a programme, gives notice to the Contractor stating the extent to which it does not comply with the Contract, the Contractor shall proceed in accordance with the programme, subject to his other obligations under the Contract. The Employer's Personnel shall be entitled to rely upon the programme when planning their activities.</p> <p>The Contractor shall promptly give notice to the Engineer of specific probable future events or circumstances which may adversely affect the work, increase the Contract Price or delay the execution of the Works. The Engineer may require the Contractor to submit an estimate of the anticipated effect of the future event or circumstances, and/or a proposal under Sub-Clause 34.3/PCC [Variation Procedure].</p> <p>If, at any time, the Engineer gives notice to the Contractor that a programme fails (to the extent stated) to comply with the Contract or to be consistent with actual progress and the Contractor's stated intentions, the Contractor shall submit a revised programme to the Engineer within 15 days in accordance with this Sub-Clause.</p>
<p>Clause 26 of CC</p>	<p>The following paras are added to the Existing CC Clauses.</p> <p>26.3 Commencement of Works</p> <p>The Engineer shall give the Contractor not less than 7 days' notice of the Commencement of work. Unless otherwise stated in the Special Conditions of Contract, the Commencement of work shall be within the number of days after the Contractor receives the Letter of Acceptance as specified in Contract Data.</p> <p>The Contractor shall commence the execution of the Works as soon as is reasonably practicable after the Commencement Date, and shall then proceed with the Works with due expedition and without delay.</p> <p>26.4 Time for Completion</p> <p>The Contractor shall complete the whole of the Works, and each Section (if any), within the Time for Completion for the Works or Section (as the case may be), including:</p> <ul style="list-style-type: none"> (a) achieving the passing of the Tests on Completion, and (b) completing all work which is stated in the Contract as being required for whole of the Works or Section(s) to be considered to be completed for the purposes of taking-over under Sub-Clause 46.1/PCC [Taking Over of the Works and Sections]. <p>26.5 Extension of Time for Completion</p> <p>The Contractor shall be entitled subject to Sub-Clause 4.1/SCC [Contractor's Claims] to an extension of the Time for Completion if and to the extent that completion for the purposes of Sub-Clause 46.1/PCC [Taking-Over of the Works and Sections] is or will be delayed by any of the following causes:</p> <ul style="list-style-type: none"> a) a Variation (unless an adjustment to the Time for Completion has been agreed under Sub-Clause 34.3/PCC [Variation Procedure]) or other substantial change in the quantity of an item of work included in the Contract,

- b) a cause of delay giving an entitlement to extension of time under a Sub-Clause of these Conditions,
- c) exceptionally adverse climatic conditions,
- d) Unforeseeable shortages in the availability of personnel or Goods caused by epidemic or governmental actions, or
- e) any delay, impediment or prevention caused by or attributable to the Employer, the Employer's Personnel, or the Employer's other contractors.

If the Contractor considers himself to be entitled to an extension of the Time for Completion, the Contractor shall give notice to the Engineer in accordance with Sub-Clause 4.1/SCC [Contractor's Claims]. When determining each extension of time under Sub-Clause 4.1/SCC the Engineer shall review previous determinations and may increase, but shall not decrease, the total extension of time.

26.6 Delays Caused by Authorities

If the following conditions apply, namely:

- (a) the Contractor has diligently followed the procedures laid down by the relevant legally constituted public authorities in the Country,
- (b) these authorities delay or disrupt the Contractor's work, and
- (c) the delay or disruption was Unforeseeable,

then this delay or disruption will be considered as a cause of delay under subparagraph (b) of Sub-Clause 26.5/PCC [Extension of Time for Completion].

26.7 Rate of Progress

If, at any time:

- (a) actual progress is too slow to complete within the Time for Completion, and/or
- (b) progress has fallen (or will fall) behind the current programme under Sub-Clause 25.3/PCC [Programme],

other than as a result of a cause listed in Sub-Clause 26.5/PCC [Extension of Time for Completion], then the Engineer may instruct the Contractor to submit, under Sub-Clause 25.3/PCC [Programme], a revised programme and supporting report describing the revised methods which the Contractor proposes to adopt in order to expedite progress and complete within the Time for Completion.

Unless the Engineer notifies otherwise, the Contractor shall adopt these revised methods, which may require increases in the working hours and/or in the numbers of Contractor's Personnel and/or Goods, at the risk and cost of the Contractor. If these revised methods cause the Employer to incur additional costs, the Contractor shall subject to New-Clause 2.4/PCC [Employer's Claims] pay these costs to the Employer, in addition to delay damages (if any) under Sub-Clause 26.8/PCC below

26.8 Extension of Time for Completion with Delay Damages

If the Contractor fails to comply with Sub-Clause 26.4/PCC [Time for Completion for entire work or for specified section wise completion period], and he is not entitled to an extension of time under sub clause 26.5/PCC then the employer may grant extension of time with delay damage in such case, the Contractor shall subject to New-

Clause 2.4/PCC [Employer's Claims] pay delay damages to the Employer for this default. These delay damages shall be the sum stated in the Contract Data, which shall be paid for every day which shall elapse between the relevant Time for Completion and the date stated in the Taking-Over Certificate. However, the total amount due under this Sub-Clause shall not exceed the maximum amount of delay damages (if any) stated in the Contract Data.

Further, if the contractor fails to achieve physical/financial targets as per the agreed programme for a consecutive period of 3 months without any valid reasons, other than attributable to the contractor, a provisional recovery of delay damages shall be made from the next interim payment certificate @ 1/10th of the sum of delay damages stated in the contract data, for the entire period of 3 months. Such recovery shall continue from the further interim payment certificates till the contractor is able to make good the shortfall and achieve the cumulative targets as per agreed programme. On achieving the cumulative progress targets as per agreed programme, the entire amount recovered till that month, shall be refunded to the contractor in the next interim payment certificate. In case the contractor is unable to make good the shortfall and achieve the cumulative targets resulting in delay in completion of the project, then the provisional recoveries made shall be adjusted against the delay damages to be finally imposed on the contractor.

These delay damages shall be the only damages due from the Contractor for such default, other than in the event of termination under Sub-Clause 49.7/PCC [Termination by Employer] prior to completion of the Works. These damages shall not relieve the Contractor from his obligation to complete the Works, or from any other duties, obligations or responsibilities which he may have under the Contract.

26.9 Suspension of Work

The Engineer may at any time instruct the Contractor to suspend progress of part or all of the Works. During such suspension, the Contractor shall protect, store and secure such part or the Works against any deterioration, loss or damage.

The Engineer may also notify the cause for the suspension. If and to the extent that the cause is notified and is the responsibility of the Contractor, the following Sub-Clauses 26.10, 26.11 and 26.12 of PCC shall not apply.

26.10 Consequences of Suspension

If the Contractor suffers delay and/or incurs Cost from complying with the Engineer's instructions under Sub-Clause 26.9/PCC [Suspension of Work] and/or from resuming the work, the Contractor shall give notice to the Engineer and shall be entitled subject to Sub-Clause 4.1/SCC [Contractor's Claims] to:

- (a) an extension of time for any such delay, if completion is or will be delayed, under Sub-Clause 26.5/PCC [Extension of Time for Completion], and
- (b) payment of any such Cost, which shall be included in the Contract Price.

After receiving this notice, the Engineer shall proceed in accordance with New-Clause 3.5/PCC [Determinations] to agree or determine these matters.

The Contractor shall not be entitled to an extension of time for, or to payment of the Cost incurred in, making good the consequences of the Contractor's faulty design,

workmanship or materials, or of the Contractor's failure to protect, store or secure in accordance with Sub-Clause 26.9/PCC [Suspension of Work].

If suspension is ordered by the Engineer for reasons other than those mentioned in Sub Clause 26.9/PCC then the Contractor's entitlement is in the table below. However, Engineer's decision is final and binding in regard to defining suspension and specifying the suspension period. Contractor has no right to claim or appeal against this decision

Sr. No	Suspension Period	Extension of Time	Compensation for the suspension period	Remarks
1	Up to 60 days	NO	NO	Engineer may give extension time in exceptional circumstances
2	60-90 days	YES	NO	Extension of time as considered proper by the Engineer
3	Above 90 days	YES	A. As per Daily rate of wages for idle labour/employees B. 70% of the rate for hire charges for idle plant and machinery (excluding cost of fuel and lubricants) C. 15% above all these items to cover overhead costs	Compensation as assessed by the Engineer on submission of documentary proof by the Contractor to Engineer's satisfaction

26.11 Payment for Plant and Materials in Event of Suspension

The Contractor shall be entitled to payment of the value (as at the date of suspension) of Plant and/or Materials, if:

- (a) the work on Plant or delivery of Plant and/or Materials has been suspended for more than 28 days,
- (b) the Contractor has marked the Plant and/or Materials as the Employer's property in accordance with the Engineer's instructions, and
- (c) Such materials or plant is received at site

26.12 Prolonged Suspension

If the suspension under Sub-Clause 26.9/PCC [Suspension of Work] has continued for more than 84 days, the Contractor may request the Engineer's permission to proceed. If the Engineer does not give permission within 28 days after being requested to do so, the Contractor may, by giving notice to the Engineer, treat the suspension as an omission under Clause 34/PCC [Variations and Adjustments] of the affected part of the Works. If the suspension affects the whole of the Works, the Contractor may give notice.

	<p>26.13 Resumption of Work</p> <p>After the permission or instruction to proceed is given, the Contractor and the Engineer shall jointly examine the Works and the Plant and Materials affected by the suspension. The Contractor shall make good any deterioration or defect in or loss of the Works or Plant or Materials, which has occurred during the suspension</p> <p>26.14 Bonus for early completion:</p> <p>If the Contractor achieves completion of the whole of the Works or any section(s) prior to the intended Completion Date prescribed in Contract data (Extension of time pursuant to Clause 26.5/PCC or any other clause of these conditions will not be considered), the Employer shall pay to the Contractor a sum stated in the Contract data as bonus for early completion, for every calendar month which shall elapse between the date of completion of all items of works as stipulated in the contract, including variations ordered by the Engineer and the time prescribed in Clause 26.4.</p> <p>For the purpose of calculating bonus payments, the time given in the Bid for completion of the whole works or any section(s) is fixed and unless otherwise agreed, no adjustment of the time by reasons of granting an extension of time pursuant to clause 26.5/PCC or any other clause of these conditions will be allowed. Any period falling short of completed month shall be ignored for the purpose of computing the period relevant for the payment of bonus.</p> <p>Amount of bonus for early completion 1% of initial Contract Price per month (part of the month to be excluded) for substantial completion of work.</p> <p>Maximum limit of bonus 3% of Contract Price.</p> <p>(For earlier completion of the work as a whole from the stipulated original date of completion, a bonus payment of as above shall be paid to the contractor. The engineer's decision is final and binding on the contractor so far as bonus payment to the contractor is concerned. if bonus payment is made, earlier penalties levied for delay caused to various intermediate Key Dates will be refunded.)</p>
<p>Clause-30/CC</p>	<p>The following paras are added to the Existing CC Clauses.</p> <p>30.2 Contractor's Obligations</p> <p>The Contractor shall carry out the Tests on Completion in accordance with this Clause and New-Clause 5.4/PCC [Testing], after providing the documents in accordance with sub-paragraph (d) of New--Clause 4.1/PCC [Contractor's General Obligations].</p> <p>The Contractor shall give to the Engineer not less than 21 days' notice of the date after which the Contractor will be ready to carry out each of the Tests on Completion. Unless otherwise agreed, Tests on Completion shall be carried out within 14 days after this date, on such day or days as the Engineer shall instruct.</p> <p>In considering the results of the Tests on Completion, the Engineer shall make allowances for the effect of any use of the Works by the Employer on the performance or other characteristics of the Works. As soon as the Works, or a Section, have passed any Tests on Completion, the Contractor shall submit a certified report of the results of these Tests to the Engineer.</p>

Contractor's Obligations: The Contractor shall carry out the Tests on Completion at his own cost in accordance with the Contract and shall provide the documents in accordance with New-Clauses 3.1/PCC and the Contractor shall give, to the Engineer, 21 days' notice of the date after which the Contractor will be ready to carry out the Tests on Completion. Unless otherwise agreed, such Tests shall be carried out within 14 days after this date, on such day or days as the Engineer shall instruct.

Unless otherwise stated in Conditions of Contract/SCC, the Tests on Completion shall be carried out in the following sequence

- (a) pre-commissioning test, which shall include appropriate instructions and ("dry" or "cold") functional tests to demonstrate that each item of the Plant and Work can safely undertake the next stage
- (b) Commissioning Test shall include the specified operational tests to demonstrate Works or Sections can be operated safely and as specified under all available operating condition
- (c) trial operation which shall demonstrate that the Works or Section perform reliably and in accordance with the Contract

The Contractor at his own cost shall arrange all tools, equipment, gadgets, facilities or as deemed necessary by the Engineer for such tests, in considering the results of the Tests on Completion, the Engineer shall make allowances for the effect of any use of the Works by the Employer on the performance or other characteristics of the Works. As soon as the Works, or a Section, have passed the Tests on Completion described in sub-paragraphs (a) (b) or (c), the Contractor shall provide the Engineer and the Employer with a certified report of the results of all such Tests

30.3 Delayed Tests

If the Tests on Completion are being unduly delayed by the Employer, New-Clause 5.4/PCC [Testing] (fifth paragraph) and/or Sub-Clause 46.3/PCC [Interference with Tests on Completion] shall be applicable.

If the Tests on Completion are being unduly delayed by the Contractor, the Engineer may by notice require the Contractor to carry out the Tests within 21 days after receiving the notice. The Contractor shall carry out the Tests on such day or days within that period as the Contractor may fix and of which he shall give notice to the Engineer.

If the Contractor fails to carry out the Tests on Completion within the period of 21 days, the Employer's Personnel may proceed with the Tests at the risk and cost of the Contractor. The Tests on Completion shall then be deemed to have been carried out in the presence of the Contractor and the results of the Tests shall be accepted as accurate.

30.4 Retesting

If the Works, or a Section, fail to pass the Tests on Completion, New-Clause 5.5/PCC [Rejection] shall apply, and the Engineer or the Contractor may require the failed Tests, and Tests on Completion on any related work, to be repeated under the same terms and conditions

30.5 Failure to Pass Tests on Completion

If the Works, or a Section, fail to pass the Tests on Completion repeated under Sub-Clause 30.4/PCC [Retesting], the Engineer shall be entitled to:

	<p>(a) order further repetition of Tests on Completion under Sub-Clause 30.4;</p> <p>(b) if the failure deprives the Employer of substantially the whole benefit of the Works or Section, reject the Works or Section (as the case may be), in which event the Employer shall have the same remedies as are provided in sub-paragraph (c) of New-Clause 6.4/PCC [Failure to Remedy Defects]; or</p> <p>(c) issue a Taking-Over Certificate, if the Employer so requests.</p> <p>In the event of sub-paragraph (c), the Contractor shall proceed in accordance with all other obligations under the Contract, and the Contract Price shall be reduced by such amount as shall be appropriate to cover the reduced value to the Employer as a result of this failure. Unless the relevant reduction for this failure is stated (or its method of calculation is defined) in the Contract, the Employer may require the reduction to be (i) agreed by both Parties (in full satisfaction of this failure only) and paid before this Taking-Over Certificate is issued, or (ii) determined and paid under New-Clause 2.4 [Employer's Claims] and New-Clause 3.5 [Determinations].</p> <p>30.6 Contractor's obligations</p> <p>Notwithstanding the provisions of New-clauses 4.1/PCC, clause 30.2 to 30.5/PCC the provisions in subsequent sub-clauses shall apply for works of Permanent Way, signaling and telecommunication and railway electrification excluding General Electrical Services.</p> <p>(a) The Contractor shall be responsible for the execution of temporary and/or permanent works which may require the prior sanction/approval of Commissioner of Railway Safety (CRS) in accordance with extant rules for "The Railways opening for Public Carriage of Passengers" was amended from time to time. And applicable as and when the works are undertaken. The Contractor shall initiate the process for approval at least 63 (sixty-three) days prior to undertaking such works which require the approval of Commissioner of Railway Safety (CRS) and furnish draft documentation to the Engineer.</p> <p>(b) The Contractor shall ensure that existing services and operations for public carriage of passengers or goods, are not affected except those, which are essentially required to be regulated for execution of works. Such items of works shall be planned and coordinated through the Engineer.</p> <p>(i) Prior to the commencement of commercial operations of passenger traffic, the Employer may permit freight train operations to Railway after certification by the authorized person of Zonal Railway. The Contractor shall be responsible for maintaining the facilities ensuring safety of operations as per specifications.</p>
<p>Clause 34/CC</p>	<p>The following paras are replaced to the Existing CC Clause 34.</p> <p>VARIATIONS AND ADJUSTMENTS.</p> <p>34.1 Right to Vary</p> <p>Variations may be initiated by the Employer at any time prior to issuing the Taking-Over Certificate for the Works, either by an instruction or by making a request to the Contractor to submit a proposal.</p> <p>The Contractor shall execute and be bound by each variation till the price does not exceed 50% of the agreement value as specified in LOA/Original agreement.</p>

For variation beyond the above the contractor shall be bound to execute, unless the Contractor promptly gives notice to the Engineer stating (with supporting particulars) that the Contractor cannot readily obtain the Goods required for the Variation. Upon receiving this notice, the Engineer shall cancel, confirm or vary the instruction.

Each Variation may include:

- (a) changes to the quantities of any item of work included in the Contract,
- (b) changes to the quality and other characteristics of any item of work,
- (c) changes to the levels, positions and/or dimensions of any part of the Works,
- (d) omission of any work unless it is to be carried out by others,
- (e) any additional work, Plant, Materials or services necessary for the Permanent Works, including any associated Tests on Completion, boreholes and other testing and exploratory work, or
- (f) changes to the sequence or timing of the execution of the Works.

The Contractor shall not make any alteration and/or modification of the Permanent Works, unless and until the Engineer instructs or approves a Variation

34.2 Value Engineering

The Contractor may, at any time, submit to the Engineer a written proposal which (in the Contractor's opinion) will, if adopted, (i) accelerate completion, (ii) reduce the cost to the Employer of executing, maintaining or operating the Works, (iii) improve the efficiency or value to the Employer of the completed Works, or (iv) otherwise be of benefit to the Employer.

The proposal shall be prepared at the cost of the Contractor and shall include the items listed in Sub-Clause 34.3/PCC [Variation Procedure].

If a proposal, which is approved by the Engineer, includes a change in the design of part of the Permanent Works, then unless otherwise agreed by both Parties:

- (a) the Contractor shall design this part,
- (b) sub-paragraphs (a) to (d) of New-Clause 4.1/PCC [Contractor's General Obligations] shall apply, and
- (c) if this change results in a reduction in the contract value of this part, the Engineer shall proceed in accordance with New-Clause 3.5/PCC [Determinations] to agree or determine a fee, which shall be included in the Contract Price. This fee shall be half (50%) of the difference between the following amounts:
 - (i) such reduction in contract value, resulting from the change, excluding adjustments under Sub-Clause 34.7/PCC [Adjustments for Changes in Legislation] and Sub-Clause PVC/Contract Data [Adjustments for Changes in Cost], and
 - (ii) the reduction (if any) in the value to the Employer of the varied works, taking account of any reductions in quality, anticipated life or operational efficiencies.

However, if amount (i) is less than amount (ii), there shall not be a fee.

34.3 Variation Procedure

If the Engineer requests a proposal, prior to instructing a Variation, the Contractor shall respond in writing as soon as practicable, either by giving reasons why he cannot comply (if this is the case) or by submitting:

- (a) a description of the proposed work to be performed and a programme for its execution,
- (b) the Contractor's proposal for any necessary modifications to the programme according to Sub-Clause 25.3/PCC [Programme] and to the Time for Completion, and
- (c) the evaluation of the Variation shall be as specified in New-Clause 35/PCC [Payment for Variation].

The Engineer shall, as soon as practicable after receiving such proposal (under Sub-Clause 34.2/PCC [Value Engineering] or otherwise), respond with approval, disapproval or comments. The Contractor shall not delay any work whilst awaiting a response.

Each instruction to execute a Variation, with any requirements for the recording of Costs, shall be issued by the Engineer to the Contractor, who shall acknowledge receipt.

Each Variation shall be evaluated in accordance with New-Clause 7 [Measurement and Evaluation], unless the Engineer instructs or approves otherwise in accordance with this Clause.

34.4 Payment in Applicable Currencies

If the Contract provides for payment of the Contract Price in more than one currency, then whenever an adjustment is agreed, approved or determined as stated above, the amount payable in each of the applicable currencies shall be specified. For this purpose, reference shall be made to the actual or expected currency proportions of the Cost of the varied work, and to the proportions of various currencies specified for payment of the Contract Price.

34.5 Provisional Sums

Each Provisional Sum shall only be used, in whole or in part, in accordance with the Engineer's instructions, and the Contract Price shall be adjusted accordingly. The total sum paid to the Contractor shall include only such amounts, for the work, supplies or services to which the Provisional Sum relates, as the Engineer shall have instructed. For each Provisional Sum, the Engineer may instruct:

- (a) work to be executed (including Plant, Materials or services to be supplied) by the Contractor and valued under Sub-Clause 34.3/PCC [Variation Procedure]; and/or
- (b) Plant, Materials or services to be purchased by the Contractor, from a nominated Subcontractor (as defined in Clause 7 [Nominated Subcontractors]) or otherwise; and for which these shall be included in the Contract Price:
 - (i) the actual amounts paid (or due to be paid) by the Contractor, and
 - (ii) a sum for overhead charges and profit, calculated as a percentage of these actual amounts by applying the relevant percentage rate (if any) stated in the appropriate Schedule. If there is no such rate, the percentage rate stated in the Contract Data shall be applied.

The Contractor shall, when required by the Engineer, produce quotations, invoices, vouchers and accounts or receipts in substantiation

34.6 Day work

For work of a minor or incidental nature, the Engineer may instruct that a Variation shall be executed on a daywork basis. The work shall then be valued in accordance with the Daywork Schedule included in the Contract, and the following procedure shall apply. If a Daywork Schedule is not included in the Contract, this Sub-Clause shall not apply.

Before ordering Goods for the work, the Contractor shall submit quotations to the Engineer. When applying for payment, the Contractor shall submit invoices, vouchers and accounts or receipts for any Goods.

Except for any items for which the Daywork Schedule specifies that payment is not due, the Contractor shall deliver each day to the Engineer accurate statements in duplicate which shall include the following details of the resources used in executing the previous day's work:

- (a) the names, occupations and time of Contractor's Personnel,
- (b) the identification, type and time of Contractor's Equipment and Temporary Works, and
- (c) the quantities and types of Plant and Materials used.

One copy of each statement will, if correct, or when agreed, be signed by the Engineer and returned to the Contractor. The Contractor shall then submit priced statements of these resources to the Engineer, prior to their inclusion in the next Statement under Sub-Clause 37.1/PCC [Application for Interim Payment Certificates]

34.7 Adjustments for Changes in Legislation

Contract Price shall be adjusted to take account of any increase or decrease in Cost resulting from a change in the Laws of the Country (including the introduction of new Laws and the repeal or modification of existing Laws) or in the judicial or official governmental interpretation of such Laws, made after the Base Date, which affect the Contractor in the performance of obligations under the Contract.

If the Contractor suffers (or will suffer) delay and/or incurs (or will incur) additional Cost as a result of these changes in the Laws or in such interpretations, made after the Base Date, the Contractor shall give notice to the Engineer and shall be entitled subject to Sub-Clause 4.1/SCC [Contractor's Claims] to:

- (a) an extension of time for any such delay, if completion is or will be delayed, under Sub-Clause 26.5/PCC [Extension of Time for Completion], and
- (b) payment of any such Cost, which shall be included in the Contract Price.

After receiving this notice, the Engineer shall proceed in accordance with New-Clause 3.5 [Determinations] to agree or determine these matters.

In case there is a decrease in cost as a result of changes of Law by Legislation after the Base Date, the Engineer shall proceed in accordance with New-Clause 3.5 (determination) to agree or determine these matters without waiting for Contractor's / Employer's Notice.

	<p>Notwithstanding the foregoing, the Contractor shall not be entitled to such an extension of time if the same shall already have been taken into account in determining an extension and such Cost shall not be separately paid if the same shall already have been taken into account in the indexing of any inputs to the table of adjustment data in accordance with the provisions of Sub-Clause PVC/Contract Data.</p>
<p>Clause 35/CC</p>	<p>The clause 35 of CC is substituted with following paras.</p> <p>Payment for Variations.</p> <p>A. Variation in the Bill of Quantities</p> <p>i) The quantities of items shown in the Bill of Quantities are approximate, and liable to vary during the actual execution of the work. Some items/group of items may have to be altered, added or omitted. The Contractor shall be bound to carry out and complete the stipulated work as instructed by the Engineer, irrespective of the magnitude of variations including additions, alterations or omissions in the Bill of Quantities, individual items or group of items, specified in the Bill of Quantities.</p> <p>ii) Such variations shall be paid as follows:</p> <p>a) At the accepted rates of the Contract for Positive variation in quantities of each individual item to the extent of 25%, except in the case of foundation works. Unless otherwise specifically provided for in the Bill of Quantities or elsewhere in the Contract, the variation of 25% shall be applicable to each individual item of the BoQ. In case of variation in quantities on minus side, contract rates will be payable for executed quantities.</p> <p>b) In case of foundation work, no variation limit applies and Contractor shall carryout the Work, at rates stipulated in the Contract irrespective of any variation.</p> <p>c) In case of earth work, the aforesaid variation limit of 25% shall apply to the gross quantity of earth work and variation in the quantity of individual classifications of soil will not be subject to this limit where any variation can take place.</p> <p>d) For items against which the quantity given in the Bills of Quantities is “if or as required”, there shall be no increase/decrease of rates whatever be the quantity finally executed.</p> <p>e) Variation in the quantity of items individually costing up to 1% of the total contract value, shall be payable at the rates stated in the Contract notwithstanding the magnitude of variation up to 2% of the original Contract Value for each item.</p> <p>f) In case the variation in individual items is more than 25% on plus side, the rate for the varied quantity beyond 25% shall be negotiated between the Engineer and the Contractor and mutually agreed rates arrived at before actual execution of the extra quantity.</p> <p><u>New Items/Extra items:</u></p> <p>g) In case Engineer introduces an item for which the Contract does not contain any rates or prices applicable to the varied Works, the rate of such items shall be derived, wherever possible, from rate for similar items available in the Bill of</p>

	<p>Quantities of the accepted Tender. In case this is not possible, the rate may be decided on the following basis:</p> <ol style="list-style-type: none"> i. Cost of Materials at current market price, as actually utilised in the final finished Permanent Works, including a reasonable percentage for wastage and transportation. ii. Cost of enabling works if any (unless provided for separately) worked out on the above basis but with less stringent quality. Specifications minus salvage value of serviceable material released after completion of work and cost of material released as scrap. iii. Cost of labour actually used at the site of work at rates under Payment of Minimum Wages Act for the area of work for each category of worker, further enhanced by a percentage of 10% of the aforesaid rates to account for labour not directly utilised at Site and other ancillary and incidental expenses on labour. iv. Hire charges for Plant & Machinery, scaffolding, shuttering, forms, etc., required to be used at the site of the work. The tools used by the various trades shall not be counted as Plant & Machinery for this purpose. v. An amount of 20% of items (i), (ii), (iii) and (iv) above to allow for Contractor's overheads, profits and taxes. This percentage shall also apply to estimated cost of Materials supplied free to the Contractor. vi. In all cases where extra items of work are involved, for which there are no rates in the accepted Bill of Quantities the Contractor shall give a notice to the Engineer, of at least 7 days before the need for their execution arises. <p>h) In the event of disagreement in respect of items (f) and (g) above, the Engineer shall fix such rates of price as are, in his opinion appropriate and obtain the approval of Employer and Engineer 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 the Contractor. Alternatively, in the event of disagreement, the Contractor shall have no claim to execute extra quantities/new items and the Engineer shall be free to get such additional quantities beyond 25% new items executed through any other agency. However, if the Engineer or the Employer so directs the Contractor shall be bound to carry out any such additional quantities beyond the limits stated above original quantities and or new items and the disagreement or the difference regarding rates to be paid for the same shall be settled in the manner laid down under the conditions for the settlement of dispute.</p>
<p>Clause 37/CC</p>	<p>The clause 37 of CC is replaced with the following.</p> <p>Payments.</p> <p>37.1 Application for Interim Payment Certificates</p> <p>Payments shall be adjusted for deductions for advance payments other than recoveries in terms of contract and taxes, at source as applicable under law. The Contractor shall be liable to pay liquidated damages for shortfall in progress. Items of</p>

the Works for which no rate or price has been entered in will not be paid for by the Employer and shall be deemed covered by other rates and prices in the Contract.

The Contractor shall submit a Statement in six copies to the Engineer in accordance with the payment procedure specified by the Engineer, after the end of each month, in a form approved by the Engineer, showing in detail the amounts to which the Contractor considers himself to be entitled, together with supporting documents which shall include the report on the progress during this month in accordance with New-Clause 4.39/PCC [Progress Reports] and Record Measurement Sheets.

The Statement shall include the following items, as applicable, which shall be expressed in the various currencies in which the Contract Price is payable, in the sequence listed:

- (a) the estimated contract value of the Works executed and the Contractor's Documents produced up to the end of the month (including Variations but excluding items described in sub-paragraphs (b) to (g) below);
- (b) any amounts to be added and deducted for changes in legislation and changes in cost, in accordance with Sub-Clause 34.7/PCC [Adjustments for Changes in Legislation] and Sub-Clause PVC/Contract Data [Adjustments for Changes in Cost];
- (c) any amount to be deducted for retention, calculated by applying the percentage of retention stated in the Contract Data to the total of the above amounts, until the amount so retained by the Employer reaches the limit of Retention Money (if any) stated in the Contract Data;
- (d) Any amounts to be added and deducted for the advance payments and repayments in accordance with sub clause 42.0/PCC [Advance Payment];
- (e) any amounts to be added and deducted for Materials in accordance with New-Clause 13/PCC [Materials intended for the Works];
- (f) any other additions or deductions which may have become due under the Contract or otherwise, including those under Clause 4.1/SCC [Claims, Disputes and Arbitration]; and
- (g) the deduction of amounts certified in all previous Payment Certificates.
- (h) for invoicing as per GST Laws, the estimated contract value of the Works executed in terms of (a) above and any amounts added or deducted as per (b), (e) to (g) above is to be broken up in two components i.e. (i) the base amount excluding GST (ii) GST component (calculated at the rate for works contract service as per GST Laws).
- (i) Statement of interim payments certificates should be submitted by the Contractor to the Engineer by the 7th day of each month for the work executed upto the end of the previous month.
- (j) An amount to be deducted for the payments to be made to different Departments towards payments liable to be made by the Contractor

37.2 Schedule of Payments

If the Contract includes a schedule of payments specifying the installments in which the Contract Price will be paid, then unless otherwise stated in this schedule:

- (a) the installments quoted in this schedule of payments shall be the estimated contract values for the purposes of sub-paragraph (a) of Sub-Clause 37.1/PCC [Application for Interim Payment Certificates];
- (b) New-Clause 13/PCC [Provisional payment against material at site] shall not apply; and
- (c) if these installments are not defined by reference to the actual progress achieved in executing the Works, and if actual progress is found to be less than that on which this schedule of payments was based, then the Engineer may proceed in accordance with New-Clause 3.5/PCC [Determinations] to agree or determine revised installments, which shall take account of the extent to which progress is less than that on which the installments were previously based.

If the Contract does not include a schedule of payments, the Contractor shall submit non-binding estimates of the payments which he expects to become due during each quarterly period. The first estimate shall be submitted within 42 days after the Commencement Date. Revised estimates shall be submitted at quarterly intervals, until the Taking-Over Certificate has been issued for the Works.

37.3 Issue of Interim Payment Certificates

No amount will be certified or paid until the employer has received and approved the performance security. Thereafter, the Engineer shall within two days after receiving a statement and supporting documents (including Contractor's certificate in terms of Sub-Clause 1.22/SCC, issue to the Employer a provisional interim payment certificate which shall state the amount which the Engineer determines to be due after preliminary check as per K-RIDE's procedure order. After this the Engineer shall, within 28 days after receiving a statement and supporting documents, issue to the employer an Interim Payment Certificate which shall state the amount which the Engineer fairly determines to be due, with supporting particulars.

However, prior to issuing the Taking-Over Certificate for the Works, the Engineer shall not be bound to issue the Interim Payment Certificate in an amount which would (after retention and other deductions) be less than the minimum amount of Interim Payment Certificates (if any) stated in the Contract Data. In this event, the Engineer shall give notice to the Contractor accordingly.

An Interim Payment Certificate shall not be withheld for any other reason, although:

- (a) if anything supplied or work done by the Contractor is not in accordance with the Contract, the cost of rectification or replacement may be withheld until rectification or replacement has been completed; and/or
- (b) if the Contractor was or is failing to perform any work or obligation in accordance with the Contract, and had been so notified by the Engineer, the value of this work or obligation may be withheld until the work or obligation has been performed.

The Engineer may in any Payment Certificate make any correction or modification that should properly be made to any previous Payment Certificate. A Payment Certificate shall not be deemed to indicate the Engineer's acceptance, approval, consent or satisfaction.

37.4 Payment

The Employer shall pay to the Contractor:

- (a) the first installment of the advance payment within 42 days after issuing the Letter of Acceptance or within 21 days after receiving the documents in accordance with New-Clause 4.19/PCC [Performance Security] and Sub-Clause 42.0/PCC [Advance Payment], whichever is later;
- (b) (i) After preliminary scrutiny and certifications by the Engineer, payment of 70% of the certified net payment due (after recoveries and deductions), shall be made by the Employer within 10 days of receiving a statement and supporting documents by the Engineer subject to the condition that last interim payment certificate has been settled after detailed check. In the event of the contractor submitting bills based on false measurements, Project Director should issue a written warning to him to the effect that the facility of 70% payment without detailed check will be withdrawn in future. If the contractor repeats the misconduct this facility should be withdrawn.
- (ii) The amount certified in each Interim Payment Certificate within 56 days after the Engineer receives the Statement and supporting documents. Any discrepancy shall be rectified in the next payment to the Contractor; and
- (c) the amount certified in the Final Payment Certificate within 56 days after the Employer receives this Payment Certificate or, the undisputed amount shown in the Final Statement, within 56 days after the date of notification of the suspension.
- Payment of the amount due, unless specified in the Contract Data, shall be made in INR into the bank account, nominated by the Contractor.

However, in case of JV, direct payment to individual JV partners shall be made on joint certification (about the net amounts payable to individual partners) by the authorized representative of the JV and concerned respective authorized representative of individual JV partners, after making requisite recoveries/deductions from the gross payment. In case of any dispute regarding the net amounts payable to individual partners, the Engineer shall decide the same on the basis of the execution of items of works under Schedules/Bills indicated in the JV agreement as the responsibility of execution of each JV partner. Payment to individual JV partners shall be treated as payment made to the JV. The said payment shall not alter any obligation of the JV and its individual Partners under the Agreement and their obligations under the agreement shall remain joint and several.

A foreign company (either single entity or JV partner), shall have to submit proof of having opened their project office in India before any payment (including advance payment) is released to such a company. The required proof here shall be a copy of the report containing information as per format prescribed by Reserve Bank of India submitted to the Director General of Police (DGP) of the state concerned in which project office has been established.

37.5 DELETED

37.6 Delayed Payment

If the Contractor does not receive payment in accordance with Sub-Clause 37.4/PCC [Payment], the Contractor shall be entitled to receive interest compounded monthly on the amount unpaid during the period of delay. This period shall be deemed to commence on the date for payment specified in Sub-Clause 37.4/PCC [Payment],

irrespective (in the case of its sub-paragraph (b)) of the date on which any Interim Payment Certificate is issued.

Unless otherwise stated in the Special Conditions of Contract, the interest amount be calculated at the annual rate of 7% (seven percent).

The Contractor shall be entitled to this payment without formal notice or certification, and without prejudice to any other right or remedy, if the Contractor submits the complied (Fulfilled) documents.

37.7 DELETED

37.8 DELETED

37.9 DELETED

37.10 DELETED

37.11 Statement at Completion

Within 84 days after receiving the Taking-Over Certificate for the Works, the Contractor shall submit to the Engineer six copies of a Statement at completion with supporting documents, in accordance with Sub-Clause 37.7/PCC [Application for Interim Payment Certificates], showing:

- (a) the value of all work done in accordance with the Contract up to the date stated in the Taking- Over Certificate for the Works,
- (b) any further sums which the Contractor considers to be due, and
- (c) an estimate of any other amounts which the Contractor considers will become due to him under the Contract. Estimated amounts shall be shown separately in this Statement at completion.

The Engineer shall then certify in accordance with Sub-Clause 37.3/PCC [Issue of Interim Payment Certificates].

Within 56 days after receiving the Performance Certificate, the Contractor shall submit, to the Engineer, six copies of a draft final statement as per procedure prescribed by the Engineer, with supporting documents showing in detail in a form approved by the Engineer:

37.12 Application for Final Payment Certificate

Within 56 days after receiving the Performance Certificate, the Contractor shall submit, to the Engineer, six copies of a draft final statement as per procedure prescribed by the Engineer, with supporting documents (including Contractor's certificate in terms of Sub-Clause 1.22/SCC showing in detail in a 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, as per procedure prescribed by the Engineer 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. This agreed statement is referred to in these Conditions as the "Final Statement".

However, if, following discussions between the Engineer and the Contractor and any changes to the draft final statement which are agreed, it becomes evident that a dispute exists, the Engineer shall deliver to the Employer (with a copy to the Contractor) an Interim Payment Certificate for the agreed parts of the draft final statement. Thereafter, if the dispute is finally resolved under Sub-Clause 4.2/SCC [Obtaining Dispute Board's Decision] or Sub-Clause 4.2/SCC [Amicable Settlement], the Contractor shall then prepare and submit to the Employer (with a copy to the Engineer) a Final Statement.

37.13 Discharge

When submitting the Final Statement, the Contractor shall submit a discharge which confirms that the total of the Final Statement represents full and final settlement of all moneys due to the Contractor under or in connection with the Contract. This discharge may state that it becomes effective when the Contractor has received the Performance Security and the outstanding balance of this total, in which event the discharge shall be effective on such date

37.14 Issue of Final Payment Certificate

Within 28 days after receiving the Final Statement and discharge in accordance with Sub-Clause 37.12/PCC [Application for Final Payment Certificate] and Sub-Clause 37.13/PCC [Discharge], the Engineer shall issue, to the Employer, the Final Payment Certificate which shall state:

- (a) the amount which he fairly determines is finally due, 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, the balance (if any) due from the Employer to the Contractor or from the Contractor to the Employer, as the case may be.

If the Contractor has not applied for a Final Payment Certificate in accordance with Sub-Clause 37.12/PCC [Application for Final Payment Certificate] and Sub-Clause 37.13/PCC [Discharge], the Engineer shall request the Contractor to do so. If the Contractor fails to submit an application within a period of 28 days, the Engineer shall issue the Final Payment Certificate for such amount as he fairly determines to be due.

37.15 Cessation of Employer's Liability

The Employer shall not be liable to the Contractor for any matter or thing under or in connection with the Contract or execution of the Works, except to the extent that the Contractor shall have included an amount expressly for it:

- (a) in the Final Statement and also
- (b) (except for matters or things arising after the issue of the Taking-Over Certificate for the Works) in the Statement at completion described in Sub-Clause 37.11/PCC [Statement at Completion].

However, this Sub-Clause shall not limit the Employer's liability under his indemnification obligations, or the Employer's liability in any case of fraud, deliberate default or reckless misconduct by the Employer

37.16 Currencies of Payment

a) The Contract Price shall be paid in Indian Rupees (INR).

37.17 Tax Deduction at Source: Tax deductions will be made at source as per statutory requirement from every payment made to the Contractor at rates notified from time to time.

i. **Income tax deduction:** Income Tax deduction shall be as per law.

ii. **Labour Cess & Royalties:** The labour Cess & Royalties will be deducted as per norms of applicable law from each IPCs and remitted to the respective Authorities

37.18 Production of Vouchers

a. The Contractor shall, whenever required by the Engineer, produce or cause to be produced for examination by the Engineer, any quotation, invoice, cost or other account books, vouchers, receipts, letters, memoranda or any copy of or extract from any such documents and also furnish information and returns, as may be required, relating to the execution of this Contract or relevant for verifying or ascertaining the cost of execution of this Contract or ascertaining the Materials supplied by the Contractor are in accordance with the Specifications laid down in the Contract. The Engineer's decision on the question of relevancy of any documents, information or returns shall be final and binding on the parties

b. If any part or item of the Work is allowed to be carried out by a Sub-Contractor, assignee or any subsidiary or allied firm, the Engineer shall have power to secure the books of such Sub-Contractor, assignee or any subsidiary or allied firm through the Contractor, and shall have power to examine and inspect the same. The above obligations are without prejudice to the obligations of the Contractor under any statute, rules or orders.

37.19 Withholding and Lien For Sums Claimed

(i) The Employer shall have lien on and over all materials of every description, tools, tackles, plant, equipment or any amount due and/or that may become due and payable to the Contractor under the Contract, and / or on and over the deposit of Performance Security or other amount or amounts made under the Contract and which may become payable to the Contractor. Employer may exercise a general lien also.

(ii) And further, unless the Contractor pays and clears immediately on demand any claim of the Employer, the Employer shall at all times be entitled to deduct the amount of the said claim from the amount, securities and / or deposits which may have become or will become payable to the Contractor under the existing contract, or under any other Contract or transaction whatsoever between the Employer and the Contractor even if the matter stands referred to Arbitration. The Contractor shall have no claim for any interest or damage whatsoever in respect of any amounts withheld or treated as withheld under the lien referred to above and duly notified as such to the Contractor

	<p>37.20 Signature on Receipts for Payments</p> <p>Every receipt of payment to Contractor including refund of the Performance Security shall be signed by the person authorized to do so on his behalf. In the event of death of any of the Contractor's partners in case the Contractor is a partnership firm, during the currency of the Contract, it is hereby expressly agreed that every receipt by any one of surviving Contractor's partners, shall, if so signed as aforesaid, be a good and sufficient discharge as aforesaid, provided that nothing in this Clause shall be deemed to prejudice or affect any claim, which the Employer may hereafter have against the legal representatives of any Contractor's partner so dying, for or in respect of breach of any of the conditions of the Contract. Provided also that nothing contained in this clause shall be deemed to prejudice or affect the respective rights and obligations of the Contractor's partners, or of the legal heirs / representatives of any deceased Contractor / partner interest</p> <p>37.21 Post Payment Audit</p> <p>It is an agreed term of the Contract, that the Employer reserves to himself the right to carry out a post payment audit and / or technical examination of the Works, and the Final bill including all supporting vouchers, abstracts, etc., and to make a claim on the Contractor for the refund of any excess amount paid to him, if as a result of such examination, any over-payment to him is discovered to have been made in respect of any work done or alleged to have been done by the Contractor, under the Contract. If any under-payment is discovered, the same shall be paid by the Employer to the Contractor. Such payments or recoveries, however, shall not carry any interest.</p> <p>37.22 Recovery of money due to the Employer</p> <p>All damages (including, without limitation, liquidated damages), costs, charges, expenses, debts, or sums for which the Contractor is liable to the Employer under any provision of the Contract may be deducted by the Employer from amount due to the Contractor under the Contract including, without limitation, and the Employer shall have the power to recover any balance not so deducted from amount due to the Contractor under any other contract between the Employer and the Contractor</p> <p>When the Contractor has assigned to a third party the right to receive amount due, or, to become due, under the Contract to the Contractor or charged such amount in favour of a third party, the Employer's right to deduct damages (including without limitation liquidated damages), costs, charges, expenses, debts or sums for which the Contractor is liable to the Employer from amount due to the Contractor under the Contract shall be limited to the right expressed above.</p>
<p>Clause-38/CC</p>	<p>The clause 38 of CC is substituted with the following para.</p> <p>38.1 Compensation Event:</p> <p>The risks referred to in Sub-Clause 11.4/PCC below, in so far as they directly affect the execution of the works in the Country, are:</p> <ul style="list-style-type: none"> (a) war, hostilities (whether war be declared or not), invasion, act of foreign enemies, (b) rebellion, terrorism, sabotage by persons other than the Contractor's Personnel, revolution, insurrection, military or usurped power, or civil war, within the Country,

	<ul style="list-style-type: none"> (c) riot, commotion or disorder within the Country by persons other than the Contractor's Personnel, (d) munitions of war, explosive materials, ionising radiation or contamination by radio-activity, within the Country, except as may be attributable to the Contractor's use of such munitions, explosives, radiation or radio-activity, (e) pressure waves caused by aircraft or other aerial devices travelling at sonic or supersonic speeds, (f) use or occupation by the Employer of any part of the Permanent Works, except as may be specified in the Contract, (g) design of any part of the Works by the Employer's Personnel or by others for whom the Employer is responsible.
<p>Clause-40/CC</p>	<p>The following paras are added to the Existing CC Clauses.</p> <p>CONTRACT PRICE</p> <p>40.1 The Contract Price</p> <p>Unless otherwise stated in the Special Conditions of Contract:</p> <ul style="list-style-type: none"> (a) the Contract Price shall be agreed or determined under Clause 35/PCC [Payment for Variation] and be subject to adjustments in accordance with the Contract; (b) the Contractor shall pay all taxes, duties and fees required to be paid by him under the Contract, and the Contract Price shall not be adjusted for any of these costs except as stated in Sub-Clause 34.7/PCC [Adjustments for Changes in Legislation]; (c) any quantities which may be set out in the Bill of Quantities or other Schedule are estimated quantities and are not to be taken as the actual and final quantities: <ul style="list-style-type: none"> (i) of the Works which the Contractor is required to execute, or (ii) for the purposes of New-Clause 7/PCC [Measurement and Evaluation]; (d) the Contractor shall submit to the Engineer, within 28 days after the Commencement Date, a proposed breakdown of each lump sum price in the Schedules, if applicable. The Engineer may take account of the breakdown when preparing Payment Certificates, but shall not be bound by it. (e) It may be noted that in the event of the Contractor not making the due payments stated in sub-clause (b) above, and the concerned party puts up a claim with the Employer / Engineer, then the Employer / Engineer may make such payments and deduct the same from the sums due to the Contractor. <p>Change in Law</p> <p>Change in Law means the occurrence or coming into force of the following, at any time after the last Date of submission of tender:</p> <p>Any new Central and State Taxes, duties, cess, levies, which is imposed or any existing Central and State Taxes, duties, cess, levies & royalties are withdrawn after the due date of submission of tender and which impacts the performance of the contractor with</p>

	<p>increased cost or which results in extra financial gains to the contractor due to decreased cost in execution of contract. Such additional or reduced cost shall be certified by the Engineer after examining records provided by the contractor and shall be paid by or credited to the employer.</p> <p>However, change in the rate of any existing Central & State taxes (except GST), duties, cess, levies will not be considered as change in Law. Any risk of change in rate of existing Central and State Taxes (except GST), duties, cess, levies lies with and shall be borne by the Contractor.</p>				
<p>Clause 42/CC</p>	<p>The following paras are added to the Existing CC Clauses.</p> <p>Advance Payment:</p> <p>42.1 Mobilization Advance</p> <p>The Employer shall make payment, as an Interest bearing advance for mobilization, when the Contractor submits a guarantee in accordance with this Sub-Clause. The total advance payment, the number and timing of instalments (if more than one), and the applicable currencies and proportions, shall be as stated in the Contract Data.</p> <p>Unless and until the Employer receives this guarantee, or if the total advance payment is not stated in the Contract Data, this Sub-Clause shall not apply.</p> <p>The Engineer shall issue an interim payment certificate for the first installment of mobilization advance after receiving an application for advance payment (under sub clause 37.1/PCC [Application for Interim Payment Certificates]) and after the Employer receives (i) the Performance Security in accordance with New-Clause 4.19/PCC [Performance Security] and (ii) a guarantee in amounts and currencies equal to the advance payment plus 10%. The next installment shall be released only when the contractor submits statement of having utilized the previous installment of mobilization advance and the Employer is satisfied that the utilization has been done in purposeful manner.</p> <p>Mobilization advance payment: Comprises of the percentage of Accepted Contract Amount payable in the currencies and proportions in which the Accepted Contract Amount is payable and in installments as mentioned below;</p> <table border="1" data-bbox="454 1518 1449 1664"> <thead> <tr> <th data-bbox="454 1518 1051 1574">Mobilisation Advance</th> <th data-bbox="1051 1518 1449 1574">Instalments</th> </tr> </thead> <tbody> <tr> <td data-bbox="454 1574 1051 1664">As per request of the Contractor subject to a maximum of 5%</td> <td data-bbox="1051 1574 1449 1664">Two Equal</td> </tr> </tbody> </table> <p>Timing of Mobilization Advance Payment: First Installment within 21 (Twenty-one) days from the date of receipt of Bank guarantee acceptable to Employer.</p> <p>Second Installment shall be released only when the contractor submits statement of having utilized the First Installment of mobilization Advance and the Employer is satisfied that the utilization has been done in purposeful manner. This shall be released within 21 days from the date of receipt of Bank guarantee acceptable to the Employer.</p>	Mobilisation Advance	Instalments	As per request of the Contractor subject to a maximum of 5%	Two Equal
Mobilisation Advance	Instalments				
As per request of the Contractor subject to a maximum of 5%	Two Equal				

Interest on Advance Payment: At the rate of SBI MCLR+2% simple interest per annum on reducing balances

42.2 Advance against Plant and Machinery

This advance is payable in Indian Rupees/respective currencies as quoted in the Tender and accepted by the Employer against plant, equipment and machinery, provided the same have reached the site, or in the case of new items meant specifically for the works, firm purchase order has been placed and the invoices received. The plant and machinery shall be valued by the Engineer as follows:

(a) New items: 80% of purchase price

(b) Used items in working order: 80% of the depreciated value as assessed by the Engineer

(c) Items valued at less than Rs. 1,000,000 (Rs. One million) per unit: Not to be considered

The total advance for Plant and Machinery shall be limited to 5% of the Contract Price and will carry an interest rate of SBI MCLR +2% simple interest per annum on reducing balances. It will be paid against submission of Bank Guarantees for 110% of advance value for each stage of advance to be given by each member of the consortium/JV in proportion to their participation as per format given in section 10: Formats, from an Indian Schedule bank (excluding Cooperative Banks) or from a schedule Foreign Bank as defined in Section 2(e) of RBI Act 1934 read with Second Schedule. All bank Guarantees should be payable in Bangalore at the designated branch.

The Contractor should give an Undertaking that "No advance/loan has been taken against the subject plant & machinery from any other individual/financial institution/organisation etc." If a wrong/false undertaking is given, all the BGs can be forfeited and the contract is liable for termination under clause 49 of CC/PCC.

The Advance against Plant and Machinery will be paid within 30 days after receipt of the Contractor's written request by the Employer which is recommended by the Engineer and submission of Bank Guarantees for procurement of plant and machinery.

Wherever Bank Guarantee or any other instrument is to be extended or fresh BG to be obtained, the cost towards getting extension of BG or fresh BG and other incidental charges will be on Contractor's account

The Contractor;

(i) Shall submit the invoice and RC book (wherever applicable) in original, at the time of obtaining advance amount.

(ii) Shall furnish all four Bank Guarantees one time as per Condition of Contract.

(iii) Shall execute an Indemnity bond in favour of an Employer as against Third Party claim.

(iv) Shall not seek the possession of machinery brought to the site till the Advance obtained from Employer is fully settled.

The contractor should ensure that in the case of "Machinery and Equipment Advance" insurance and hypothecation in favour of the Employer should be done. The contractor should submit the proof of document related to Insurance and Hypothecation to the Engineer who will certify that the insurance and hypothecation to the Employer has been done in proper manner.

Employer shall be the sole custodian of the entire plant and machinery whenever the advance amount is given to the contractor and the same shall remain in the custody of Employer, till the Advance obtained from Employer, is fully settled.

The machinery and equipment brought to the site shall be exclusively intended for the execution of the work of Employer and shall not be removed without the consent of the Engineer.

The Contractor shall indemnify and hold harmless, the Employer against all actions, suits, proceedings, claims, damages, losses, expenses, demands pertaining to Advance amount towards plant and machinery.

The Contractor shall not remove any Equipment or Machinery from the site without the prior permission of the Engineer.

The contractor;

a) Shall not mortgage/create charge/hypothecate/encumber, in any way the machineries and equipment brought to site from the amounts advanced by Employer and shall give an undertaking in writing to that effect in favour of Employer.

b) Shall not sell or alienate any part/portion of machinery and equipment without the consent of Employer.

c) In the event of any such sale/alienation of any portion or part of machinery, Employer shall hold First Charge and the proceeds of such sale or alienation shall be appropriated towards the loan/ credit/ advance in respect of plant and machinery brought to the site by contractor.

42.3 Guarantees

Advances as mentioned in sub-clauses 42.1/PCC above, shall be payable against acceptable Bank Guarantees from banks as specified in New-clause 4.19/PCC. The guarantees shall be in the form as given in Section 10 (Contract Forms) or in another form approved by the Employer. The Contractor shall ensure that the guarantees are valid and enforceable until the advance amount paid as has been repaid, but its amount may be progressively reduced by the amount repaid by the Contractor as indicated in the Payment Certificates. If the terms of the guarantee specify its expiry date, and the advance payment has not been repaid by the date 28 days prior to the expiry date, the Contractor shall extend the validity of the guarantee until the advance payment has been repaid.

42.4 Recovery of Advances

	<p>Unless stated otherwise in the Contract Data, the advance payment shall be repaid through percentage deductions from the interim payments determined by the Engineer in accordance with Sub-Clause 37.3/PCC [Issue of Interim Payment Certificates], as follows:</p> <p>(a) deductions shall commence in the next interim Payment Certificate following that in which the total of all certified interim payments (excluding the advance payment) exceeds 15 percent of the Accepted Contract Amount Less Provisional Sums or passage of six months from the date of release of first advance payment, whichever is earlier; and</p> <p>(b) deductions shall be made for accrued interest on the advance up to the month and advance at the rate stated in the Contract Data of the amount of each Interim Payment Certificate (excluding the advance payment and deductions and repayments of retention) in the currencies and proportions of the advance payment until such time as the advance payment and accrued interest has been repaid; provided that the advance payment and accrued interest shall be completely repaid prior to the time when 85 percent of the Accepted Contract Amount has been certified for payment. If the amount of interim payment certificate is not sufficient for recovery of accrued interest or in the opinion of the Employer satisfactory progress is not being achieved by the contractor, then the contractor will have to deposit the accrued interest and return the mobilisation advance in part or in full as demanded by the Employer, failing which Employer shall have the right to encash the Bank Guarantee(s)</p> <p>The contractor shall always have the option to start repayment earlier and/or to complete the repayment earlier than the due date.</p> <p>If the advance payment has not been repaid prior to the issue of the Taking-Over Certificate for the Works or prior to termination under Clause 49.0/PCC [Termination by Employer] or New-Clause 8/PCC [Force Majeure] (as the case may be), the whole of the balance then outstanding shall immediately become due and payable by the Contractor to the Employer.</p> <p>42.5 Repayment rate of Advance payment: 10% (Ten percent) of the amount of each running account bill payment.</p> <p>42.6 Advances to be Used only for this Work</p> <p>The advances shall be used by the Contractor strictly for the purpose of the Contract, and for the purpose for which they are paid. Under no circumstances, shall the advances be diverted for other purposes. Any such diversion shall be construed as a breach of the Contract and the Contractor shall be asked to return the advance at once and pay interest at 15% per annum till the advance is recovered back from him. The Contractor shall return the advance and pay the interest in one go without demur.</p> <p>Employer retains the right for any other remedy prescribed for breach of Contract in this regard.</p> <p>The Contractor, if required by the Engineer shall provide the details of utilization of Mobilization advance.</p>
Clause 46/CC	<p>The clause 46 of CC replaced with the following paras.</p> <p>Employer Taking Over</p>

46.1 Taking Over of the Works and Sections

The Employer shall take over the Site and the Works within after issuing a certificate of Completion. Except as stated in Sub-Clause 30.5/PCC [Failure to Pass Tests on Completion], the Works shall be taken over by the Employer/Railway when (i) the Works have been completed in accordance with the Contract, including the matters described in Sub-Clause 26.4/PCC [Time for Completion] and except as allowed in sub-paragraph (a) below, and (ii) a Taking-Over Certificate for the Works has been issued, or is deemed to have been issued in accordance with this Sub-Clause.

The Contractor may apply by notice to the Engineer for a Taking-Over Certificate not earlier than 14 days before the Works will, in the Contractor's opinion, be complete and ready for taking over. If the Works are divided into Sections, the Contractor may similarly apply for a Taking-Over Certificate for each Section.

In case the works are to be taken over in accordance with sub-clause 30.6/PCC, the completed works shall be taken over by the Zonal Railway with the procedure specified by the Engineer.

The Engineer shall, within 28 days after receiving the Contractor's application:

- (a) issue the Taking-Over Certificate to the Contractor, stating the date on which the Works or Section were completed in accordance with the Contract, except for any minor outstanding work and defects which will not substantially affect the use of the Works or Section for their intended purpose (either until or whilst this work is completed and these defects are remedied); or
- (b) reject the application, giving reasons and specifying the work required to be done by the Contractor to enable the Taking-Over Certificate to be issued. The Contractor shall then complete this work before issuing a further notice under this Sub-Clause.

If the Engineer fails either to issue the Taking-Over Certificate or to reject the Contractor's application within the period of 28 days, and if the Works or Section (as the case may be) are substantially in accordance with the Contract, the Taking-Over Certificate shall be deemed to have been issued on the last day of that period.

46.2 Taking Over of Parts of the Works

The Engineer may, at the sole discretion of the Employer, issue a Taking-Over Certificate for any part of the Permanent Works.

The Employer shall not use any part of the Works (other than as a temporary measure which is either specified in the Contract or agreed by both Parties) unless and until the Engineer has issued a Taking-Over Certificate for this part. However, if the Employer does use any part of the Works before the Taking-Over Certificate is issued:

- (a) the part which is used shall be deemed to have been taken over as from the date on which it is used,
- (b) the Contractor shall cease to be liable for the care of such part as from this date, when responsibility shall pass to the Employer, and
- (c) if requested by the Contractor, the Engineer shall issue a Taking-Over Certificate for this part.

After the Engineer has issued a Taking-Over Certificate for a part of the Works, the Contractor shall be given the earliest opportunity to take such steps as may be

necessary to carry out any outstanding Tests on Completion. The Contractor shall carry out these Tests on Completion as soon as practicable before the expiry date of the relevant Defects Notification Period.

If the Contractor incurs Cost as a result of the Employer taking over and/or using a part of the Works, other than such use as is specified in the Contract or agreed by the Contractor, the Contractor shall (i) give notice to the Engineer and (ii) be entitled subject to Sub-Clause 4.1/SCC [Contractor's Claims] to payment of any such Cost, which shall be included in the Contract Price. After receiving this notice, the Engineer shall proceed in accordance with New—Clause 3.5/PCC [Determinations] to agree or determine this Cost and profit.

If a Taking-Over Certificate has been issued for a part of the Works (other than a Section), the delay damages thereafter for completion of the remainder of the Works shall be reduced. Similarly, the delay damages for the remainder of the Section (if any) in which this part is included shall also be reduced. For any period of delay after the date stated in this Taking-Over Certificate, the proportional reduction in these delay damages shall be calculated as the proportion which the value of the part so certified bears to the value of the Works or Section (as the case may be) as a whole. The Engineer shall proceed in accordance with New-Clause 3.5/PCC [Determinations] to agree or determine these proportions. The provisions of this paragraph shall only apply to the daily rate of delay damages under Sub-Clause 26.8/PCC [Delay Damages], and shall not affect the maximum amount of these damages

46.3 Interference with Tests on Completion

If the Contractor is prevented, for more than 14 days, from carrying out the Tests on Completion by a cause for which the Employer/Engineer/other Contractors of the Employer, are responsible, the Employer shall be deemed to have taken over the Works or Section (as the case may be) on the date when the Tests on Completion would otherwise have been completed.

The Engineer shall then issue a Taking-Over Certificate accordingly, and the Contractor shall carry out the Tests on Completion as soon as practicable, before the expiry date of the Defects Notification Period. The Engineer shall require the Tests on Completion to be carried out by giving 14 days' notice and in accordance with the relevant provisions of the Contract.

If the Contractor suffers delay and/or incurs Cost as a result of this delay in carrying out the Tests on Completion, the Contractor shall give notice to the Engineer and shall be entitled subject to Sub-Clause 4.1/SCC [Contractor's Claims] to:

- (a) an extension of time for any such delay, if completion is or will be delayed, under Sub-Clause 26.5/PCC [Extension of Time for Completion], and
- (b) payment of any such Cost, which shall be included in the Contract Price.

After receiving this notice, the Engineer shall proceed in accordance with New-Clause 3.5/PCC [Determinations] to agree or determine these matters.

46.4 Surfaces Requiring Reinstatement

Except as otherwise stated in a Taking-Over Certificate, a certificate for a Section or part of the Works shall not be deemed to certify completion of any ground or other surfaces requiring reinstatement.

<p>Clause-49/CC</p>	<p>The following paras are added to the existing CC Clauses.</p> <p>TERMINATION BY EMPLOYER</p> <p>49.6 Notice to Correct</p> <p>If the Contractor fails to carry out any obligation under the Contract as mentioned below, but not limited to the obligations mentioned herein below, the Engineer/ Employer may serve the contractor with a 14 days' notice in writing calling upon the Contractor to make good the failure and to remedy it. If the Contractor;</p> <ul style="list-style-type: none"> (a) fails to comply with New-Clause 4.19/PCC [Performance Security], (b) abandons the Works or otherwise plainly demonstrates the intention not to continue performance of his obligations under the Contract, (c) without reasonable excuse fails to: <ul style="list-style-type: none"> (i) proceed with the Works in accordance with Clause 26/CC/PCC [Commencement, Delays and Suspension], or (ii) comply with a notice issued under New-Clause 5.5 [Rejection] or New-Clause 5.6/PCC [Remedial Work], within 28 days after receiving it, or (iii) adhere to the agreed programme of work / activity on the critical path, by a margin of 10% of the stipulated period, or (iv) take steps to deploy competent and adequate number of personnel, and equipment to achieve progress as per agreed programme or (v) adhere to the instructions of Engineers/Employer persistently or (vi) comply any provision of the contract or (vii) provide the Engineer/Employer or their representative proper facilities for inspecting the works or any part thereof as required, under New-Clause 5.3/PCC (Inspection) and New-clause 5.4/PCC (Testing). (d) subcontracts the whole or major part of the Works or assigns the Contract without prior written consent of the Employer., <p>If the Contractor does not, within 14 days of receipt of notice under this sub-clause, proceed to make good his default in so far as the same is capable of being made good and carry on the work of complying with such direction as contained in the notice under sub clause 49.6/PCC to the entire satisfaction of the Engineer/Employer, the Employer shall be entitled to take action under sub-clause 49.6/PCC, 49.7/PCC below,</p> <p>In case of Contractor's repeated failure to adhere to the agreed program, and whereas the contractor has been served with a Notice to Correct under Clause 49.6 of PCC, if the Contractor approaches K-RIDE with a revised program with specific monthly physical and financial targets along with the proposal to deploy matching inputs in the form of manpower and other resources to the satisfaction of the Employer, then the Employer may consider whether to proceed with termination of the contract under Clause 49.7/PCC or to continue with the contract. However, the request to continue with the contract shall only be considered if the Contractor supports his earnestness to adhere to the revised program by submitting additional Performance Security in the form of Bank Guarantee(s) of specified number and value as decided by the Employer (total value of which will not exceed 10% of the contract price). The encashment of</p>
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these additional Bank Guarantee(s) shall be linked with the non-achievement of agreed physical/financial targets agreed upon by the Contractor and the Employer.

In case the Contractor's failure is limited to only some of the works, and in response to Notice to Correct under Clause 49.6 of PCC, the contractor approaches the Employer that such works may be offloaded from him and got executed through another agency and additional cost incurred, if any, should be recovered from his dues, the Employer, on being convinced that the anticipated additional cost for such works will not be substantial and can be recovered from the dues of the contractor and that such offloading will help in improving the overall progress of the project, may

agree to such offloading without any repercussion on the performance security and/or additional bank guarantees, if any, submitted by the contractor. However, the Employer will not be under any compulsion to agree to such a request. The Contractor shall be informed of the LOA issued to other agency(ies) for such works.

In case the Contractor does not approach the employer for offloading but the Employer is convinced that:

- (i) offloading of some works will help in improving the progress of the project;
- (ii) termination/part termination of the contract at this stage will not be in the interest of the project;
- (iii) the anticipated additional cost for such works will not be substantial and can be recovered from the dues of the Contractor;

The Employer may issue 7 days' notice to the Contractor stating the resources required to be deployed against each work. If the Contractor fails to deploy the required resources as indicated in the notice, the employer shall offload such works and proceed with getting the works executed through other agency(ies). The Contractor shall be informed of the LOA issued to other agency(ies) for such works.

Offloading under the sub clause 49.6/PCC shall be without any repercussion on the performance security and/or additional bank guarantees, if any, submitted by the contractor. The Contractor would have no future claim on this account and the extra expenditure so incurred, if any, by the Employer in getting the offloaded work done, shall be recovered from subsequent payment certificates or any other dues of the Contractor

49.7 Termination by Employer

The Employer shall be entitled to terminate the Contract as a whole or any part or parts (as may be specified in the Notice of Termination under any of the above Sub-Clause issue) if the Contractor:

- (a) fails to comply with the directions contained in the notice under Sub-Clause 49.6/PCC [Notice to Correct],
- (b) becomes bankrupt or insolvent, goes into liquidation, has a receiving or administration order made against it by Court or Statutory Authority him, compounds with his creditors, or carries on business under a 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, or
- (c) gives or offers to give (directly or indirectly) to any person any bribe, gift, gratuity, commission or other thing of value, as an inducement or reward:

	<p>(i) for doing or forbearing to do any action in relation to the Contract, or</p> <p>(ii) for showing or forbearing to show favour or disfavour to any person in relation to the Contract,</p> <p>or if any of the Contractor's Personnel, agents or Subcontractors gives or offers to give (directly or indirectly) to any person any such inducement or reward as is described in this sub-paragraph (c). However, lawful inducements and rewards to Contractor's Personnel shall not entitle termination</p> <p>In any of these events or circumstances, the Employer may, by Notice Terminate the contract with immediate effect.</p> <p>The Employer's election to terminate the Contract shall not prejudice any other rights of the Employer, under the Contract or otherwise.</p> <p>The Contractor shall remove all his plants and machinery from the site then leave the Site and deliver any required Goods, all Contractors' Documents, and other design documents made by or for him, to the Engineer within 7 days from the issue of Notice of Termination, failing which Delay Damages as prescribed for delay in completion of works shall be imposed as per provision of clause 26.8/PCC However, the Contractor shall use his best efforts to comply immediately with any reasonable instructions included in the notice of Termination (i) for the assignment of any subcontract, and (ii) for the protection of life or property or for the safety of the Works.</p> <p>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 for completing the work.</p> <p>49.8 Valuation at Date of Termination</p> <p>As soon as practicable after a notice of termination under Sub-Clause 49.7/PCC [Termination by Employer] has taken effect, the Engineer shall proceed in accordance with Sub-Clause 3.5/PCC [Determinations] to agree or determine the value of the Works, Goods and Contractor's Documents, and any other sums due to the Contractor for work executed in accordance with the Contract. For this purpose, the contractor shall be notified the date for witnessing of measurements and handing over of the materials for which contractor has already been paid. In case the contractor fails to attend or send a representative even after such notice, the Engineer shall ex parte proceed with measurements of the works executed and taking over of plants and materials etc. for which payment has already been made to the contractor, which shall be treated as final.</p> <p>49.9 Payment after Termination</p> <p>After a notice of termination under Sub-Clause 49.7/PCC [Termination by Employer] has taken effect, the Employer may:</p> <p>(a) proceed in accordance with New-Clause 2.4/PCC [Employer's Claims],</p> <p>(b) encash the Performance Guarantee and forfeit the Performance Security:</p> <p>i. In full including additional Performance Guarantee amount if any taken in terms of ITT and not due for release on the date of issue of termination letter, in case of termination of the contract as a whole; or</p>
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ii. in part/parts proportionate to the contract price of the bill/schedule to which the terminated part of work belongs i.e.

$$P = (A \times B) \div C \text{ where,}$$

P = Proportionate Bank Guarantee Amount

A = Contract Price of the particular bill/schedule to which the terminated part of work belongs

B = Performance Guarantee amount in terms of CC New- clause 4.19/PCC

C = Total Contract Price

Plus, additional Performance Guarantee amount if any taken in terms of ITT and not due for release on the date of issue of termination letter against that particular bill/Schedule to which the terminated part of the work belongs in case of termination in part/parts.

(c) release any payment due to the contractor for works executed prior to termination and evaluation under clause 49.8/PCC (valuation at date of termination, however, if by this time the Contractor has failed to make a payment due to the Employer, the same will be deducted from the payment due and any balance remaining shall then be paid to the Contractor.)

49.10 Employer's Entitlement to Termination for Convenience

The Employer shall be entitled to terminate the Contract, at any time for the Employer's convenience, by giving notice of such termination to the Contractor. The termination shall take effect 28 days after the later of the dates on which the Contractor receives this notice or the Employer returns the Performance Security. The Employer shall not terminate the Contract under this Sub-Clause in order to execute the Works himself or to arrange for the Works to be executed by another contractor or to avoid a termination of the Contract by the Contractor.

After this termination, the Contractor shall proceed in accordance with the relevant clause and shall be paid in accordance with New-Clause 8/PCC [Payment and Release in case of Optional Termination].

49.11 Payment on Termination

After termination under Sub-Clause-49.7/PCC the Employer shall return the Performance Security, and shall pay the Contractor an amount calculated and certified in accordance with the following conditions:

- A. The value of approved materials actually brought to the site and reasonably required to execute the works during next three months, as per approved programme, and
- B. Value of work completed up to date by the Contractor at rates specified in the Contract, after taking into account any deductions, retentions, and setoff.
- C. In addition, a sum not exceeding 2% (two percent) of the value of the work remaining incomplete on the date of Termination notice taking effect.

The payment as above are full compensation for termination under this clause and the Contractor has no claim for damages or other entitlements whether under the contract or otherwise.

In case of termination/ foreclosure of the Contract under whatsoever circumstances, any remaining tools, plants, equipment's and surplus materials of the Employer with the Contractor will be returned to the Employer at Employer's depot at the Contractor's cost. In case of the failure of the Contractor to do so, the Employer will be entitled to recover their cost from the Contractor from the amount becoming due to the Contractor or from any other amount due in any other contracts.

The decision of the Engineer of the amount to be recovered will be final decision and full credit at rates initially charged to the Contractor shall be allowed for such materials. Similarly, the Employer shall be entitled to recover the cost of the unreturned material, plants, equipment and tools from the Contractor, where such material have been supplied free of cost and plants, equipment and tools, free of cost or on lease basis to the Contractor as stipulated in the Contract.

49.12 Survival

Termination of this Contract

- a. shall not relieve the Contractor or the Employer of any obligations already incurred hereunder which expressly or by implication survives Termination hereof and
- b. except as otherwise provided in any provision of this Contract expressly limiting the liability of either party, shall not relieve either party of any obligations or liabilities for loss or damage to the other Party arising out of or caused by acts or omissions of such Party prior to the effectiveness of such Termination or arising out of such Termination

49.13 Corrupt or Fraudulent Practices

If the Employer determines that the Contractor has engaged in corrupt, fraudulent, collusive or coercive practices, in competing for or in executing the Contract, then the Employer may, after giving 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 49 CC/PCC shall apply as if such expulsion had been made under Sub-Clause 49.7/PCC.

For the purposes of this Sub-Clause:

- (a) "corrupt practice" means the offering, giving, receiving of soliciting of anything of "value to influence the action of a public official in the procurement process or in the Contract execution.
- (b) "fraudulent practice" means a misrepresentation of facts in order to influence a procurement process or the execution of the 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
- (c) "collusive practice" means a scheme or arrangement between two or more bidders, with or without the knowledge of the Employer, designed to establish bid prices at artificial, non-competitive levels.
- (d) "coercive practice" means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in the procurement process or affect the execution of a contract.

<p>Clause 1/SCC</p>	<p>The following New-paras are added to the Existing SCC Clauses.</p> <p>1.1 Engagement of Staff and Labour</p> <p>Except as otherwise stated in the Specification, the Contractor shall make arrangements for the engagement of all staff and labour, local or otherwise, and for their payment, housing, feeding and transport.</p> <p>The Contractor is encouraged, to the extent practicable and reasonable, to employ staff and labor with appropriate qualifications and experience from sources within the Country.</p> <p>1.2 Rates of Wages and Conditions of Labour</p> <p>The Contractor shall pay rates of wages, and observe conditions of labour, which are not lower than those established for the trade or industry where the work is carried out. If no established rates or conditions are applicable, the Contractor shall pay rates of wages and observe conditions which are not lower than the general level of wages and conditions observed locally by employers whose trade or industry is similar to that of the Contractor.</p> <p>If the Employer is obliged to provide amenities or arrange payment of wages to contract labour employed by the contractor either directly or through sub-contractor under the contract on account of failures on the part the contractor to provide the amenities and / or arrange payment of wages to the contract labour as required of him under the provision of the applicable acts / rules made there under, the Engineer/Employer shall be at liberty without prejudice to the rights of Engineer/Employer under Section 20(2) and 21(4) of the Contract Labour (Regulation and Abolition) Act 1970 to recover the whole or part of the expenditure so incurred on the wages so paid by the Engineer/Employer/Railway from the security deposit and/or from any sum or sums due to the Contractor whether under this contract or any other contract.</p> <p>The Contractor shall inform the Contractor's Personnel about their liability to pay personal income taxes in the Country in respect of such of their salaries, wages, allowances, and any benefits as are subject to taxes under the Laws of the Country 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.</p> <p>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 there-under, regulation or notifications including amendment. 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 Engineer/Employer shall have the right to deduct any money due to the contractor including his amount of performance security. The Employer/Engineer 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.</p> <p>The employees of the Contractor and the Sub-Contractor in no case shall be treated as the employees of the Employer at any point of time.</p> <p>The Contractor shall duly comply with the provisions of the Apprentices Act 1961 (III of 1961), the rules made there under and the orders that may be issued from time to time</p>
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under the said Act and the said Rules and on his failure or neglect to do so he shall be subject to all liabilities provide by the said Act and said Rules.

The Contractor and his Sub Contractors shall comply with all applicable Labour Laws, and should not employ Child Labour for construction and maintenance activities. The Contractor shall provide appropriate facilities for children in Construction Camp sites.

The Contractors shall not differentiate wages between men and women for work of equal value

1.3 Persons in the Service of Employer

The Contractor shall not recruit, or attempt to recruit, staff and labour from amongst persons in the service of the Employer or the Engineer

1.4 Labour Laws

The Contractor shall comply with all the relevant Labour Laws applicable to the Contractor's Personnel, including Laws relating to their employment, health, safety, welfare, immigration, and emigration, and shall allow them all their legal rights. The Contractor and his sub-contractors shall be responsible to ensure at his own cost, compliance to all laws, bye-laws, rules and regulations for the time being in force pertaining to the employment of local or imported labour and shall take all necessary precautions to ensure and preserve the health and safety of all staff employed directly or through sub-contractors or petty contractors on the works which shall include all the acts listed in Appendix – 1 but not limited to the same.

The Contractor shall require his employees to obey all applicable Laws, including those concerning safety at work.

During continuance of the Contract, the Contractor and his Sub-Contractors shall abide at all times by all existing labor enactments and rules made thereunder, regulations, notifications and bye laws of the State or Central government or local authority and any other labor laws (including rules), regulations, bye laws that may be passed or notification that may be issued under any labor law in future either by the State or the Central Government or the local authority. Salient features of some of the major labor laws that are applicable to construction industry are given in Appendix 1 to these Conditions of Contract

1.5 Working Hours

No work shall be carried out on the Site on locally recognized days of rest, or outside the normal working hours stated in the Contract Data, unless:

- (a) otherwise stated in the Contract,
- (b) the Engineer gives consent, or
- (c) the work is unavoidable, or necessary for the protection of life or property or for the safety of the Works, in which case the Contractor shall immediately advise the Engineer.
- (d) The Contractor, generally will have to carry out work during night hours also and in shifts unless specifically provided otherwise in the Contract. No increase in rates or extra payments shall be admissible for night work. Wherever night working is carried out by Contractor, temporary lighting arrangements as per approved layout shall be provided, installed, maintained for the duration of the contract and removed after completion of work. Flashing lights to warn the traffic on roads shall be used

	<p>at all times on all obstructions. No extra payment will be made for the provision of temporary lighting, flashing lights and for maintenance. It is to be noted that the works are being undertaken in an urban area.</p> <p>(e) Should there be complaints received by members of the public regarding excessive noise or vibration, etc. especially at night, and if such complaints are valid, then the contractor shall take remedial measures to prevent such nuisance. No extra payment will be made to the contractor for the provision of such measures.</p> <p>(f) Working hours during the Defect liability period will be curtailed when certain system become operational</p> <p>1.6 Facilities for Staff and Labour</p> <p>Except as otherwise stated in the Specification, the Contractor shall provide and maintain all necessary accommodation and welfare facilities for the Contractor's Personnel. The Contractor shall also provide facilities for the Employer's Personnel as stated in the Specification.</p> <p>The Contractor shall not permit any of the Contractor's Personnel to maintain any temporary or permanent living quarters within the structures forming part of the Permanent Works.</p> <p>1.7 Health and Safety</p> <p>The Contractor shall at all times take all reasonable precautions to maintain the health and safety of the Contractor's Personnel. In collaboration with local health authorities, the Contractor shall ensure that medical staff, first aid facilities, sick bay and a standing arrangement for ambulance service are available at a phone call at all times at the Site and at any accommodation for Contractor's and Employer's Personnel, and that suitable arrangements are made for all necessary welfare and hygiene requirements and for the prevention of epidemics.</p> <p>In the event of any outbreak of illness of an epidemic nature, the Contractor shall comply with and carry out such regulations, orders and requirements as may be made by the Government or the local medical or sanitary authorities, for the purpose of dealing with and overcoming the same. The Contractor shall appoint an accident prevention officer at the Site, responsible for maintaining safety and protection against accidents. This person shall be qualified for this responsibility, and shall have the authority to issue instructions and take protective measures to prevent accidents. Throughout the execution of the Works, the Contractor shall provide whatever is required by this person to exercise this responsibility and authority.</p> <p>The Contractor shall send, to the Engineer, details of any accident as soon as practicable after its occurrence.</p> <p>HIV-AIDS Prevention. The Contractor shall conduct an HIV-AIDS awareness programme via an approved service provider, and shall undertake such other measures as are specified in this Contract to reduce the risk of the transfer of the HIV virus between and among the Contractor's Personnel and the local community, to promote early diagnosis and to assist affected individuals</p> <p>Epidemics</p> <p>In the event of any outbreak of illness of an epidemic nature, the Contractor shall comply with and carry out such regulations, orders and requirements as may be made by the</p>
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Government or the local medical or sanitary authorities, for the purpose of dealing with and overcoming the same.

Records of Safety and Health

The Contractor shall maintain such records and make such reports concerning safety, health and welfare of persons and damage to property as the Engineer may from time to time prescribe.

Submission of Returns

The contractor shall be responsible for timely submission of all returns and statements to the concerned authorities in full compliance of all rules, bye-laws and regulations for the time being in force.

The Contractor shall throughout the contract (including the Defects Notification Period):

- (i) conduct Information, Education and Consultation Communication (IEC) campaigns, at least every other month, addressed to all the Site staff and labor (including all the Contractor's employees, all Sub-Contractors and Consultants' employees, and all truck drivers and crew making deliveries to Site for construction activities) and to the immediate local communities, concerning the risks, dangers and impact, and appropriate avoidance behavior with respect to of Sexually Transmitted Diseases (STD)—or Sexually Transmitted Infections (STI) in general and HIV/AIDS in particular;
- (ii) provide male or female condoms for all Site staff and labor as appropriate; and (iii) provide for STI and HIV/AIDS screening, diagnosis, counseling and referral to a dedicated national STI and HIV/AIDS program, (unless otherwise agreed) of all Site staff and labor.

The Contractor shall include in the program to be submitted for the execution of the Works under Sub-Clause 25.3 an alleviation program for Site staff and labour and their families in respect of Sexually Transmitted Infections (STI) and Sexually Transmitted Diseases (STD) including HIV/AIDS. The STI, STD and HIV/AIDS alleviation program shall indicate when, how and at what cost the Contractor plans to satisfy the requirements of this Sub-Clause and the related specification. For each component, the program shall detail the resources to be provided or utilized and any related sub-contracting proposed. The program shall also include provision of a detailed cost estimate with supporting documentation. Payment to the Contractor for preparation and implementation this program shall not exceed the Provisional Sum dedicated for this purpose.

1.8 Contractor's Superintendence

Throughout the execution of the Works, and as long thereafter as is necessary to fulfil the Contractor's obligations, the Contractor shall provide all necessary superintendence to plan, arrange, direct, manage, inspect and test the work.

Superintendence shall be given by a sufficient number of persons having adequate knowledge of the language for communications (defined in Sub-Clause 3/CC [Law and Language]) and of the operations to be carried out (including the methods and techniques required, the hazards likely to be encountered and methods of preventing accidents), for the satisfactory and safe execution of the Works.

The Contractor shall employ the key personnel named in the Schedule of Personnel as referred to in the Contract Data to carry out the functions stated in the Schedule or other personnel approved by the Engineer. The Engineer will approve any proposed

replacement of key personnel only if their qualifications, abilities and relevant experience are substantially equal to or better than those of the personnel listed in the Schedule.

The Contractor shall not employ any retired government Gazetted officer, who has either not completed one year after the date of retirement, or has not obtained permission to employment with the Contractor

1.9 Contractor's Personnel

The Contractor's Personnel shall be appropriately qualified, skilled and experienced in their respective trades or occupations. The Engineer may require the Contractor to remove (or cause to be removed) any person employed on the Site or Works, including the Contractor's Representative if applicable, who:

- (a) persists in any misconduct or lack of care,
- (b) carries out duties incompetently or negligently,
- (c) fails to conform with any provisions of the Contract, or
- (d) persists in any conduct which is prejudicial to safety, health, or the protection of the environment.

If the Engineer asks the Contractor to remove a person who is a member of the Contractor's staff or his work force stating the reasons, the Contractor shall ensure that the person leaves the Site within seven (7) days and has no further connection with the work in the Contract. The replacement person shall be appointed within fourteen (14) days of the notification by the Engineer.

A reasonable proportion of the Contractor's Superintending Staff shall have a working knowledge of the English language 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. If appropriate, the Contractor shall then appoint (or cause to be appointed) a suitable replacement person

1.10 Records of Contractor's Personnel and Equipment

The Contractor shall submit, to the Engineer, details showing the number of each class of Contractor's Personnel and of each type of Contractor's Equipment on the Site. Details shall be submitted each calendar month, in a form approved by the Engineer, until the Contractor has completed all work which is known to be outstanding at the completion date stated in the Taking-Over Certificate for the Works

1.11 Disorderly Conduct

The Contractor shall at all times take all reasonable precautions to prevent any unlawful, riotous or disorderly conduct by or amongst the Contractor's Personnel, and to preserve peace and protection of persons and property on and near the Site

1.12 Foreign Personnel

The Contractor may bring in to the country any foreign personnel who are necessary for the execution of the Works to the extent allowed by the applicable Laws. The Contractor shall ensure that these personnel are provided with the required residence visas and work permits. The Employer will, without any financial liability, if requested by the Contractor, use his best endeavours in a timely and expeditious manner to

assist the Contractor in obtaining any local, state, national, or government permission required for bringing in the Contractor's personnel.

The Contractor shall be responsible for the return of these personnel to the place where they were recruited or to their domicile. In the event of the death in the Country of any of these personnel or members of their families, the Contractor shall similarly be responsible for making the appropriate arrangements for their return or burial. Contractor shall also be responsible for any legal liabilities during their stay.

1.13 Supply of Foodstuffs

The Contractor shall arrange for the provision of a sufficient supply of suitable food as may be stated in the Specification at reasonable prices for the Contractor's Personnel for the purposes of or in connection with the Contract

1.14 Supply of Water

The Contractor shall, having regard to local conditions, provide on the Site an adequate supply of drinking and other water for the use of the Contractor's Personnel

1.15 Measures against Insect and Pest Nuisance

The Contractor shall at all times take the necessary precautions to protect the Contractor's Personnel employed on the Site from insect and pest nuisance, and to reduce their danger to health. The Contractor shall comply with all the regulations of the local health authorities, including use of appropriate insecticide

The Contractor shall provide his staff and labour with suitable prophylactics for the prevention of malaria, and take steps to prevent the formation of stagnant pools of water. He shall comply with all the regulations of the local health authorities in these respects and shall in particular arrange to spray thoroughly with approved insecticides all buildings erected on the site such treatment shall be carried out at least once a year or as instructed by the Engineer. The Contractor shall warn his staff and labour of the dangers of diseases like Malaria, Filaria and other contagious diseases etc. and also regarding, Scorpions, Snakes, Wild animals etc. and preventive actions required to be taken by the labour and staff.

1.16 Alcoholic Liquor or Drugs

The Contractor shall not, otherwise than in accordance with the Laws of the Country, import, sell, give barter or otherwise dispose of any alcoholic liquor or drugs, or permit or allow importation, sale, gift barter or disposal thereto by Contractor's Personnel.

1.17 Arms and Ammunition

The Contractor shall not give, barter, or otherwise dispose of, to any person, any arms or ammunition of any kind, or allow Contractor's Personnel to do so.

1.18 Festivals and Religious Customs

The Contractor shall respect the Country's recognized festivals, days of rest and religious or other customs

1.19 Funeral Arrangements

The Contractor shall be responsible, to the extent required by local regulations, for making any funeral arrangements for any of his local employees who may die while engaged upon the Works.

1.20 Prohibition of Forced or Compulsory Labour

The contractor shall not employ "forced or compulsory labour" in any form. "Forced or compulsory labour" consists of all work or service, not voluntarily performed, that is extracted from an individual under threat of force or penalty.

1.21 Prohibition of Harmful Child Labour

The Contractor shall not employ any child to perform any work that is economically exploitative, or is likely to be hazardous to, or to interfere with, the child's education, or to be harmful to the child's health or physical, mental, spiritual, moral, or social development.

1.22 Employment Records of Workers

The Contractor shall keep complete and accurate records of the employment of labour at the Site. The records shall include the names, ages, genders, hours worked and wages paid to all workers. These records shall be summarized on a monthly basis and shall be available for inspection by the Engineer during normal working hours. These records shall be included in the details to be submitted by the Contractor under Sub-Clause 1.10/SCC of PCC [Records of Contractor's Personnel and Equipment].

In addition to the above, the Contractor shall register his firm/company etc. on website 'www.shramikkalyan.indianrailways.gov.in' and upload requisite details of labour and their payment in this portal. These details shall be available in public domain. The Registration/ updation on Portal shall be done as under:

- (a) Contractor shall apply for onetime registration of his company/firm etc. in the Shramikkalyan portal with requisite details subsequent to issue of Letter of Acceptance. Employer/Engineer shall approve the contractor's registration in the portal within 7 days of receipt of such request.
- (b) Contractor once approved by any Employer/Engineer, can create password with login ID (PAN No.) for subsequent use of portal for all LoAs issued in his favour.
- (c) The contractor once registered on the portal, shall provide details of his Letter of Acceptances (LoA) / Contract Agreements on shramikkalyan portal within 15 days of issue of any LoA for approval of concerned Employer/Engineer. Employer/Engineer shall update (if required) and approve the details of LoA filled by contractor within 7 days of receipt of such request.
- (d) After approval of LoA by Employer/Engineer, contractor shall fill the salient details of contract labours engaged in the contract and ensure updating of each wage payment to them on shramikkalyan portal on monthly basis.
- (e) It shall be mandatory upon the contractor to ensure correct and prompt uploading of all salient details of engaged contractual labour & payments made thereof after each wage period.

	<p>While processing payment of any 'Interim Payment Certificate' or 'Final Payment Certificate' or release of 'Advances' or 'Performance Guarantee / Security deposit', contractor shall submit a certificate to the Engineer or Engineer's representatives that "I have uploaded the correct details of contract labours engaged in connection with this contract and payments made to them during the wage period in EPFO portal till ____Month, ____Year."</p>
<p>Clause Price adjustment/ Contract data</p>	<p>1 PRICE VARIATION CLAUSE (PVC):</p> <p>1.1 Applicability: Price Variation Clause (PVC) shall be applicable only in those contracts where tender conditions specifically permit it. Materials supplied free of cost by Railway to the Contractors and any extra NS item(s) included in subsequent variation falling outside the purview of the Schedule of Items of tender shall fall outside the purview of Price Variation Clause. If, in any case, accepted offer includes some specific payment to be made to consultants or some materials supplied by Railway free or at fixed rate, such payments shall be excluded from the gross value of the work for the purpose of payment/recovery of price variation.</p> <p>1.2 Base Month: The Base Month for 'Price Variation Clause' shall be taken as month 28 days prior to opening of tender including extensions, if any, unless otherwise stated elsewhere. The quarter for applicability of PVC shall commence from the month following Base month. The Price Variation shall be based on the average Price Index of the quarter under consideration.</p> <p>1.3 VALIDITY:</p> <p>Rates accepted by Railway Administration shall hold good till completion of work and no additional individual claim shall be admissible except:</p> <ul style="list-style-type: none"> (a) Payment/recovery for increase/decrease in GST on works contract or imposition/removal of any tax/cess on Works Contract as per Clause 37, (b) Payment/recovery for overall market situation as per Price Variation Clause given hereunder. <p>1.4 Adjustment for variation in prices of material, labour, fuel, explosives, detonators, steel, concreting, ferrous, non-ferrous, insulators, zinc and cement shall be determined in the manner prescribed.</p> <p>1.5 Components of various items in a contract on which variation in prices be admissible, shall be Material, Labour, Fuel, Explosives & Detonators, Steel, Cement, Concreting, Ferrous, Non-ferrous, Insulator, Zinc, Erection etc. However, for fixed components, no price variation shall be admissible.</p>

1.6 The percentages of labour component, material component, fuel component etc. in various types of Engineering contracts shall be as under:

S	Component	E/Work & Minor Bridges Contracts, Ballast Supply Contracts, Tunneling Contracts (without explosive)	Tunneling Contracts (with explosives)	Major and Important Bridges Contracts	Building Contracts	Permanent Way linking Contracts (Manual)	Other Works Contracts
1	Labour Component	20	20	20	40	50	20
2	Other Material Components	10	15	30	35	5	20
3	Plant Machinery & Spares	30	15	20	5	15	30
4	Fuel & Lubricants Component	25	15	15	5	15	15
5	Fixed Component*	15	15	15	15	15	15
6	Detonators & Explosive Component	-	20	-	-	-	-

* It shall not be considered for any price variation.

Formulae: The Amount of variation in prices in several components (labour, material etc.) shall be worked out by the following formulae

$$(i) \quad L = W \times (LQ - LB) \times LC / LB \times 100$$

$$(ii) \quad M = W \times (MQ - MB) \times MC / MB \times 100$$

$$(iii) \quad F = W \times (FQ - FB) \times FC / FB \times 100$$

$$(iv) \quad E = W \times (EQ - EB) \times EC / EB \times 100$$

$$(v) \quad PM = W \times (PMQ - PMB) \times PMC / PMB \times 100$$

$$(vi) \quad S = SW \times (SQ - SB) / SB \quad (vii) \quad C = CV \times (CQ - CB) / CB$$

For Railway Electrification Works:

$$(vii) \quad T = [(CS - CO) / CO \times 0.4136] \times TC$$

$$(viii) \quad R = [(RT - RO) / RO + (ZT - ZO) / ZO \times 0.06] \times RC$$

	<p>(ix) $N = [(PT - PO) / PO] \times NC$</p> <p>(x) $Z = [(ZT - ZO) / ZO] \times ZC$</p> <p>(xi) $I = [(IT - IO) / IT] \times 85$</p> <p>Where,</p> <p>L Amount of price variation in Labour</p> <p>M Amount of price variation in Materials</p> <p>F Amount of price variation in Fuel E Amount of price variation in Explosives</p> <p>PM Amount of price variation in Manufacture of machinery for mining, Quarrying and Construction</p> <p>S Amount of price variation in Steel</p> <p>C Amount of price variation in Cement</p> <p>T Amount of price variation in Concreting</p> <p>R Amount of price variation in Ferrous Items</p> <p>N Amount of price variation in Non-Ferrous Items</p> <p>Z Amount of price variation in Zinc</p> <p>I Amount of price variation in Insulator</p> <p>Lc % of Labour Component</p> <p>Mc % of Material Component</p> <p>Fc % of Fuel Component</p> <p>EC % of Explosive Component</p> <p>PMC % of Manufacture of machinery for mining, Quarrying and Construction Component</p> <p>Tc % of Concreting Component</p> <p>Rc % of Ferrous Component</p> <p>Nc % of Non-Ferrous Component</p>
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Zc	% of Zinc Component
W	Gross value of work done by Contractor as per on-account bill(s) excluding cost of materials supplied by Railway at fixed price, minus the price values of cement and steel. This will also exclude specific payment, if any, to be made to the consultants engaged by Contractors (such payment shall be indicated in the Contractor's offer)
Lb	Consumer Price Index for Industrial Workers - All India: Published in R.B.I. Bulletin for the base period.
Lq	Consumer Price Index for Industrial Workers - All India: Published in R.B.I. Bulletin for the average price index of the 3 months of the quarter under consideration.
Mb	Wholesale Price Index: All commodities – as published in the R.B.I. Bulletin for the base period
Mq	Wholesale Price Index: All commodities – as published in the R.B.I. Bulletin for the average price index of the 3 months of the quarter under consideration
Fb	Wholesale Price Index for the group Fuel & Power as published in the R.B.I. Bulletin for the base period
Fq	Index Number of Wholesale Price Index – By Groups and Sub-Groups for the group Fuel & Power as published in the R.B.I. Bulletin for the average price index of the 3 months of the quarter under consideration
Eb	Index number of Monthly Whole Sale Price Index for the category 'Explosive' of (g).Manufacture of other chemical products under (J) MANUFACTURE OF CHEMICALS AND CHEMICAL PRODUCTS, published by Office of Economic Adviser, Govt. of India, Ministry of Commerce & Industry, Department of Industrial Policy & Promotion (DIPP), for the base period. EQ Index number of Monthly Whole Sale Price Index for the category 'Explosive' of (g).Manufacture of other chemical products under (J) MANUFACTURE OF CHEMICALS AND CHEMICAL PRODUCTS, published by Office of Economic Adviser, Govt. of India, Govt. of India, Ministry of Commerce & Industry, Department of Industrial Policy & Promotion (DIPP), for the average price index of 3 months of the quarter under consideration.
PM	Index number of Monthly Whole Sale Price Index for the category 'k. Manufacture of machinery for mining, quarrying and construction' under (R) MANUFACTURE OF MACHINERY AND EQUIPMENT, published by Office of Economic Adviser, Govt. of India, Ministry of Commerce & Industry, Department of Industrial Policy & Promotion (DIPP), for the base period.
PMQ	Index number of Monthly Whole Sale Price Index for the category 'k. Manufacture of machinery for mining, quarrying and construction' under (R) MANUFACTURE OF MACHINERY AND EQUIPMENT, published by Office of Economic Adviser, Govt. of India, Ministry of Commerce & Industry,

	Department of Industrial Policy & Promotion (DIPP), for the average price index of 3 months of the quarter under consideration.
Sw	Gross value of steel supplied by the Contractor as per the 'on-account' bill for the month under consideration
Sb	Index number of Monthly Whole Sale Price Index for the relevant category of mild steel item as mentioned in Clause 46A.9, published by Office of Economic Adviser, Govt. of India, Ministry of Commerce & Industry Department of Industrial Policy & Promotion (DIPP); for the base period.
Sq	Index number of Monthly Whole Sale Price Index for the relevant category of mild steel item as mentioned in Clause 46A.9, published by Office of Economic Adviser, Govt. of India, Ministry of Commerce & Industry Department of Industrial Policy & Promotion (DIPP); for the average price index of the 3 months of the quarter under consideration.
Cv	Value of Cement supplied by Contractor as per on account bill in the quarter under consideration.
Cb	Index No. of Wholesale Price Index of sub-group Cement, Lime & Plaster as published in RBI Bulletin for the base period.
Cq	No. of Wholesale Price Index of sub-group Cement, Lime & Plaster as published in RBI Bulletin for the average price index of the 3 months of the quarter under consideration.
Cs	RBI wholesale price index for Cement, Lime & Plaster for the month which is six months prior to date of casting of foundation.
Co	RBI wholesale price index for Cement, Lime & Plaster for the month which is one month prior to date of opening of tender.
Rt	IEEMA price index for Iron & Steel for the month which is two months prior to date of inspection of material.
Ro	IEEMA price index for Iron & Steel for the month which is one month prior to date of opening of tender.
PT	IEEMA price index for Copper wire bar for the month which is two months prior to date of inspection of material.
PO	IEEMA price index for Copper wire bar for the month which is one month prior to date of opening of tender.
ZT	IEEMA price index for Zinc for the month which is two months prior to date of inspection of material
ZO	IEEMA price index for Zinc for the month which is one month prior to date of opening of tender

- It RBI wholesale price index for the sub-group “other Portland and Ceramic product” for the month which is two months prior to date of inspection of material
- lo RBI wholesale price index for the sub-group “other Portland and Ceramic product” for the month which is one month prior to date of opening of tender
- 46A. 8 The demands for escalation of cost shall be allowed on the basis of provisional indices as mentioned above in Clause 46A.7. Any adjustment needed to be done based on the finally published indices shall be made as and when they become available.
- 46A.9: Relevant categories of steel for the purpose of operating Price Variation formula as mentioned in this Clause shall be as under:

SL	Category of Steel Supplied in Railway Work	Category of Steel Items as mentioned in Office of Economic Adviser, Govt. of India, Ministry of Commerce & Industry Department of Industrial Policy & Promotion (DIPP).
1.	Reinforcement bars and other rounds	'MS Bright Bars' individual commodity of group item (d) Mild Steel-Long Products under (N) MANUFACTURE OF BASIC METAL.
2.	All types and sizes of angles, channels and joists	'Angles, Channels, Sections, Steel' individual commodity of group item (d) Mild Steel- Long Products under (N) MANUFACTURE OF BASIC METAL.
3.	All types and sizes of plates	'e. Mild Steel – Flat Products' of (N) MANUFACTURER OF BASIC METAL.
4.	Any other section of steel not covered in the above categories and excluding HTS	Average of price for the 3 categories covered under SL 1, 2 & 3 above

46A.10 PRICE VARIATION DURING EXTENDED PERIOD OF CONTRACT

The price adjustment as worked out above, i.e. either increase or decrease shall be applicable upto the stipulated date of completion of work including the extended period of completion where such extension has been granted under Clause 17-A of the Standard General Conditions of Contract. However, where extension of time has been granted due to Contractor's failure under Clause 17-B of the Standard General Conditions of Contract, price adjustment shall be done as follows:

- a. In case the indices increase above the indices applicable to the last month of original completion period or the extended period under Clause 17-A, the price adjustment for the period of extension granted under Clause 17-B shall be

limited to the amount payable as per the Indices applicable to the last month of the original completion period or the extended period under Clause 17-A of the Standard General Conditions of Contract; as the case may be.

- b. In case the indices fall below the indices applicable to the last month of original or extended period of completion under Clause 17-A, as the case may be; then the lower indices shall be adopted for the price adjustment for the period of extension under Clause 17-B of the Standard General Conditions of Contract.

Period of Work under consideration will mean as under:

- i. In the case of first Bill the period from the month of signing of agreement to the month of measurement of the first bill.
- ii. In the case of second and subsequent interim payment certificate and Final bills, the Period from the month of measurement for previous bill to the month of measurement of that bill.
- iii. As per provisions of contract (Clause 37.3/PCC) interim payments certificates are to be submitted by the contractor on monthly basis for the works/supply of items pertaining to a particular month. However, in case a bill is submitted for a period pertaining to more than a calendar month the average indices for those months and previous month(s) shall be used for calculation purpose.

Responsibility of arranging the RBI indices /Economic advisor indices/Labour Bulletins desired by the Employer or the Engineer shall rest with the Contractor.

(B) Procedure in case of Delay in Availability of Final RBI Indices/ Economic advisor indices

Where the final Price Indices are not available in the Economic advisor, while making payment towards interim payment certificate, payment towards Price Variation will be made on provisional basis based on the indices available, to be adjusted in subsequent bills as and when the final Indices figures become available.

(C) Adjustment on Account of Price Variation

Adjustment on account of Price Variations may be positive (in which case extra amount shall be paid to the Contractor), or negative (in which case the amount of Price Variation shall be recovered from the Contractor). Adjustment on account of Price Variation shall be calculated separately, for each period, between two successive dates of measurements for bills and paid along with each bill as claimed by the contractor.

After verifying the bill, the Engineer shall certify the adjustment amount and advise the same to the Employer along with the interim payment certificate. Should any extra amount be due to Contractor, the Employer shall pay the same. Any amount due from Contractor on account of negative adjustment shall be recovered from his pending or other bills at the earliest.

The above adjustment on account of Price Variation payment shall be made to the contractor in accordance with the proportion stipulated in Schedule of Payment Currencies by using exchange rate on the last day of the period to which a particular interim payment certificate is related as per the website of Reserve Bank of India (RBI). In case the exchange rate on the above date, is not available in this

	<p>web site, it will be as per the web site of Financial Benchmark India Private Limited (FBIL) as recommended by RBI.</p> <p>In case the exchange rate of particular currency is not available on the above date in both these websites then the exchange rate as per the website of the Central Bank of that country to which this currency belongs will be adopted. In case the exchange rate of that currency is not directly available in INR on that website then the currency will be first converted to USD as per the exchange rate between that foreign currency and US Dollar on that web site and then converted from USD to INR as per RBI or FBIL exchange rate between US Dollar and INR, as prevailing on the said date.</p> <p>(D) Limit of Price Adjustment</p> <p>Provided that, in determining all such price adjustment in accordance with the aforesaid Sub-Clauses:</p> <ol style="list-style-type: none"> 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 26.4 the adjustment of prices thereafter until the completion of the works shall be made using either the indices or prices, whichever is more favourable to the Employer, provided that if an extension of time is granted pursuant to Sub-Clause 26.5/PCC, the above position shall apply to the adjustments made after expiry of such extension of time. <p>(E) Price Variation during extended period of completion</p> <p>The price adjustment as worked out above i.e., either increase or decrease will be applicable up to the stipulated Completion Date of the Works, including the extended period of completion where such extension has been granted under Sub-Clause 26.5/PCC and where such an extension has been granted, the price adjustment will be due as follows:</p> <ol style="list-style-type: none"> a. In a. In case the indices increase above the indices applicable to a bill made on the last date of original completion period or the extended period under Sub-Clause 26.5/PCC, the price adjustment for the period of extension granted in accordance with Sub-Clause 26.5/PCC will be limited to the amount payable as per the indices applicable to a statement made on the last date of the original completion period or the extended period as the case may be. b. In case the indices fall below the indices applicable to a statement made on the last date of the original or extended period of completion, then the lower indices will be adopted for Price Adjustment for the period of extension
New Clause-1.1	<p>Assignment</p> <p>Neither Party shall assign the whole or any part of the Contract or any benefit or interest in or under the Contract. However, either Party:</p> <ol style="list-style-type: none"> i. may assign the whole or any part with the prior agreement of the other Party, at the sole discretion of such other Party, and

	<p>ii. may, as security in favour of a bank or financial institution, assign its right to any moneys due, or to become due, under the Contract.</p>
New Clause -1.2	<p>Care and Supply of Documents</p> <p>The Specification and Drawings shall be in the custody and care of the Employer. Unless otherwise stated in the Contract, two copies of the Contract and of each subsequent Drawing shall be supplied to the Contractor, who may make or request further copies at the cost of the Contractor.</p> <p>Each of the Contractor's Documents shall be in the custody and care of the Contractor, unless and until taken over by the Employer. Unless otherwise stated in the Contract, the Contractor shall supply to the Engineer six copies of each of the Contractor's Documents.</p> <p>The Contractor shall keep, on the Site, a copy of the Contract, publications named in the Specification, the Contractor's Documents (if any), the Drawings and Variations and other communications given under the Contract. The Employer's Personnel shall have the right of access to all these documents at all reasonable times.</p> <p>If a Party becomes aware of an error or defect in a document which was prepared for use in executing the Works, the Party shall promptly give notice to the other Party of such error or defect.</p>
New Clause-1.3	<p>Delayed Drawings or Instructions</p> <p>The Contractor shall give notice to the Engineer whenever the Works are likely to be delayed or disrupted if any necessary drawing or instruction is not issued to the Contractor within a particular time, which shall be reasonable. The notice shall include details of the necessary drawing or instruction, details of why and by when it should be issued, and details of the nature and amount of the delay or disruption likely to be suffered if it is late. If the Contractor suffers delay and/or incurs Cost as a result of a failure of the Engineer to issue the notified drawing or instruction within a time which is reasonable and is specified in the notice with supporting details, the Contractor shall give a further notice to the Engineer and shall be entitled subject to Clause 4.1/SCC of contract conditions [Contractor's Claims] to:</p> <p>(a) an extension of time for any such delay, if completion is or will be delayed, under Sub-Clause 26.5/PCC [Extension of Time for Completion], and</p> <p>(b) payment of any such Cost, which shall be included in the Contract Price.</p> <p>After receiving this further notice, the Engineer shall proceed in accordance with New-Clause 3.5/PCC [Determinations] to agree or determine these matters.</p> <p>However, if and to the extent that the Engineer's failure was caused by any error or delay by the Contractor, including an error in, or delay in the submission of, any of the Contractor's Documents, the Contractor shall not be entitled to such extension of time, Cost or profit.</p>
New Clause-1.4	<p>Employer's Use of Contractor's Documents</p> <p>As between the Parties, the Contractor shall retain the copyright and other intellectual property rights in the Contractor's Documents and other design documents made by (or on behalf of) the Contractor.</p> <p>The Contractor shall be deemed (by signing the Contract) to give to the Employer a non-terminable transferable non-exclusive royalty-free licence to copy, use and communicate</p>

	<p>the Contractor's Documents, including making and using modifications of them. This licence shall:</p> <ul style="list-style-type: none"> (a) apply throughout the actual or intended working life (whichever is longer) of the relevant parts of the Works, (b) entitle any person in proper possession of the relevant part of the Works to copy, use and communicate the Contractor's Documents for the purposes of completing, operating, maintaining, altering, adjusting, repairing and demolishing the Works, and (c) in the case of Contractor's Documents which are in the form of computer programs and other software, permit their use on any computer on the Site and other places as envisaged by the Contract, including replacements of any computers supplied by the Contractor. <p>The Contractor's Documents and other design documents made by (or on behalf of) the Contractor shall not, without the Contractor's consent, be used, copied or communicated to a third party by (or on behalf of) the Employer for purposes other than those permitted under this Sub-Clause.</p>
New Clause-1.5	<p>Contractor's Use of Employer's Documents</p> <p>As between the Parties, the Employer shall retain the copyright and other intellectual property rights in the Specification, the Drawings and other documents made by (or on behalf of) the Employer. The Contractor may, at his cost, copy, use, and obtain communication of these documents for the purposes of the Contract. They shall not, without the Employer's consent, be copied, used or communicated to a third party by the Contractor, except as necessary for the purposes of the Contract.</p>
New Clause-1.6	<p>Confidential Details</p> <p>The Contractor shall disclose all such confidential and other information as the Engineer may reasonably require in order to verify the Contractor's compliance with the Contract.</p> <p>The Contractor shall treat the details of the Contract as private and confidential, except to the extent necessary to carry out the Contractor's obligations under the Contract or to comply with applicable Laws. The Contractor shall not publish or disclose any particulars of the Works without the previous agreement of the Employer. However, the Contractor shall be permitted to disclose any publicly available information, or information otherwise required to establish his qualifications to compete for other projects.</p>
New Clause-1.7	<p>Compliance with Laws</p> <p>The Contractor shall, in performing the Contract, comply with applicable Laws. Unless otherwise stated in the Special Conditions of Contract:</p> <ul style="list-style-type: none"> (a) the Employer shall have obtained (or shall obtain) the planning, zoning or similar permission for the Permanent Works, and any other permissions described in the Specification as having been (or being) obtained by the Employer; and the Employer shall indemnify and hold the Contractor harmless against and from the consequences of any failure to do so; and (b) the Contractor shall give all notices, pay all taxes, duties and fees, and obtain all permits, licences and approvals, as required by the Laws in relation to the execution and completion of the Works and the remedying of any defects; and the Contractor shall indemnify and hold the Employer harmless against and from the consequences of any failure to do so.

New Clause-1.8	<p>Joint Venture - Joint and Several Liability</p> <p>If the Contractor constitutes (under applicable Laws) a Joint Venture of two or more persons/firms:</p> <ul style="list-style-type: none"> (a) these persons shall be deemed to be jointly and severally liable to the Employer for the performance of the Contract; (b) these persons shall notify the Employer of their leader who shall have authority to bind the Contractor and each of these persons; and (c) the Contractor shall not alter its composition or legal status without the prior consent of the Employer. (d) In the event of default by any partner of Joint Venture, on or after achieving 25% of the financial progress (excluding advance if any) the lead partner or remaining partner(s), in case the defaulting partner is the lead partner, shall notify the Employer within twenty eight (28) days of the occurrence and within Fifty six (56) days of the said notification, the lead partner or remaining partner(s), who are not the defaulting partner, shall assign the works of the defaulting partner, to equally competent party with prior consent of the Employer. For this purpose the term “equally competent party” shall mean as under: “The new JV partner replacing the defaulting partner should meet the EQC requirement of package/combination of packages which was met by the defaulting partner on the basis of which the original tender was awarded.” <p>The replacement of any defaulting partner, with the new partner shall be subject to the condition that the new partner has to submit additional performance security equal to 10% of balance cost of work of the JV partner being replaced. The performance security submitted by the defaulting partner shall also continue with K-RIDE till satisfactory completion of the work.</p> <ul style="list-style-type: none"> (e) Notwithstanding the consent of the Employer for change in composition or legal status of the Joint Venture the partners shall continue to be jointly and severally liable to the Employer. (f) The Joint Venture shall enter into a Joint Venture Agreement incorporating the provisions of sub-paras (a) to (e) based upon the form annexed to the Conditions of Contract. The JV agreement shall indicate precisely the specific role of all members of the JV in respect of planning, design, construction equipment, key personnel, work execution, and financing of the project. The authority to sign the JV Agreement shall be evidenced by approved legal instruments. <p>Notwithstanding the contents of the sub-clauses above, if the performance of any JV partner is not found satisfactory by the Employer, in respect of the responsibilities assigned to him as per JV agreement which is a part of this agreement, the Employer may issue notice of such default to the said JV partner or the JV (depending upon reasons of default) and declare the said JV partner or the JV as Poor Performer. The issue of such notice shall automatically debar the JV partner or JV as the case may be from participating in any K-RIDE tender from the date of issue of notice of default.</p>
New Clause-1.9	Inspections by the Employer

	The Contractor shall permit the Employer and/or persons appointed by the Employer to inspect the Site and/or the Contractor's records relating to the performance of the Contract.
New Clause-1.10	<p>Bidder's Credentials:</p> <p>The bidder shall submit an affidavit on a stamp paper to the effect that all the documents submitted by her along with her bid are true. This shall be mandatory all bids. The bid shall be summarily rejected if the bidder fails to submit this undertaking along with the bid.</p> <p>After opening the financial bid, the tender committee shall verify the credentials of the bidder who is declared as the lowest bidder (L1) for their authenticity. In case the credentials of L1 are not found to be in order, The bid shall be treated as technically unresponsive and thus invalid. The process shall be repeated for the next higher bidder till the valid L1 is established. If any document (or copy thereof) submitted by a bidder is found to be false/forged:</p> <ol style="list-style-type: none"> a) The bidder/each partner/member of the bidding firm shall be liable to legal actions apart from punitive actions, as decided by competent authority of K-RIDE. In such an eventuality. The bid shall also be summarily rejected. b) If the contract has already been awarded, or Letter of Acceptance (LoA) has been issued and in the event of any failure to comply with the above, the contract shall be terminated, irrespective of the stage of progress in execution of the work. In such an eventuality, Security Deposit (SD), performance Guarantee (PG) and partial/full payments otherwise due to the contractor, in respect of the partial/full work executed by the contractor, shall be forfeited by the K-RIDE. c) Other punitive actions, like banning the bidder and partners/members of the bidding firm for future dealings with K-RIDE/Government of India/ Government of Karnataka may also be taken.
	2. THE EMPLOYER
New Clause-2.1	<p>Permits, Licenses or Approvals</p> <p>The Employer shall (where he is in a position to do so) provide reasonable assistance to the Contractor at the request of the Contractor:</p> <ol style="list-style-type: none"> (a) by obtaining copies of the Laws of the Country which are relevant to the Contract but are not readily available, and (b) for the Contractor's applications for any permits, licences or approvals required by the Laws of the Country: <ol style="list-style-type: none"> (i) which the Contractor is required to obtain under New-Clause 1.7/PCC [Compliance with Laws], (ii) for the delivery of Goods, including clearance through customs, and (iii) for the export of Contractor's Equipment when it is removed from the Site.
New Clause -2.2	<p>Employer's Personnel</p> <p>The Employer shall be responsible for ensuring that the Employer's Personnel and the Employer's other contractors on the Site:</p> <ol style="list-style-type: none"> (a) co-operate with the Contractor's efforts under New-Clause 4.24/PCC [Co-operation], and

	(b) take actions similar to those which the Contractor is required to take under subparagraphs (a), (b) and (c) of New-Clause 4.26/PCC [Safety Procedures] and under New-Clause 4.36/PCC [Protection of the Environment].
New Clause-2.3	<p>Employer's Financial Arrangements</p> <p>The Employer has sourced the funds to finance the project</p> <p>Assignment by the Employer</p> <p>The Employer shall be fully entitled without the consent of the Contractor, to assign the benefit of the Contract or any part thereof and any interest therein or there under to any third party.</p>
New Clause-2.4	<p>Employer's Claims</p> <p>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 Notification Period, the Employer or the Engineer shall give notice and particulars to the Contractor. However, notice is not required for payments due under New-Clause 4.37/PCC [Electricity, Water and Gas], under New-Clause 4.38/PCC [Employer's Equipment and Free-Issue Material], or for other services requested by the Contractor.</p> <p>The notice shall be given as soon as practicable 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 Notification Period shall be given before the expiry of such period.</p> <p>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 New-Clause 3.5/PCC [Determinations] 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 Notification Period in accordance with New-Clause 6.3/[PCC Extension of Defects Notification Period].</p> <p>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.</p>
	3.THE ENGINEER
New Clause-3.1	<p>Engineer's Duties and Authority</p> <p>The Employer shall appoint the Engineer who shall carry out the duties assigned to him in the Contract. The Engineer's staff shall include suitably qualified engineers and other professionals who are competent to carry out these duties.</p> <p>The Engineer shall have no authority to amend the Contract.</p> <p>The Engineer may exercise the authority attributable to the Engineer as specified in or necessarily to be implied from the Contract.</p> <p>However, the Engineer shall obtain the specific approval of the Employer before taking action under the-following Sub-Clauses of these Conditions:</p>

	<p>a) New-Clause 4.30/PCC [Unforeseeable Physical Conditions] Agreeing or determining an extension of time and/or additional cost.</p> <p>b) Sub-Clause 26.5/PCC [Extension of Time for Completion] Agreeing or determining extension of time.</p> <p>c) New-Clause 6.9/PCC [Performance Certificate] Issue of Performance Certificate.</p> <p>d) Sub-Clause 34. Except,</p> <p style="padding-left: 40px;">i) in an emergency situation as determined by the Engineer and as amplified in sub-paras (h) and (i) below, or</p> <p style="padding-left: 40px;">ii) DELETED</p> <p>e) Sub-Clause 34.3 -Variation Procedure: Approving a proposal for Variation submitted by the Contractor in accordance with Sub Clause 34.1 or 34.2.</p> <p>f) Sub-Clause 34.4 -Payment in applicable Currencies: Specifying the amount payable in each of the applicable currencies for a Variation.</p> <p>g) Clause 4.1/SCC: Contractor Claims for extension of time and/or additional payment.</p> <p>h) DELETED</p> <p>i) DELETED</p> <p>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 responsibility 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 34/PCC and shall notify the Contractor accordingly, with a copy to the Employer.</p> <p>i) In case the emergency mentioned in above Sub-paras occurs on account of failure of Contractor, by way of not adhering to the approved scheme of work or not taking adequate safety precautions or by any other reason attributable to the contractor, then no additional amounts shall be paid to the Contractor for attending to such emergencies and the Contractor shall be liable for Employer's claims.</p> <p>j) Clause7/PCC regarding deployment of Sub-Contractors.</p>
New Clause-3.2	<p>Delegation by the Engineer</p> <p>The Engineer may from time to time assign duties and delegate authority to assistants, and may also revoke such assignment or delegation. These assistants may include a resident engineer, and/or independent inspectors appointed to inspect and/or test items of Plant and/or Materials. The assignment, delegation or revocation shall be in writing and shall not take effect until copies have been received by both Parties.</p> <p>However, unless otherwise agreed by both Parties, the Engineer shall not delegate the authority to determine any matter in accordance with New-Clause 3.5/PCC [Determinations].</p>

	<p>Assistants shall be suitably qualified persons, who are competent to carry out these duties and exercise this authority, and who are fluent in the language for communications defined in Sub-Clause 3/CC [Law and Language].</p> <p>Each assistant, to whom duties have been assigned or authority has been delegated, shall only be authorised to issue instructions to the Contractor to the extent defined by the delegation. Any approval, check, certificate, consent, examination, inspection, instruction, notice, proposal, request, test, or similar act by an assistant, in accordance with the delegation, shall have the same effect as though the act had been an act of the Engineer. However:</p> <p>(a) any failure to disapprove any work, Plant or Materials shall not constitute approval, and shall therefore not prejudice the right of the Engineer to reject the work, Plant or Materials;</p> <p>(b) if the Contractor questions any determination or instruction of an assistant, the Contractor may refer the matter to the Engineer, who shall promptly confirm, reverse or vary the determination or instruction.</p>
<p>New Clause-3.3</p>	<p>Instructions of the Engineer</p> <p>The Engineer may issue to the Contractor (at any time) instructions and additional or modified Drawings which may be necessary for the execution of the Works and the remedying of any defects, all in accordance with the Contract. The Contractor shall only take instructions from the Engineer, or from an assistant to whom the appropriate authority has been delegated under this Clause. If an instruction constitutes a Variation, Clause34/PCC [Variations and Adjustments] shall apply.</p> <p>The Contractor shall comply with the instructions given by the Engineer or delegated assistant, on any matter related to the Contract. Whenever practicable, their instructions shall be given in writing. If the Engineer or a delegated assistant,</p> <p>(a) gives an oral instruction and</p> <p>(b) receives a written confirmation of the instruction, from (or on behalf of) the Contractor, within two working days after giving the instruction, and</p> <p>(c) does not reply by issuing a written rejection and/or instruction within two working days after receiving the confirmation,</p> <p>(d) then the confirmation shall constitute the written instruction of the Engineer or delegated assistant (as the case may be).</p>
<p>New Clause-3.4</p>	<p>Replacement of the Engineer</p> <p>Notwithstanding New-Clause 3.1/PCC, if the Employer intends to replace the Engineer, the Employer shall, not less than 21 days before the intended date of replacement, give notice to the Contractor of the name, address and relevant experience of the replacement Engineer.</p>
<p>New Clause-3.5</p>	<p>Determinations</p> <p>Whenever these Conditions provide that the Engineer shall proceed in accordance with this New-Clause 3.5/PCC to agree or determine any matter, the Engineer shall consult with each Party in an endeavour 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.</p>

	The Engineer shall give notice to both Parties of each agreement or determination, with supporting particulars. Each Party shall give effect to each agreement or determination unless and until revised under Clause 4/SCC [Claims, Disputes and Arbitration].
	4.THE CONTRACTOR
New Clause-4.1	<p>Contractor's General Obligations</p> <p>The Contractor shall design (to the extent specified in the Contract), execute and complete the Works in accordance with the Contract and with the Engineer's instructions, and shall remedy any defects in the Works.</p> <p>The Contractor shall provide the Plant and Contractor's Documents specified in the Contract, and all Contractor's Personnel, Goods, consumables and other things and services, whether of a temporary or permanent nature, required in and for this design, execution, completion and remedying of defects.</p> <p>All equipment, and material, to be incorporated in or required for the Works shall be procured from approved sources as stipulated in the Contract.</p> <ol style="list-style-type: none"> i. All plants / equipment to be deployed on the work shall carry designated authority certificate. Where not specified, it shall have third party safety certificate for the safe working of the equipment and shall be renewed after every 3 months. This certificate shall be produced to the Engineer as and when required. ii. All the construction plant shall be provided with the experienced operators having valid license issued by the competent authority. iii. Any material or equipment not meeting the approval of the Engineer shall be removed from the site immediately. iv. All Contractor's Equipment and Temporary Works provided by the Contractor shall, when brought on to the site, be deemed to be exclusively intended for execution of the Works and not be removed without the consent in writing of the Engineer. Such consent shall not be unreasonably withheld or delayed. <p>The Contractor shall be responsible for the adequacy, stability and safety of all Site operations and of all methods of construction. Except to the extent specified in the Contract, the Contractor (i) shall be responsible for all Contractors' Documents, Temporary Works, and such design of each item of Plant and Materials as is required for the item to be in accordance with the Contract, and (ii) shall not otherwise be responsible for the design or specification of the Permanent Works.</p> <p>The Contractor shall throughout the execution of the Works including the carrying out of any testing, commissioning or remedying of any defect:</p> <ol style="list-style-type: none"> i. provides and maintain all lights, guards, fences and warning signs and watchmen when and where necessary or required by the Engineer or by laws or by any relevant authority for the protection of the Works and for the safety and convenience of the public and all persons on or in the vicinity of the Site; and ii. Contractor is required to take note of all the necessary provisions in Employer's Safety, Health and Environment Manual (SHE Manual) and the Contractor's price shall be inclusive of all the necessary costs to meet the prescribed safety standards

	as specified in the Special Conditions of Contract. In the case, the Contractor fails in the above; the Employer may provide the necessary arrangements and recover the costs from the Contractor
New Clause-4.2	<p>Tools, Plants and Equipment Supplied by the Employer</p> <ul style="list-style-type: none"> i. Except for any specific item mentioned in the Special Conditions of Contract or in Employer's Requirements, the Contractor shall provide all tools, plants and Equipment for the Works. In respect of such exceptional tools, plants or Equipment committed to be provided by the Employer under terms and conditions specified in the Special Conditions of Contract, the Contractor shall take all reasonable care and shall be responsible for all damages or loss caused by him, his representatives, sub-contractors or his workmen or others while they are in his charge. ii. No tools, plant and equipment shall be supplied by the Employer. Unless specifically incorporated in special conditions, the Contractor has to arrange all tools, plant, equipment required for the work. iii. On completion of the Works, the Contractor shall hand over the unused balance of the tools, plants and Equipment supplied by the Employer to the Employer back in good order and repair, fair wear and tear expected, and shall be responsible for any failure to account for the same or any damage done thereto. iv. The decision of the Engineer as to the amount recoverable from the Contractor on this account shall be final and binding.
New Clause-4.3	<p>Employer's Materials</p> <p>Except for items mentioned in the Special Conditions of Contract, the Contractor shall provide all materials for the Works. Material if any, to be provided by Employer will be done only in a phased manner as per pre-approved program, against a Bank Guarantee for the value of the Material and at terms and conditions for issue, upkeep, usage, return and recovery of such Materials as specified in Special Conditions of Contract.</p>
New Clause-4.4	<p>Sheds, Stores, Yards</p> <p>It shall be the responsibility of the Contractor to provide at his own expense the required sheds, store houses, and yards for both Permanent and Temporary Works and provide free access to the Engineer and the Engineer's Representative who will have right of inspection including that of instructing the Contractor to remove a particular material from the stores and not to use the same on the Works.</p>
New Clause-4.5	<p>Temporary Works</p> <p>The Contractor's proposals for erection of all ancillary and temporary works shall be in conformity with the proposals submitted along with the Tender and modifications thereto as approved by Engineer.</p> <p>The Contractor shall submit drawings, supporting design calculations of Temporary works, where called for by the Engineer and other relevant details of all such works to the Engineer for approval at least one month before he desires to commence such works. Approval by the Engineer of any such proposal shall not relieve the Contractor of his responsibility for sufficiency of such works.</p> <p>All temporary works necessary for the proper execution of the Works shall be provided and maintained by the Contractor at his cost (unless otherwise provided in tender document) and subject to the consent of the Engineer shall be removed by Contractor at his own expense when they are no longer required and in such manner as the Engineer shall direct.</p>

	In case the Contractor fails to remove the temporary works on completion the Engineer is authorized to get the same removed and recover the cost thereof from the Contractor.
New Clause-4.6	<p>Access for Engineer</p> <p>The Contractor shall allow at all times the Engineer or the Engineer's assistant or any other person authorised by the Engineer access to the Site and to any place where work in connection with the Contract is being carried out or is intended to be carried out and to any place where materials or plant are being manufactured, fabricated and/or assembled for the Works. The Contractor shall ensure that sub contracts if any shall contain provisions entitling the Engineer or any person authorised by him to have such access.</p>
New Clause-4.7	<p>Access Road and Way Leave</p> <ol style="list-style-type: none"> I. Providing access roads/ way leaves to the site will be Contractor's responsibility. II. The Contractor shall pay the statutory vehicle license and permit fees for use of public roads. The Contractor's heavy construction or tracked equipment shall not travel on any public road or bridge, unless the Contractor has made arrangements with the authority concerned and has obtained the approval of the Engineer to such arrangements. III. The Contractor shall repair any damage to the road or bear the cost thereof due to movement of contractor's plants and equipment, vehicles etc. to the specifications and satisfaction of road authorities as well as of Engineer. IV. The Contractor shall plan transportation of construction materials to work site in accordance with traffic regulations enforced by local traffic authorities from time to time and in such a way that congestion on the roads and road accidents are avoided. The Contractor should study this aspect thoroughly before quoting for the work.
New Clause-4.8	<p>Contractor to keep Site Clear</p> <ol style="list-style-type: none"> i. During the execution of the Works, the Contractor shall keep the Site free from all unnecessary obstruction, and shall store or dispose of any Contractor's Equipment or surplus materials. The Contractor shall clear away and remove from the Site any wreckage, rubbish or Temporary Works no longer required. ii. On completion of the works, the Contractor shall clear away and remove from site all Constructional Plant, surplus material and Temporary Works. He should leave the whole of the site and Works in a clean, tidy and workman like condition to the satisfaction of the Engineer. iii. On completion of Work the Contractor shall also clear away the labour camps, hutments and other related installations and restore the land to its original condition to the satisfaction of the Engineer within 45 days of the physical completion of Work. The cost on account of delay in return of land and reinstatement of original condition within the stipulated time as determined by Engineer will be recovered from the Contractor's dues. iv. All garbage shall be removed from site daily or as they accumulate. All surface and sub-soil drains shall be maintained in a clean, sound and satisfactory state of performance. No extra payment shall be made on this account. v. No final payment in settlement of the accounts for Works shall be made till, in addition to any other condition necessary for such final payment, site clearance and clearances of labour camps etc. shall have been effected by him. Such clearance may be made by the Engineer through any other agency at the expense of the Contractor in the event of the Contractor's failure to comply with this provision within 7 days after receiving notice to that effect from the Engineer. All expenses on such removal / clearance shall be debit able to the Contractor as loans due from the Contractor to the

	Employer, and the Employer shall be competent to recover the same from Contractor's on-account or final bills, or from Performance Security amount or from any other amount payable to the Contractor in any other Contract.
New Clause-4.9	<p>Security of the Site</p> <ol style="list-style-type: none"> I. The Contractor shall take all measures necessary to ensure security, including exercising control over all persons and vehicles which are employed or engaged on the Site or in connection with the Works or the other works comprising the Project and with the security arrangements applicable to any other site within the Project. II. The Contractor shall arrange the issue of passes for the admission of all persons and vehicles to the Site or to any part thereof and may refuse admission to or remove from the Site any person or vehicle failing to show an appropriate pass on demand to any duly authorized person. III. If required by the Engineer, the Contractor shall submit a list identifying all persons to whom passes have been issued together with two photographs of each person and all entities to which a pass has been issued in respect of any vehicle and shall satisfy the Engineer of the bonafides of any such person or entity. IV. The Contractor shall not, without the written permission of the Engineer or otherwise in accordance with the Contract, allow access to the Site to any person unless the presence on Site of such person is necessary in connection with the execution of the Works or with the discharge of the duties of any relevant authority. V. The Contractor shall be wholly responsible for security of site and Works. The Contractor shall follow relevant Safety and Security instructions issued by the concerned Authorities from time to time and shall work in close coordination with the concerned Authorities.
New Clause-4.10	<p>Contractor's Operations on Site</p> <ol style="list-style-type: none"> I. The Contractor shall confine his operations to the Site, and to any additional area which may be provided to the Contractor and agreed by the Engineer as working areas. The Contractor shall take all necessary precautions to keep his personnel and equipment within the Site and such additional areas, and to keep and prohibit them from encroaching on adjacent land. II. The Contractor, after obtaining any necessary consent from any relevant authority, shall submit to the Engineer proposals showing the layout of pedestrian routes, lighting, signs, and guarding any road opening or traffic diversion which may be required in connection with the execution of the Works and which the Contractor intends to construct. Any consent given by the Engineer to such proposals shall not relieve the Contractor of any obligation under the Contract or absolve the Contractor from any liability for or arising from such proposals or the implementation thereof. III. All lights provided by the Contractor shall be so placed or screened as not to interfere with signs, signals or lights. The Contractor shall not in any way obscure or affect signs, signals or lights, in use by any relevant authority. In the event that the Contractor does so, the Contractor shall pay all costs associated with the re-fitting, re-instating or provision of alternatives for any sign, signal or light, obscured or affected. IV. For the purposes of this Clause only, "Site" shall include off-Site places of manufacture or storage and the Contractor's Work Areas and shall include, areas provided to the Contractor by others.

New Clause-4.11	<p>Publicity</p> <p>The Contractor shall not publish or otherwise circulate alone or in conjunction with any other person, any articles, photographs or other materials relating to the Contract, the Site, the Works, the Project or any part thereof, nor impart to the press, or any radio or television network any information relating thereto, nor allow any representative of the media access to the Site, Contractor's Works Areas, or off-Site place of manufacture, or storage except with the permission, in writing, of the Employer. The Contractor shall ensure that his sub-contractors of any tier shall be bound by a like obligation and shall, if so required by the Employer, enforce the same at his own expense. The provisions of this Sub-Clause shall not exempt the Contractor from complying with any statutory provision in regard to the taking and publication of photographs.</p>
New Clause-4.12	<p>Disclosure of Relationship</p> <p>If the Contractor or any partner of the Contractor or Director of the Contractor's company is closely related to any of the Officers of the Employer or the Engineer, or alternatively, if any close relative of an officer of the Employer or the Engineer has financial interest / stake in the Contractor's firm, the same shall be disclosed by the Contractor at the time of filing his tender. Any failure to disclose the interest involved, shall entitle the Employer to rescind the Contract, without payment of any compensation to the Contractor. The Contractor shall note that he is prohibited from developing such interest during the Contract period.</p>
New Clause-4.13	<p>Use Of Explosives</p> <p>Explosives if required on the Work shall be used by Contractor only with prior Approval of the Engineer and in the manner and to the extent permitted by him. The explosives shall be handled, stored in a special magazine to be provided at the cost of the Contractor and used under the strict supervision of persons licensed for this purpose under the requisite statutory rules and regulations. The Contractor shall take all precautions in transporting and using the explosives and avoid damage to nearby structures and utilities. The Contractor shall be responsible for taking all the precautions in the usage of the explosives at Contractor's cost, sole risk and responsibility. The Contractor shall hold the Employer harmless and indemnify for the above.</p>
New Clause-4.14	<p>In pursuance with this policy, the Employer</p> <ol style="list-style-type: none"> a. Will reject the Tender for the Work or rescind the Contract, if the Employer determines that the Tenderer/Contractor has engaged in corrupt or fraudulent practices. b. Will declare a Tenderer/Contractor ineligible, either indefinitely or for a minimum period of 2 years from the date of identification of such prohibited conduct, to be awarded a Contract/s if the Employer at any time determines that the Contractor has engaged in corrupt or fraudulent practices in competing for, or in executing the Contract.
New Clause-4.15	<p>Compensation to Contractor on rescission of Contract under this clause</p> <p>In the event of rescission of Contract, the Contractor shall not be entitled to any compensation whatsoever, except for the work done up to the date of rescission.</p>
New Clause-4.16	<p>Quality Assurance</p> <p>Unless otherwise stated in Special Conditions of Contract and/or Employer's Requirement, the Contractor shall institute a quality assurance system to demonstrate compliance with the requirements of the Contract. Such system shall be in accordance with the details stated in the Contract. Compliance with the quality assurance system shall not relieve the Contractor of his duties, obligations or responsibilities.</p> <p>Details of all procedure and compliance documents shall be submitted to the Engineer for his consent before each execution stage is commenced</p>
New Clause-4.17	Work by Persons Other than Contactor

	<ol style="list-style-type: none"> I. If the Contractor shall fail to carry out any work required under the Contract or refuse to comply with any instruction or order given by the Engineer in accordance with the Contract within a reasonable time, the Engineer may give the Contractor 14 days' notice in writing to carry out such work or comply with such instruction. II. If the Contractor fails to comply with such notice, the Employer shall be entitled to carry out such work or instruction by his own workmen or by other contractors in whatever manner the Engineer decides, be it single Tender or limited Tender or open Tender or on entrustment basis without any right of appeal by the contractor. III. However, in case of emergencies/urgencies/affecting safety the period of 14 days' notice shall be 24hours notice in writing. The Classification of work as emergencies/urgencies/affecting safety is the prerogative of Engineer and his decision is final and binding on the contractor. Without prejudice to any other right or remedy, all additional expenditure properly incurred by the Employer in having such work or instruction carried out shall be recoverable by the Employer from the Contractor. IV. If by reason of any accident or failure or other event occurring to, in, or in connection with the Works any remedial or other work shall, in the opinion of the Engineer, be urgently necessary and the Contractor is unable or unwilling at once to do such remedial or other work, the Engineer may authorize the carrying out of such remedial or other work by a person other than the Contractor. V. If the remedial or other work so authorized by the Engineer is work, which, in the Engineer's opinion, the Contractor was liable to do under the Contract; all expenses properly incurred in carrying out the same shall be recoverable by the Employer from the Contractor. Provided that the Engineer shall, as soon after the occurrence of any such emergency as may be reasonably practicable, notify the Contractor thereof in writing.
<p>New Clause-4.18</p>	<p>Confidentiality of Information</p> <ol style="list-style-type: none"> I. The Contractor shall not use or divulge, except for the purpose of the Contract or with the written permission of the Employer, any information relating to the Works or the Project provided in the Contract or otherwise provided by the Employer, or the Engineer. The Contractor shall ensure that his sub-contractors of any tier shall be bound by a like confidentiality undertaking. II. The Employer, Engineer and any third party to whom an assignment has been made in accordance with New-clause 2.3/PCC may use any information provided by the Contractor in accordance with the Contract. The Employer shall use reasonable endeavours to ensure that the Engineer and any third party referred to in aforesaid New-clause 2.3/PCC shall not; divulge such information except for any purpose connected with the Contract. <p>On completion of the 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 46.1/PCC herein, 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.</p> <p>If the Contract specifies that the Contractor shall design any part of the Permanent Works, then unless otherwise stated in the Special Conditions of Contract:</p>

	<p>(a) the Contractor shall submit to the Engineer the Contractor's Documents for this part in accordance with the procedures specified in the Contract;</p> <p>(b) these Contractor's Documents shall be in accordance with the Specification and Drawings, shall be written in the language for communications defined in Sub-Clause 3/CC [Law and Language], and shall include additional information required by the Engineer to add to the Drawings for co-ordination of each Party's designs;</p> <p>(c) the Contractor shall be responsible for this part and it shall, when the Works are completed, be fit for such purposes for which the part is intended as are specified in the Contract; and</p> <p>(d) prior to the commencement of the Tests on Completion, the Contractor shall submit to the Engineer the "as-built" documents and operation and maintenance manuals in accordance with the Specification and in sufficient detail for the Employer to operate, maintain, dismantle, reassemble, adjust and repair this part of the Works. Such part shall not be considered to be completed for the purposes of taking-over under Sub-Clause 46.1/PCC [Taking Over of the Works and Sections] until these documents and manuals have been submitted to the Engineer.</p>
<p>New Clause-4.19</p>	<p>Performance Security</p> <p>The Contractor shall obtain (at his cost) a Performance Security and an additional Performance Security, if any in terms of ITB 35.5, for proper performance of the contract, for the amount, currencies and validity period for Performance Security stated in the Contract Data. If an amount is not stated in the Contract Data, this Sub-Clause shall not apply.</p> <p>The Contractor shall deliver the Performance Security and additional Performance Security, if any, to the Employer within 28 days after receiving the Letter of Acceptance, and shall send a copy to the Engineer. The Performance Security/additional Performance Security shall be issued by an entity and from within a country (or other jurisdiction) approved by the Employer and shall be in the form as given in Section 10 (Formats) or in another form specifically approved by the Employer.</p> <p>The procedure for obtaining Performance Guarantee is outlined below:</p> <p>The successful bidder shall have to submit a Performance Guarantee (PG) within 28 (Twenty-eight) days from the date of issue of Letter of Acceptance (LOA). Extension of time for submission of PG beyond 28 (Twenty-eight) days and upto 60 days from the date of issue of LOA may be given by the Authority who is competent to sign the contract agreement. However, a penal interest of 12% per annum shall be charged for the delay beyond 28(Twenty-eight) days, i.e. from 29th day after the date of issue of LOA. Further, if the 60th day happens to be a declared holiday in the concerned office of the Railway, submission of PG can be accepted on the next working day.</p> <p>In all other cases, if the Contractor fails to submit the requisite PG even after 60 days from the date of issue of LOA, the contract is liable to be terminated. In case contract is terminated railway shall be entitled to forfeit Earnest Money Deposit and other dues payable against that contract. In case a tenderer has not submitted Earnest Money Deposit on the strength of their registration as a Startup recognized by Department for promotion of</p>

industry and internal trade (DPIIT) under Ministry of Commerce and Industry, DPIIT shall be informed to this effect. The failed Contractor shall be debarred from participating in re-tender for that work.

The Performance Security/additional Performance Security shall be, at the Contractor's option, in any of the following forms:

- (i) An unconditional Bank Guarantee in the prescribed format
- (ii) A Pay Order / Demand Draft drawn on a Scheduled / Nationalized Bank in India in favour of "Rail Infrastructure Development Company (Karnataka) Ltd" payable at Bangalore.
- (iii) FDR in favour of "Rail Infrastructure Development Company (Karnataka) Ltd." (free from any encumbrance).
- (iv) A online bank transfer to K-RIDE account.

The Bank Guarantee shall be from a bank having minimum net-worth of over INR 500 million from the specified banks as under:

- (i) a Schedule Bank in India, or
- (ii) a Foreign Bank having their operations in India, or
- (iii) a Foreign Bank which does not have operations in India is required to provide a counter-guarantee by State Bank of India,

The Scheduled Bank is suing the Bank Guarantee must be on "Structured Financial Messaging System (SFMS)" platform. A separate advice of the BG shall be invariable be sent by the issuing bank to the Employer's Bank through SFMS and only after this the BG shall become operative and acceptable to the Employer.

The Issuing Bank shall send the SFMS to:

Beneficiary: Rail Infrastructure Development Company (Karnataka) Ltd. (K-RIDE)
Bank Name: Canara Bank
Branch: Prime Corporate Branch
Account No. 0430201012110
IFSC Code: CNRB0002636

In case the contractor is a JV,"the Performance Security/additional Performance Security, if any in terms of ITB 35.5, shall be submitted by each JV Partner separately on behalf of the JV in favour of K-RIDE in proportion of their respective percentage share specified in the JV Agreement. The additional Performance Security shall be submitted by the partner(s) responsible for execution of schedule(s) (as per JV agreement) against which additional Performance Security is required to be submitted in terms of ITB 35.5.

However, Submission of Performance Guarantee Security by individual partners on behalf of the JV shall in no way dilute their Joint & Several responsibility. The Employer shall be entitled to recover the amount of Bank Guarantees individually and / or from all the Partners jointly at its discretion."

The Contractor shall ensure that the Performance Security/additional Performance Security is valid and enforceable until the Contractor has executed and completed the Works and remedied defects, if any. If the contractor does not complete the work for any reasons whatsoever, the terms of the Performance Security/ additional Performance Security specify its expiry date, and the Contractor has not become entitled to receive the Performance

Certificate by the date 28 days prior to the expiry date, the Contractor shall be bound to extend the validity of the Performance Security/additional Performance Security until the Works have been completed and any defects have been remedied.

Failure of the successful Tenderer to furnish the required Performance Security shall be a ground for the annulment of the award of Contract and execution of the Tender Securing Declaration.

Release of performance security

- i. The whole or such portion of the Performance Security amount shall be liable to be forfeited by the Employer at the discretion of the Employer, in the event of any breach of Contract on the part of the Contractor.
- ii. After completion of the entire Work, the Performance Security shall be released to the Contractor, on issue of last Taking Over Certificate if more than one Certificate exist, by the Engineer, the release of Performance Security shall not relieve the Contractor from his obligations and liabilities, to make good that may be detected during the Defects Liability Period.

The Guarantees shall be unconditional and irrevocable. The Employer shall return the Performance Security to the Contractor within 21 days after receiving a copy of the Performance Certificate or passing of the Final Payment Certificate whichever is later. However, on completion of specified section(s) and successful passage of defect liability period for such section(s) along with execution of any leftover works at the time of completion of such section(s), the contractor shall be entitled for release of 90% of the proportionate Performance Security calculated as specified in Contract Data subject to the condition that Engineer certifies that no recoveries are pending in the contract. In case Engineer points out amount to be recovered then the contractor shall be entitled for release of 90% of the proportionate Performance Security calculated as specified in Contract Data minus the amount to be recovered.

The Employer shall return additional Performance Security submitted in terms of ITB 35.5 as per the following;

- (a) If the Contractor submits an application stating that all the works against the particular schedule(s)/bill(s) for which additional Performance Security was submitted in terms of ITB 35.5 have been completed in all respect, then the Employer, on being satisfied with the claim of the Contractor, shall return the full additional Performance Security against the particular schedule(s). Decision of the Employer regarding completion of works against a particular schedule/bill shall be final and binding on the Contractor.
- (b) If the Contractor submits an application stating that majority of the works (physical progress being not less than 90%) against the particular schedule(s)/bill(s) for which additional Performance Security was submitted in terms of ITB 35.5 have been completed and execution of balance works is held up for reasons not attributable to the Contractor, then the Employer, on being satisfied with the claim of the Contractor, shall return 75% of the amount of additional Performance Security against the particular schedule(s). The balance amount of additional Performance Security shall however be returned only after completion of the works against the particular schedule(s)/bill(s) for which additional Performance Security was submitted in terms of ITB 35.5, in all respects to the satisfaction of the Employer. Decision of the Employer regarding completion of works against a particular schedule/bill shall be final and binding on the Contractor.

Without limitation to the provisions of the rest of this Sub-Clause, whenever the Engineer determines an addition or a reduction to the Contract Price as a result of a change in cost and/or legislation or as a result of a Variation amounting to more than 25 percent of the portion of the Contract Price payable in a specific currency, the Contractor shall at the Engineer's request promptly submit Performance Guarantee @ 10% of the increased amount over the original contract price in a specific currency. On the other hand if the value of contract price decreases by more than 25% of the original contract price payable in a specific currency, Performance Guarantee @ 10% of the decrease in contract price from the original contract price in a specific currency shall be returned to the contractor, on his request.

Wherever the contract is terminated under Clause 49.7/PCC, the Performance Guarantee shall be encashed by the Employer:

- i) in full including additional Performance Guarantee amount, if any, taken in terms of clause 25.5 and 29 of ITT and not due for release on the date of issue of termination letter in terms of this clause, in case of termination of the contract as a whole; or
- ii) at the discretion of the Employer it may be encashed in part/parts proportionate to the Contract price of the bill/schedule to which the terminated part of work belongs
i.e $P = (A \times B) \div C$ where

P=Proportionate Bank Guarantee Amount.

A=Contract price of the particular bill/schedule to which the terminated part of work belongs.

B=Performance Guarantee amount in terms of CC New-clause 4.19/PCC

C=Total Contract price.

Plus additional performance Guarantee amount, if any, taken in terms of sub clause 25.5 and 29 of ITT and not due for release on the date of issue of termination letter in terms of this clause against this particular bill/schedule to which the terminated part of the work belongs, in case of termination in part/parts.

The balance work should be got done separately, and independently by K-RIDE without risk and cost of the original contractor. The original contractor shall be debarred from participating in the tender for executing the balance work. If the failed contractor is a JV or a partnership firm, then every member/partner of such a firm would be debarred from participating in the tender for the balance work either in his/her individual capacity or as a partner of any other JV/partnership firm.

In case the Contractor fails to perform the Contract or any JV partner fails to perform its obligations under the JV agreement, which is a part of this agreement, the Employer may issue notice of such default to the said JV partner or the JV (depending upon reasons of default) and declare the said JV partner or the JV as Poor Performer. The issue of such notice shall automatically debar the JV partner or JV, as the case may be, from participating in any K-RIDE tender from the date of issue of notice of default. The relevant performance security including additional performance security, if any, in terms of sub clauses 25.5 and 29 of ITT submitted by the Contractor or submitted on behalf of JV partner to the extent not due for release at the time of contemplation of such action shall be encashed and forfeited either fully or in proportion of the percentage share of that partner in the JV agreement, as the case may be.

<p>New Clause-4.20</p>	<p>Security Deposit: The Security Deposit shall be 5% of the contract value. Security Deposit may be deposited by the Contractor before release of first on account bill in cash or Term Deposit Receipt issued from Scheduled Bank, or may be recovered at the rate defined in this section PCC, the bill amount till the full Security Deposit is recovered. Provided also that in case of defaulting Contractor, the Employer may retain any amount due for payment to the Contractor on the pending "on account bills" so that the amounts so retained (including amount guaranteed through Performance Security) may not exceed 10% of the total value of the contract. The security deposit may be recovered at the rate 6% of bill amount till the security deposit is recovered.</p> <p>Further, in case of contracts having value equal to or more than ₹ 50 crore (Rs Fifty crore) the Security Deposit may be deposited as Bank Guarantee Bond also, issued by a scheduled bank after execution of contract documents, but before payment of 1st on account bill. Provided further that the validity of Bank Guarantee Bond shall be extended from time to time, depending upon extension of contract granted in terms Clause No 26 of PCC.</p> <p>Further, in case Security Deposit has been submitted as Term Deposit Receipt/Bank Guarantee Bond in full amount, the Bid security by Contractor with his tender will be returned by K-RIDE.</p> <p>Note: After the work is physically completed as certified by competent authority, Security Deposit recovered from the running bills of a Contractor can be returned to him, if he so desires, in lieu of Term Deposit Receipt/irrevocable Bank Guarantee for equivalent amount from Scheduled Bank, to be submitted by him.</p> <p>4.2.b(i) Refund of Security Deposit: Security Deposit mentioned in clause above shall be returned to the Contractor along with or after, the following:</p> <ul style="list-style-type: none"> (a) Final Payment of the Contract and (b) Execution of Final Supplementary Agreement or Certification by Engineer that K-RIDE has No Claim on Contractor and (c) Maintenance Certificate issued, on expiry of the maintenance period. <p>4.2.b(ii) Forfeiture of Security Deposit: Whenever the contract is rescinded as a whole under clause 49 of CC/PCC, the Security Deposit already with K-RIDE under the contract shall be forfeited. However, in case the contract is rescinded in part or parts under clause 49 of CC/PCC, the Security Deposit shall not be forfeited.</p> <p>4.2.(c) No interest shall be payable upon the Bid Security and Security Deposit or amounts payable to the Contractor under the Contract, but Government Securities deposited in terms of New-Clause 4.19/PCC of this clause will be payable with interest accrued thereon.</p>
<p>New Clause -4.21</p>	<p>Contractor Representative:</p> <p>The Contractor shall depute his Representative to attend all the review meetings notified by the Engineer.</p> <p>Facilities for and Co-ordination with Others</p>

The Contractor shall not impede and shall afford all necessary facilities, access and/or services to the Employer, Engineer, Designated Contractors, utility undertakings, other relevant authorities and other contractors (whether employed by the Employer or not) who are carrying out on, or in the vicinity of, the Site, works not included in the Contract but forming part of the Project:

- A. The Contractor shall take all reasonable steps to ensure that the Works are co-ordinated and integrated with the Design, manufacture, installation execution and testing of such other works and shall in particular (but without limitation):
- (i) comply with any direction which the Engineer may give for the integration of the Design with the design of any other part of the Project;
 - (ii) consult, liaise and co-operate with those responsible for carrying out such other works, including where necessary, in the preparation of the respective designs, the preparation of co-ordinated programmes, method statements, co-ordination drawings and specifications together with arrangements of service priorities and zoning;
- B. The Contractor shall undertake Design co-ordination with other contractors who are carrying out works forming part of the Project as described in the Employer's Requirements. At the end of each such co-ordination period, the Contractor and the other contractor with whose works the interface period refers shall jointly state in writing that their design co-ordination activities are complete and that their respective designs are integrated and can be finalised without interference with each other's designs or the designs with which their designs have already been integrated.
- A copy of this joint written statement shall be provided to the Engineer within 7 days of the end of the said design co-ordination period. Unless and until copies of all relevant and necessary design co-ordination statements have been submitted to the Engineer, the Engineer shall be entitled to suspend any review or further review of the Contractor's or the other contractor's design submissions. Such suspension shall not be grounds for the Contractor to claim nor shall be entitled to receive an extension of time or additional payments.
- C. The Contractor shall share within the Site, staging, storage and unloading areas for the use of Designated Contractors, if any, who are undertaking civil work, fare collection system, supply, testing and commissioning of Rolling Stock, escalators, lifts, signalling and telecommunications and traction power installation works, etc. Separate locations shall be provided for each such contractor. The exact size and location of these staging, storage and unloading areas, and the commencement date shall be co-ordinated and agreed during the design interface period with each Designated Contractor.
- D. Any other contract which depends for its execution on the Contract or upon which the Contract is dependent for its own execution shall be identified by the Engineer as a "Designated Contract". The Contractor shall provide attendance on Designated Contractors in accordance with the Employer's Requirements and as instructed by the Engineer. The identity of the contractor for a Designated Contract may not be known before the execution of the Contract but this shall not be a ground for the Contractor to object to the subsequent appointment of a Designated Contractor
- E. The Contractor shall in accordance with the requirements of the Engineer co-ordinate his own Works with that of Designated Contractors through Co-ordinated Installation

	<p>Programme (CIP) stated in the Employer's Requirements, or as the Engineer may require, and shall afford the Designated Contractors all reasonable opportunities for carrying out their works.</p> <p>F. The Contractor shall afford all reasonable opportunities, for carrying out their work, to other contractors employed by the Employer and their workmen respectively and the workmen of the Employer who may be engaged on or near the Site of any work, ancillary to the Works, but, not included in the Contract and shall not cause them inconvenience.</p> <p>G. If the Contractor shall suffer delay by reason of failure by any Designated Contractor to meet the specified installation interfacing and co-ordination, completion dates, which delay shall be caused otherwise than by fault of the Contractor, or, if compliance with sub-clause (f) herein shall involve the Contractor in delay beyond that which could be reasonably foreseen by an experienced contractor at the time of tender, then the Engineer shall take such delay into account in determining any extension of time to which the Contractor is entitled under the Contract.</p> <p>H. It shall be the responsibility of the Contractor to ensure that the full extent of the Works under the Contract and the works to be carried out by Designated Contractors within the Works or, in, on, under, through and over the Site are co-ordinated and integrated in their design, manufacture, installation and construction. Such responsibility shall neither be mitigated nor in any other way affected by virtue of similar responsibilities being placed on other contractors.</p> <p>The Contractor shall be deemed to have made adequate allowance in the Contract Price and in the Works Programme in respect of these obligations.</p> <p>If any act or omission of the Contractor whether directly or indirectly results in the delay in the execution of the works of a Designated Contractor, the Contractor, in addition to his liability in respect of liquidated damages if they become due, shall pay to the Employer, or the Engineer may deduct from Interim Payment Certificates such amount as the Engineer shall have certified in respect of additional payments or costs to the Designated Contractor in respect of such delay.</p>
New Clause-4.22	DELETED
New Clause-4.23	DELETED
New Clause-4.24	<p>Co-operation</p> <p>The Contractor shall, as specified in the Contract or as instructed by the Engineer, allow appropriate opportunities for carrying out work to:</p> <ul style="list-style-type: none"> (a) the Employer's Personnel, (b) any other contractors employed by the Employer, and (c) the personnel of any legally constituted public authorities, <p>who may be employed in the execution on or near the Site of any work not included in the Contract.</p> <p>Any such instruction shall constitute a Variation if and to the extent that it causes the Contractor to incur Unforeseeable Cost. Services for these personnel and other contractors may include the use of Contractor's Equipment, Temporary Works or access arrangements which are the responsibility of the Contractor.</p>

	<p>If, under the Contract, the Employer is required to give to the Contractor possession of any foundation, structure, plant or means of access in accordance with Contractor's Documents, the Contractor shall submit such documents to the Engineer in the time and manner stated in the Specification.</p>
<p>New Clause-4.25</p>	<p>Setting Out</p> <p>The Contractor shall set out the Works in relation to original points, lines and levels of reference specified in the Contract or notified by the Engineer. The Contractor shall be responsible for the correct positioning of all parts of the Works, and shall rectify any error in the positions, levels, dimensions or alignment of the works, notifying the Engineer within 28 days of the date of commencement</p> <p>In the event of such discrepancy arising during the course of the work, for which Employer's documents are handed over after the date of commencement, the contractor shall seek clarifications within 14 days of receipt of such documents</p> <p>The Employer shall be responsible for any errors in these specified or notified items of reference, but the Contractor shall use reasonable efforts to verify their accuracy before they are used.</p> <p>Contractor shall promptly notify the Employer and the Engineer of any error, omission, fault, or any other defect in the design, drawing or specifications for the works, which he discovers when reviewing the Contract Documents, and in the process of execution of the Works. The Contractor shall be responsible to ensure correlation in various drawings and bill of quantities, before commencement and execution of work. In case of any discrepancy the Contractor shall bring it to notice of the Engineer for clarification within 28 days of the issue of Letter of Acceptance. In the event of such discrepancy arising during the course of the work, for which drawings are given after the date of issue of Letter of Acceptance, the Contractor shall seek clarifications within 14 days of receipt of such drawings.</p> <p>Notwithstanding with any other provision, the Contractor shall have to pay penalty for damage to Railway cable in terms of clause C 15 of the JPO as given in para 1.2 of Chapter 1. (Safety and Security) of Section 8 and shall also indemnify the Employer against any losses, damages to property or life in terms of para 1.11 and 1.12 of the chapter 1. (Safety and Security) of Section 8.</p>
<p>New Clause-4.26</p>	<p>Safety Procedures</p> <p>The Contractor shall follow the provisions laid down in Chapter 1. (Safety and Security) of Section 8 and shall:</p> <ul style="list-style-type: none"> (a) comply with all applicable safety regulations, (b) take care for the safety of all persons entitled to be on the Site, (c) use reasonable efforts to keep the Site and Works clear of unnecessary obstruction so as to avoid danger to these persons, (d) provide fencing, lighting, guarding and watching of the Works until completion and taking over under Clause 46/PCC [Employer's Taking Over], and (e) provide any Temporary Works (including roadways, footways, guards and fences) which may be necessary, because of the execution of the Works, for the use and protection of the public and of owners and occupiers of adjacent land. <p>Additional Safety Precautions</p>

- (1) The Contractor shall comply with all the precautions as required for the safety of the workmen by the I.L.O Convention No.62 as far as they are applicable to the Contract. The Contractor shall provide all necessary safety appliances; such as safety goggles, helmets, masks, etc. to the workmen and the staff.
- (2) 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 (1/4 horizontal in 1 vertical).
- (3) 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 maybe necessary for the delivery of materials. Such scaffolding or staging shall be so fastened as to prevent it from swaying in from the support or structure.
- (4) 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 (3) above.
- (5) 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.
- (6) 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.
- (7) Adequate precautions shall be taken to prevent danger from electrical equipment. Adequate safety measures shall be taken when any work is undertaken near any live highly charged electric wire. Necessary shutdown may be arranged, where and whenever essential. All rules in force in this connection shall be fully complied with. The Contractor shall ensure all precautions to prevent any accidents due to electrocution or otherwise.
- (8) 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

	<p>proceedings to any such person or which may with the consent of the Contractor be paid to compromise any claim by any such person.</p> <p>(9) 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 metres 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.</p> <p>(10) Demolition : Before any demolition work is commenced and also during the process of the work :</p> <ul style="list-style-type: none"> (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. <p>(11) 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.</p> <ul style="list-style-type: none"> (a) Workers employed on mixing asphaltic materials, cement, lime mortars, concrete etc. shall be provided with protective footwear and protective goggles. (b) Those engaged in handling any material, which is injurious to the eyes, shall be provided with protective goggles. (c) Those engaged in welding works shall be provided with welder's protective eye-shield. (d) Stone breakers shall be provided with protective goggles and protective clothing and seated at sufficiently safe intervals. (e) When workers are employed in sewers and manhole, 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. <p>(12) The Contractor shall not employ men below the age of 18 years and women, on the work of painting with products containing lead in any form. Whenever men above the age of 18 years are employed on the work of lead painting, the following precautions shall be taken</p>
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	<p>(a) No paint containing lead or lead products shall be used except in the form of paste or readymade paint.</p> <p>(b) Suitable face masks shall be supplied for use by workers when paint is applied in the form of spray or a surface having lead paint dry rubbed and scrapped.</p> <p>(c) Overalls shall be supplied by the Contractor to workmen and adequate facilities shall be provided to enable workers to wash during and at the close of any day's work.</p> <p>13) 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.</p> <p>(14) Use of hoisting machines and tackle including their attachments, anchorage and supports shall conform to the following:</p> <p>(i) 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.</p> <p>(ii) 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</p> <p>a) Every crane driver or hoisting appliance operator shall be properly qualified and no person under the age of 21 shall be in charge of any hoisting machine including scaffold equipment. Only trained men over the age of 21 shall be permitted to give signals to such plant and appliance operators.</p> <p>For every hoisting machine and every chain hook, shackle, swivel and pulley 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.</p> <p>b) In case of the Employer's machine, safe working load shall be notified by the Engineer or his Representative. As regards Contractor's machines, the Contractor shall notify safe working load of each machine to the Engineer or his Representative, whenever he brings it to the site of work and get it verified by him.</p> <p>(15) 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,</p>
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	<p>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 materials which are good conductor of electricity.</p> <p>(16) 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.</p> <p>(17) 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.</p> <p>(18) 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.</p> <p>(19) Notwithstanding anything contained in conditions (1) to (17) above, the Contractor shall at its own costs, 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.</p> <p>(20) For work carried out in the vicinity of any wharf or quay, the Contractor shall abide by all the provisions of the Dock Workers (Safety, Health and Welfare) Scheme, 1961.</p> <p>(21) The Contractor shall at his own expense provide protective safety Equipment like gloves and footwear for all labour engaged on concrete mixing work and all other types of working involving the use of tar, cement, etc. to the satisfaction of the Engineer or his Representative, and on his failure to do so, the employer shall be entitled to provide the same and recover the cost from the Contractor.</p> <p>The Contractor shall be responsible for observance, by the sub-contractors, of the foregoing provisions.</p> <p>(23) All construction labour at all-time shall use personal protective equipment like, safety shoes, helmets and reflective jackets in all activities at site. This shall be ensured without fail on each work site. Failing to comply with this, provision shall attract penalty of Rs. 500/- per occasion per staff.</p> <p>Notwithstanding with any other provision, the Contractor shall have to pay penalty for damage to Railway cable in terms of clause C 15 of the JPO as given in para 1.2 of Chapter 1. (Safety and Security) of Section 8 and shall also indemnify the Employer against any losses, damages to property or life in terms of para 1.11 and 1.12 of the chapter 1. (Safety and Security) of Section 8).</p>
New Clause-4.27	<p>Quality Assurance</p> <p>The Contractor shall institute a quality assurance system to demonstrate compliance with the requirements of the Contract. The system shall be in accordance with the details stated in the Contract. The Engineer shall be entitled to audit any aspect of the system.</p> <p>Details of all procedures and compliance documents shall be submitted to the Engineer for information before each design and execution stage is commenced. When any document</p>

	<p>of a technical nature is issued to the Engineer, evidence of the prior approval by the Contractor himself shall be apparent on the document itself.</p> <p>Compliance with the quality assurance system shall not relieve the Contractor of any of his duties, obligations or responsibilities under the Contract.</p> <p>Quality Control</p> <p>Within 28 days of the issue of the Letter of acceptance, the Contractor shall submit to the Engineer, for his consent, his proposed Site Quality Plan based on the Outline Quality Plan and the Employer's Requirements. The quality manual should address the quality system as required by ISO 9001-1991. Any supplement to the Site Quality Plan shall be submitted at least 14 days before commencement of the relevant work.</p> <p>Upon the Engineer notifying his consent to the Site Quality Plan, or any supplement thereto, the Contractor shall, adhere to the principles and procedures contained in such document, except where the Engineer gives his consent to any amended or varied version thereof. The Contractor shall cause any sub-contractors to adhere to this Plan.</p> <p>The Contractor shall appoint a suitably qualified and experienced person, not otherwise engaged in the performance of the Contract, to act as manager of the quality assurance system and shall provide such other personnel and resources as required to ensure effective operation of the quality assurance system. The said manager shall carry out audits of the application of the quality assurance system, and ensure effective quality control and delivery of quality assurance.</p> <p>The Contractor shall provide all necessary access, assistance and facilities to enable the Engineer to carry out surveillance visits both on and off the Site to verify that the quality assurance system is being properly and fully implemented. No extra payment shall be made in this regard and the cost of the Work under this element shall be deemed to be included in the Contract Price.</p>
<p>New Clause-4.28</p>	<p>Site Data</p> <p>The Employer shall have made available to the Contractor for his information, prior to the Base Date, all relevant data in the Employer's possession on sub-surface and hydrological conditions at the Site, including environmental aspects. The Employer shall similarly make available to the Contractor all such data which come into the Employer's possession after the Base Date. The Contractor shall be responsible for interpreting all such data.</p> <p>To the extent which was practicable (taking account of cost and time), the Contractor shall be deemed to have obtained all necessary information as to risks, contingencies and other circumstances which may influence or affect the Bid or Works. To the same extent, the Contractor shall be deemed to have inspected and examined the Site, its surroundings, the above data and other available information, and to have been satisfied before submitting the Bid as to all relevant matters, including (without limitation):</p> <ul style="list-style-type: none"> (a) the form and nature of the Site, including sub-surface conditions, (b) the hydrological and climatic conditions, (c) the extent and nature of the work and Goods necessary for the execution and completion of the Works and the remedying of any defects, (d) the Laws, procedures and labour practices of the Country, and (e) the Contractor's requirements for access, accommodation, facilities, personnel, power, transport, water and other services.

	<p>(f) Data made available by the Employer in accordance with the preceding paragraph shall be deemed to include data listed elsewhere in the contract as open for inspection at the address stipulated in the Contract.</p>
<p>New Clause-4.29</p>	<p>Sufficiency of the Accepted Contract Amount</p> <p>The Contractor shall be deemed to:</p> <ul style="list-style-type: none"> a) have satisfied himself as to the correctness and sufficiency of the Accepted Contract Amount, and b) have based the Accepted Contract Amount on the data, interpretations, necessary information, inspections, examinations and satisfaction as to all relevant matters referred to in New-Clause 4.28/PCC [Site Data]. <p>Unless otherwise stated in the Contract, the Accepted Contract Amount covers all the Contractor's obligations under the Contract (including those under Provisional Sums, if any) and all things necessary for the proper execution and completion of the Works and the remedying of any defects.</p>
<p>New Clause-4.30</p>	<p>Unforeseeable Physical Conditions</p> <p>In this Sub-Clause, "physical conditions" means natural physical conditions and man-made and other physical obstructions and pollutants, which the Contractor encounters at the Site when executing the Works, including sub-surface and hydrological conditions but excluding climatic conditions.</p> <p>If the Contractor encounters adverse physical conditions which he considers to have been Unforeseeable, the Contractor shall give notice to the Engineer as soon as practicable.</p> <p>This notice shall describe the physical conditions, so that they can be inspected by the Engineer, and shall set out the reasons why the Contractor considers them to be Unforeseeable. The Contractor shall continue executing the Works, using such proper and reasonable measures as are appropriate for the physical conditions, and shall comply with any instructions which the Engineer may give. If an instruction constitutes a Variation, Clause 34/PCC [Variations and Adjustments] shall apply.</p> <p>If and to the extent that the Contractor encounters physical conditions which are Unforeseeable, gives such a notice, and suffers delay and/or incurs Cost due to these conditions, the Contractor shall be entitled subject to Sub-Clause 4.1/SCC [Contractor's Claims] to:</p> <ul style="list-style-type: none"> (a) An extension of time for any such delay, if completion is or will be delayed, under Sub-Clause 26.5/PCC [Extension of Time for Completion], and (b) Payment of any such Cost, which shall be included in the Contract Price. <p>After receiving such notice and inspecting and/or investigating these physical conditions, the Engineer shall proceed in accordance with New-Clause 3.5/PCC [Determinations] to agree or determine (i) whether and (if so) to what extent these physical conditions were Unforeseeable, and (ii) the matters described in sub-paragraphs (a) and (b) above related to this extent.</p> <p>However, before additional Cost is finally agreed or determined under sub-paragraph (ii), the Engineer may also review whether other physical conditions in similar parts of the Works (if any) were more favourable than could reasonably have been foreseen when the</p>

	<p>Contractor submitted the Bid. If and to the extent that these more favourable conditions were encountered, the Engineer may proceed in accordance with New-Clause 3.5/PCC [Determinations] to agree or determine the reductions in Cost which were due to these conditions, which may be included (as deductions) in the Contract Price and Payment Certificates. However, the net effect of all adjustments under sub-paragraph (b) and all these reductions, for all the physical conditions encountered in similar parts of the Works, shall not result in a net reduction in the Contract Price.</p> <p>The Engineer may take account of any evidence of the physical conditions foreseen by the Contractor when submitting the Bid, which may be made available by the Contractor, but shall not be bound by any such evidence.</p>
<p>New Clause-4.31</p>	<p>Rights of Way and Facilities</p> <p>The Contractor shall bear all costs and charges for special and/or temporary rights-of-way which he may require, including those for access to the Site. The Contractor shall also obtain, at his risk and cost, any additional facilities outside the Site which he may require for the purposes of the Works.</p> <p>In case any operation connected with traffic necessitates diversion, obstruction or closure of any road, railway or any other right of way, the approval of the Engineer and the concerned authorities shall be obtained well in advance by the Contractor.</p> <p>Provided that if it is found necessary for the Contractor to move one or more loads of heavy constructional plants and equipment, materials or Pre-constructed units or parts of units of work over roads, highways, bridges on which such oversized and overweight items that are not normally to be moved, the contractor shall obtain prior permission from the concerned authorities.</p> <p>Payments for complying with the requirements, if any, for protection 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 quoted contract price.</p>
<p>New Clause-4.32</p>	<p>Avoidance of Interference</p> <p>The Contractor shall not interfere unnecessarily or improperly with:</p> <ul style="list-style-type: none"> a) the convenience of the public, or b) the access to and use and occupation of all roads and footpaths, irrespective of whether they are public or in the possession of the Employer or of others or c) Passenger amenities at stations and station platforms. <p>The Contractor shall indemnify and hold the Employer harmless against and from all damages, losses and expenses (including legal fees and expenses) resulting from any such unnecessary or improper interference.</p>
<p>New Clause-4.33</p>	<p>Access Route</p> <p>The Contractor shall be deemed to have been satisfied as to the suitability and availability of access routes to the Site. The Contractor shall use reasonable efforts to prevent any road or bridge from being damaged by the Contractor's traffic or by the Contractor's Personnel. These efforts shall include the proper use of appropriate vehicles and routes.</p> <p>Except as otherwise stated in these Conditions:</p>

	<ul style="list-style-type: none"> (a) the Contractor shall (as between the Parties) be responsible for any maintenance which may be required for his use of access routes; (b) the Contractor shall provide all necessary signs or directions along access routes, and shall obtain any permission which may be required from the relevant authorities for his use of routes, signs and directions; (c) the Employer shall not be responsible for any claims which may arise from the use or otherwise of any access route; (d) the Employer does not guarantee the suitability or availability of particular access routes; and (e) Costs due to non-suitability or non-availability, for the use required by the Contractor, of access routes shall be borne by the Contractor.
New Clause-4.34	<p>Transport of Goods</p> <p>Unless otherwise stated in the Special Conditions of Contract:</p> <ul style="list-style-type: none"> (a) the Contractor shall give the Engineer not less than 21 days' notice of the date on which any Plant or a major item of other Goods will be delivered to the Site; (b) the Contractor shall be responsible for packing, loading, transporting, receiving, unloading, storing and protecting all Goods and other things required for the Works; and (c) the Contractor shall indemnify and hold the Employer harmless against and from all damages, losses and expenses (including legal fees and expenses) resulting from the transport of Goods, and shall negotiate and pay all claims arising from their transport.
New Clause-4.35	<p>Contractor's Equipment</p> <p>The Contractor shall be responsible for all Contractors' Equipment. When brought on to the Site, Contractor's Equipment shall be deemed to be exclusively intended for the execution of the Works. The Contractor shall not remove from the Site any major items of Contractor's Equipment without the consent of the Engineer. However, consent shall not be required for vehicles transporting Goods or Contractor's Personnel off Site</p> <p>In the event of Contractor imports any equipment the following shall apply"</p> <p>A. Custom Clearance: The Employer will assist the contractor, when required by furnishing letters of recommendation for obtaining expeditious clearance through customs of constructional plants, material and other things required for the works and then for re-export, if any. The following publications, may be referred to by the contractor for guidance about custom regulations etc :</p> <ul style="list-style-type: none"> i. Import & export policy, together with amendments, if any, published by Govt. of India, Ministry of Commerce.. ii. Hand Book of Procedures, together with amendments, if any, Volume 1 and 2 published by Ministry of Commerce. iii. Customs Tariff, together with amendments, if any published by Central Customs. <p>The Contractor shall be responsible to follow the latest rules and regulations without any liability of the Employer.</p>

	<p>B. Re-export of Contractors equipment: The contractor shall obtain all the relevant information regarding procedure for the import and subsequent re-export of his equipment and materials from the Chief Controller of Imports and Exports, Bangalore, and shall inform himself and keep himself informed on the details of custom charges and draw-back regulations as applicable to the items of Constructional plant. The contractor shall provide the necessary guarantee/bonds where these are required by the customs notwithstanding that import licenses may be granted in the name of Employer.</p> <p>C. Notwithstanding the provisions mentioned above, Contractor's Equipment, including essential spare parts therefore, imported by the Contractor for the sole purpose of executing the Contract shall be temporarily exempt from the payment of import duties and taxes upon initial importation, provided the Contractor shall post with the customs authorities at the port of entry an approved export bond or bank guarantee, valid until the Time for Completion plus six months, in an amount equal to the full import duties and taxes which would be payable on the assessed imported value of such Contractor's Equipment and spare parts, and callable in the event the Contractor's Equipment is not exported from the Country on completion of the Contract. A copy of the bond or bank guarantee endorsed by the custom authorities shall be provided by the Contractor to the Employer upon the importation of individual items of Contractor's Equipment and spare parts. Upon export of individual items of Contractor's Equipment or spare parts, or upon the completion of the Contract, Contractor shall prepare for approval by the customs authority the authorities, an assessment of the residual value of the Contractor's Equipment and spare parts to be exported based on the depreciation scale(s) and other criteria used by the customs authorities for such purposes under the provisions of the applicable Laws. Import duties and taxes shall be due and payable to the customs authorities by the Contractor on (a) the difference between the initial imported value and the residual value of the contractor's equipment and spare parts to be exported and (b) on the initial imported value that contractor's equipment and spare parts remaining in the Country after completion of the Contract. Upon payment of such dues within 28 days of being invoiced, the bond or bank guarantee shall be reduced or released accordingly; otherwise the security shall be called in the full amount remaining in the Country.</p> <p>D. Conditions of hire of the contractor's equipment: A certified copy of the agreement in respect of any item of Equipment held by contractor under any agreement for hire or hire purchase thereof, shall be supplied to the Engineer/Employer."</p>
<p>New Clause-4.36</p>	<p>Protection of the Environment</p> <p>The Contractor shall take all reasonable steps to protect the environment (both on and off the Site) and to limit damage and nuisance to people and property resulting from pollution, noise and other results of his operations.</p> <p>The Contractor shall ensure that emissions, surface discharges and effluent from the Contractor's activities shall not exceed the values stated in the Specification or prescribed by applicable Laws.</p>
<p>New Clause-4.37</p>	<p>Electricity, Water and Gas</p> <p>The Contractor shall, except as stated below, be responsible for the provision of all power, water and other services he may require.</p> <p>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</p>

	<p>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.</p> <p>The quantities consumed and the amounts due (at these prices) for such services shall be agreed or determined by the Engineer in accordance with New-Clause 2.4/PCC [Employer's Claims] and New-Clause 3.5/PCC [Determinations]. The Contractor shall pay these amounts to the Employer.</p>
New Clause-4.38	<p>Employer's, Equipment and Free-Issue Material</p> <p>The Employer shall make the Employer's Equipment (if any) available for the use of the Contractor in the execution of the Works in accordance with the details, arrangements and prices stated in the Specification. Unless otherwise stated in the Specification:</p> <p>(a) the Employer shall be responsible for the Employer's Equipment, except that</p> <p>(b) the Contractor shall be responsible for each item of Employer's Equipment whilst any of the Contractor's Personnel is operating it, driving it, directing it or in possession or control of it.</p> <p>The appropriate quantities and the amounts due (at such stated prices) for the use of Employer's Equipment shall be agreed or determined by the Engineer in accordance with New-Clause 2.4/PCC [Employer's Claims] and New-Clause 3.5/PCC [Determinations]. The Contractor shall pay these amounts to the Employer.</p> <p>The Employer shall supply, free of charge, the "free-issue materials" (if any) in accordance with the details stated in the Contract data.</p> <p>The Employer shall, at his risk and cost, provide these materials at the time and place specified in the Contract. The Contractor shall then visually inspect them, and shall promptly give notice to the Engineer of any shortage, defect or default in these materials. Unless otherwise agreed by both Parties, the Employer shall immediately rectify the notified shortage, defect or default.</p> <p>In case materials are handed over, in accordance with the procedure prescribed by the Engineer, after proper measurement and accounted for, the contractor shall be solely liable for any shortage, damage, defect or default in such material, and shall indemnify the Employer until the final account of materials is made by the Contractor on completion of the work.</p>
New Clause-4.39	<p>Progress Reports</p> <p>Unless otherwise stated in the Special Conditions of Contract, monthly progress reports shall be prepared by the Contractor and submitted to the Engineer in six copies. The first report shall cover the period up to the end of the first calendar month following the Commencement Date. Reports shall be submitted monthly thereafter, each within 7 days after the last day of the period to which it relates.</p> <p>Reporting shall continue until the Contractor has completed all work which is known to be outstanding at the completion date stated in the Taking-Over Certificate for the Works.</p> <p>Each report shall include:</p> <p>Charts and detailed descriptions of progress, including each stage of design (if any), Contractor's Documents, procurement, manufacture, delivery to Site, construction, erection</p>

	<p>and testing; and including these stages for work by each nominated Subcontractor (as defined in Clause 7/PCC (Nominated Subcontractors)),</p> <p>photographs showing the status of manufacture and of progress on the Site; for the manufacture of each main item of Plant and Materials, the name of the manufacturer, manufacture location, percentage progress, and the actual or expected dates of:</p> <ul style="list-style-type: none"> (i) commencement of manufacture, (ii) Contractor's inspections, (iii) tests, and (iv) shipment and arrival at the Site; <p>the details described in Sub-Clause 1.10/SCC of PCC [Records of Contractor's Personnel and Equipment];</p> <ul style="list-style-type: none"> a) copies of quality assurance documents, test results and certificates of Materials; b) list of notices given under New-Clause 2.4/PCC [Employer's Claims] and notices given under Sub-Clause 4.1/SCC [Contractor's Claims]; c) safety statistics, including details of any hazardous incidents and activities relating to environmental aspects and public relations; and d) Comparisons of actual and planned progress of all activities, with details of any events or circumstances which may jeopardise the completion in accordance with the Contract, and the measures being (or to be) adopted to overcome delays.
New Clause-4.40	<p>Security of the Site</p> <p>Unless otherwise stated in the Special Conditions of Contract:</p> <ul style="list-style-type: none"> (a) the Contractor shall be responsible for keeping unauthorised persons off the Site, and (b) authorised persons shall be limited to the Contractor's Personnel and the Employer's Personnel; and to any other personnel notified to the Contractor, by the Employer or the Engineer, as authorised personnel of the Employer's other contractors on the Site.
New Clause-4.41	<p>Contractor's Operations on Site</p> <p>The Contractor shall confine his operations to the Site, and to any additional areas which may be obtained by the Contractor and agreed by the Engineer as working areas. The Contractor shall take all necessary precautions to keep Contractor's Equipment and Contractor's Personnel within the Site and these additional areas, and to keep them off adjacent land.</p> <p>During the execution of the Works, the Contractor shall keep the Site free from all unnecessary obstruction, and shall store or dispose of any Contractor's Equipment or surplus materials. The Contractor shall clear away and remove from the Site any wreckage, rubbish and Temporary Works which are no longer required.</p> <p>Upon the issue of a Taking-Over Certificate, the Contractor shall clear away and remove, from that part of the Site and Works to which the Taking-Over Certificate refers, all Contractor's Equipment, surplus material, wreckage, rubbish and Temporary Works. The Contractor shall leave that part of the Site and the Works in a clean and safe condition.</p> <p>However, the Contractor may retain on Site, during the Defects Notification Period, such Goods as are required for the Contractor to fulfill obligations under the Contract.</p>

<p>New Clause-4.42</p>	<p>Design – General Obligations:</p> <p>Drawings for Permanent works:</p> <p>Preliminary Drawings showing general dimensions & details elaborating the scope of work (not based on detailed design) will be supplied along with the Tender documents.</p> <p>Design, Drawings and Specifications:</p> <p>The Contractor shall Design the false work, form work, staging scheme etc. required to perform their work and shall get the same and related working drawings approved by the Engineer. The Contractor would supply 6 sets of these drawings to the Engineer for the latter's use.</p> <p>Shop Drawings</p> <p>Based on "Good for Construction" drawings issued by Engineer the Contractor shall prepare shop / fabrication drawings to scale as directed indicating the required details. The shop drawings shall be prepared before execution of work, after taking actual site dimensions and all existing and proposed services / structures etc. The shop / fabrication drawings shall be checked by independent consultant prior to submission to the Engineer for approval.</p> <p>Shop drawings submitted by the Contractor shall be in sufficient detail to indicate the type, size, arrangement, breakdown for packing and shipment, the external connections, fixing arrangements required, the dimensions required for installation and interconnections with other equipment and materials, clearances and spaces required between various portions and any other information specifically called for.</p> <p>Approval of Engineer of any such proposal / drawings shall not relieve the contractor of his responsibility of sufficiency of such works. It shall be the responsibility of the Contractor to promptly bring to the notice of the Engineer any error or discrepancy in the Contract documents and obtains his orders thereon. Only stated dimensions are to be taken and not those obtained from scaling drawings. In case any feature of the work is not fully described and set forth in the Drawings and Specifications, the Contractor shall forthwith apply to the Engineer for further instructions, Drawings or Specifications.</p>
<p>New Clause-4.43</p>	<p>Fossils</p> <p>All fossils, coins, articles of value or antiquity, and structures and other remains or items of geological or archaeological interest found on the Site shall be placed under the care and authority of the Employer. The Contractor shall take reasonable precautions to prevent Contractor's Personnel or other persons from removing or damaging any of these findings.</p> <p>The Contractor shall, upon discovery of any such finding, promptly give notice to the Engineer, who shall issue instructions for dealing with it. If the Contractor suffers delay and/or incurs Cost from complying with the instructions, the Contractor shall give a further notice to the Engineer and shall be entitled subject to Sub-Clause 4.1/SCC [Contractor's Claims] to:</p> <p>(a) an extension of time for any such delay, if completion is or will be delayed, under Sub-Clause 26.5/PCC [Extension of Time for Completion], and</p> <p>(b) payment of any such Cost, which shall be included in the Contract Price.</p> <p>After receiving this further notice, the Engineer shall proceed in accordance with New-Clause 3.5/PCC [Determinations] to agree or determine these matters.</p>

	5. PLANT, MATERIALS AND WORKMANSHIP.
New Clause-5.1	<p>Manner of Execution</p> <p>The Contractor shall carry out the manufacture of Plant, the production and manufacture of Materials, and all other execution of the Works:</p> <ul style="list-style-type: none"> (a) in the manner (if any) specified in the Contract, (b) in a proper workmanlike and careful manner, in accordance with recognised good practice, and (c) with properly equipped facilities and non-hazardous Materials, except as otherwise specified in the Contract.
New Clause-5.2	<p>Samples</p> <p>The Contractor shall submit the following samples of Materials, and relevant information, to the Engineer for consent prior to using the Materials in or for the Works:</p> <ul style="list-style-type: none"> (a) manufacturer's standard samples of Materials and samples specified in the Contract, all at the Contractor's cost, and (b) additional samples instructed by the Engineer as a Variation. <p>Each sample shall be labelled as to origin and intended use in the Works.</p>
New Clause-5.3	<p>Inspection</p> <p>The Employer's Personnel shall at all reasonable times:</p> <ul style="list-style-type: none"> (a) have full access to all parts of the Site and to all places from which natural Materials are being obtained, and (b) during production, manufacture and construction (at the Site and elsewhere), be entitled to examine, inspect, measure and test the materials and workmanship, and to check the progress of manufacture of Plant and production and manufacture of Materials. <p>The Contractor shall give the Employer's Personnel full opportunity to carry out these activities, including providing access, facilities, permissions and safety equipment. No such activity shall relieve the Contractor from any obligation or responsibility.</p> <p>The Contractor shall give notice to the Engineer whenever any work is ready and before it is covered up, put out of sight, or packaged for storage or transport. The Engineer shall then either carry out the examination, inspection, measurement or testing without unreasonable delay, or promptly give notice to the Contractor that the Engineer does not require to do so. If the Contractor fails to give the notice, he shall, if and when required by the Engineer, uncover the work and thereafter reinstate and make good, all at the Contractor's cost.</p>
New Clause-5.4	<p>Testing</p> <p>This Sub-Clause shall apply to all tests specified in the Contract, other than the Tests after Completion (if any).</p> <p>The Contractor shall provide all apparatus, assistance, documents and other information, electricity, equipment, fuel, consumables, instruments, labour, materials, and suitably qualified and experienced staff, as are necessary to carry out the specified tests efficiently.</p>

	<p>The Contractor shall agree, with the Engineer, the time and place for the specified testing of any Plant, Materials and other parts of the Works.</p> <p>The Engineer may, under Clause 34/PCC [Variations and Adjustments], vary the location or details of specified tests, or instruct the Contractor to carry out additional tests. If these varied or additional tests show that the tested Plant, Materials or workmanship is not in accordance with the Contract, the cost of carrying out this Variation shall be borne by the Contractor, notwithstanding other provisions of the Contract.</p> <p>The Engineer shall give the Contractor not less than 24 hours' notice of the Engineer's intention to attend the tests. If the Engineer does not attend at the time and place agreed, the Contractor may proceed with the tests, unless otherwise instructed by the Engineer, and the tests shall then be deemed to have been made in the Engineer's presence.</p> <p>If the Contractor suffers delay and/or incurs Cost from complying with these instructions or as a result of a delay for which the Employer is responsible, the Contractor shall give notice to the Engineer and shall be entitled subject to Sub-Clause 4.1/SCC [Contractor's Claims] to:</p> <ul style="list-style-type: none"> (a) an extension of time for any such delay, if completion is or will be delayed, under Sub-Clause 26.5/PCC [Extension of Time for Completion], and (b) payment of any such Cost, which shall be included in the Contract Price. <p>After receiving this notice, the Engineer shall proceed in accordance with New--Clause 3.5/PCC [Determinations] to agree or determine these matters.</p> <p>The Contractor shall promptly forward to the Engineer duly certified reports of the tests. When the specified tests have been passed, the Engineer shall endorse the Contractor's test certificate, or issue a certificate to him, to that effect. If the Engineer has not attended the tests, he shall be deemed to have accepted the readings as accurate.</p>
New Clause-5.5	<p>Rejection</p> <p>If, as a result of an examination, inspection, measurement or testing, any Plant, Materials or workmanship is found to be defective or otherwise not in accordance with the Contract, the Engineer may reject the Plant, Materials or workmanship by giving notice to the Contractor, with reasons. The Contractor shall then promptly make good the defect and ensure that the rejected item complies with the Contract.</p> <p>If the Engineer requires this Plant, Materials or workmanship to be retested, the tests shall be repeated under the same terms and conditions. If the rejection and retesting cause the Employer to incur additional costs, the Contractor shall subject to New-Clause 2.4/PCC [Employer's Claims] pay these costs to the Employer.</p>
New Clause-5.6	<p>Remedial Work</p> <p>Notwithstanding any previous test or certification, the Engineer may instruct the Contractor to:</p> <ul style="list-style-type: none"> (a) remove from the Site and replace any Plant or Materials which is not in accordance with the Contract, (b) remove and re-execute any other work which is not in accordance with the Contract, and

	<p>(c) Execute any work which is urgently required for the safety of the Works, whether because of an accident, unforeseeable event or otherwise.</p> <p>The Contractor shall comply with the instruction within a reasonable time, which shall be the time (if any) specified in the instruction, or immediately if urgency is specified under sub-paragraph (c).</p> <p>If the Contractor fails to comply with the instruction, the Employer shall be entitled to employ and pay other persons to carry out the work. Except to the extent that the Contractor would have been entitled to payment for the work, the Contractor shall subject to New-Clause 2.4/PCC [Employer's Claims] pay to the Employer all costs arising from this failure.</p>
New Clause-5.7	<p>Ownership of Plant and Materials</p> <p>Each item of Plant and Materials shall, to the extent consistent with the Laws of the Country, become the property of the Employer at whichever is the earlier of the following times, free from liens and other encumbrances:</p> <p>(i) when it is delivered to the Site;</p> <p>(ii) when the Contractor is entitled to payment of the value of the Plant and Materials under Sub-Clause 26.11/PCC [Payment for Plant and Materials in Event of Suspension].</p> <p>Unless otherwise stated in the Specification, the Contractor shall pay all royalties, rents and other payments for:</p> <p>a) natural Materials obtained from outside the Site, and</p> <p>b) the disposal of material from demolitions and excavations and of other surplus material (whether natural or man-made), except to the extent that disposal areas within the Site are specified in the Contract.</p>
	6. Defect Liability
New Clause-6.1	<p>Completion of Outstanding Work and Remedying Defects</p> <p>In order that the Works and Contractor's Documents, and each Section, shall be in the condition required by the Contract (fair wear and tear excepted) by the expiry date of the relevant Defects Notification Period or as soon as practicable thereafter, the Contractor shall:</p> <p>(a) complete any work which is outstanding on the date stated in a Taking-Over Certificate, within such reasonable time as is instructed by the Engineer, and</p> <p>(b) execute all work required to remedy defects or damage, as may be notified by (or on behalf of) the Employer on or before the expiry date of the Defects Notification Period for the Works or Section (as the case may be).</p> <p>If a defect appears or damage occurs, the Contractor shall be notified accordingly, by (or on behalf of) the Employer.</p>
New Clause-6.2	<p>Cost of Remedying Defects</p> <p>All work referred to in sub-paragraph (b) of New-Clause 6.1/PCC [Completion of Outstanding Work and Remedying Defects] shall be executed at the risk and cost of the Contractor, if and to the extent that the work is attributable to:</p> <p>(a) any design for which the Contractor is responsible,</p>

	<p>(b) Plant, Materials or workmanship not being in accordance with the Contract, or</p> <p>(c) failure by the Contractor to comply with any other obligation.</p> <p>If and to the extent that such work is attributable to any other cause, the Contractor shall be notified promptly by (or on behalf of) the Employer, and Sub-Clause 34.1/PCC [Variation Procedure] shall apply</p>
New Clause-6.3	<p>Extension of Defects Notification Period</p> <p>The Employer shall be entitled subject to New-Clause 2.4/PCC [Employer's Claims] to an extension of the Defects Notification 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 Notification Period shall not be extended by more than two years.</p> <p>If delivery and/or erection of Plant and/or Materials was suspended under Sub-Clause 26.9/PCC [Suspension of Work] the Contractor's obligations under this Clause shall not apply to any defects or damage occurring more than two years after the Defects Notification Period for the Plant and/or Materials would otherwise have expired.</p>
New Clause-6.4	<p>Failure to Remedy Defects</p> <p>If the Contractor fails to remedy any defect or damage within a reasonable time, a date may be fixed by (or on behalf of) the Employer, on or by which the defect or damage is to be remedied. The Contractor shall be given reasonable notice of this date.</p> <p>If the Contractor fails to remedy the defect or damage by this notified date and this remedial work was to be executed at the cost of the Contractor under New-Clause 6.2/PCC [Cost of Remedying Defects], the Employer may (at his option):</p> <p>(a) Carry out the work himself or by others, in a reasonable manner and at the Contractor's cost, but the Contractor shall have no responsibility for this work; and the Contractor shall subject to New-Clause 2.4/PCC [Employer's Claims] pay to the Employer the costs reasonably incurred by the Employer in remedying the defect or damage;</p> <p>(b) require the Engineer to agree or determine a reasonable reduction in the Contract Price in accordance with New-Clause 3.5/PCC [Determinations]; or</p> <p>(c) if the defect or damage deprives the Employer of substantially the whole benefit of the Works or any major part of the Works, terminate the Contract as a whole, or in respect of such major part which cannot be put to the intended use. Without prejudice to any other rights, under the Contract or otherwise, the Employer shall then be entitled to recover all sums paid for the Works or for such part (as the case may be), plus financing costs and the cost of dismantling the same, clearing the Site and returning Plant and Materials to the Contractor.</p>
New Clause-6.5	<p>Removal of Defective Work</p> <p>If the defect or damage cannot be remedied expeditiously on the Site and the Employer gives consent, the Contractor may remove from the Site for the purposes of repair such items of Plant as are defective or damaged. This consent may require the Contractor to increase the amount of the Performance Security by the full replacement cost of these items, or to provide other appropriate security.</p>
New Clause-6.6	<p>Further Tests</p>

	<p>If the work of remedying of any defect or damage may affect the performance of the Works, the Engineer may require the repetition of any of the tests described in the Contract. The requirement shall be made by notice within 28 days after the defect or damage is remedied.</p> <p>These tests shall be carried out in accordance with the terms applicable to the previous tests, except that they shall be carried out at the risk and cost of the Party liable, under New-Clause 6.2/PCC [Cost of Remedying Defects], for the cost of the remedial work.</p>
New Clause-6.7	<p>Right of Access</p> <p>Until the Performance Certificate has been issued, the Contractor shall have such right of access to the Works as is reasonably required in order to comply with this Clause, except as may be inconsistent with the Employer's reasonable security restrictions.</p>
New Clause-6.8	<p>Contractor to Search</p> <p>The Contractor shall, if required by the Engineer, search for the cause of any defect, under the direction of the Engineer. Unless the defect is to be remedied at the cost of the Contractor under New-Clause 6.2/PCC [Cost of Remedying Defects], the Cost of the search shall be agreed or determined by the Engineer in accordance with New-Clause 3.5/PCC [Determinations] and shall be included in the Contract Price.</p>
New Clause-6.9	<p>Performance Certificate</p> <p>Performance of the Contractor's obligations shall not be considered to have been completed until the Employer has issued the Performance Certificate to the Contractor, stating the date on which the Contractor completed his obligations under the Contract.</p> <p>The Employer shall issue the Performance Certificate within 28 days after the latest of the expiry dates of the Defects Notification Periods, or as soon thereafter as the Contractor has supplied all the Contractor's Documents and completed and tested all the Works, including remedying any defects.</p> <p>Only the Performance Certificate shall be deemed to constitute acceptance of the Works.</p>
New Clause-6.10	<p>Unfulfilled Obligations</p> <p>After the Performance Certificate has been issued, each Party shall remain liable for the fulfilment of any obligation which remains unperformed at that time. For the purposes of determining the nature and extent of unperformed obligations, the Contract shall be deemed to remain in force.</p> <p>Emergency defect rectification</p> <p>If any defect or damage is one requiring immediate attention from safety, environmental or operational viewpoint, the Engineer has the authority to proceed with rectification in any manner suitable and deduct such sums from the Contract Price</p>
New Clause-6.11	<p>Clearance of Site</p> <p>Upon receiving the Performance Certificate, the Contractor shall remove any remaining Contractor's Equipment, surplus material, wreckage, rubbish and Temporary Works from the Site.</p> <p>If all these items have not been removed within 28 days after the Employer receives a copy of the Performance Certificate, the Employer may sell or otherwise dispose of any remaining items. The Employer shall be entitled to be paid the costs incurred in connection with, or attributable to, such sale or disposal and restoring the Site.</p>

	Any balance of the moneys from the sale shall be paid to the Contractor. If these moneys are less than the Employer's costs, the Contractor shall pay the outstanding balance to the Employer.
	7.MEASURMENT AND EVALUATION
New Clause 7.1	<p>Works to be Measured</p> <p>The Works shall be measured, and valued for payment, in accordance with this Clause.</p> <p>Whenever the Engineer requires any part of the Works to be measured, reasonable notice shall be given to the Contractor's Representative, who shall:</p> <ul style="list-style-type: none"> (a) promptly either attend or send another qualified representative to assist the Engineer in making the measurement, and (b) supply any particulars requested by the Engineer. <p>If the Contractor fails to attend or send a representative, the measurement made by (or on behalf of) the Engineer shall be accepted as accurate.</p> <p>Except as otherwise stated in the Contract, wherever any Permanent Works are to be measured from records, these shall be prepared by the Engineer. The Contractor shall, as and when requested, attend to examine and agree the records with the Engineer, and shall sign the same when agreed. If the Contractor does not attend, the records shall be accepted as accurate.</p> <p>If the Contractor examines and disagrees the records, and/or does not sign them as agreed, then the Contractor shall give notice to the Engineer of the respects in which the records are asserted to be inaccurate. After receiving this notice, the Engineer shall review the records and either confirm or vary them. If the Contractor does not so give notice to the Engineer within 14 days after being requested to examine the records, they shall be accepted as accurate.</p>
New Clause 7.2	<p>Method of Measurement</p> <p>Except as otherwise stated in the Contract and notwithstanding local practice:</p> <ul style="list-style-type: none"> (a) measurement shall be made of the net actual quantity of each item of the Permanent Works, and (b) the method of measurement shall be in accordance with the Bill of Quantities or other applicable Schedules.
New Clause 7.3	<p>Omissions</p> <p>Whenever the omission of any work form's part (or all) of a Variation, the value of which has not been agreed, if:</p> <ul style="list-style-type: none"> a) the Contractor will incur (or has incurred) cost which, if the work had not been omitted, would have been deemed to be covered by a sum forming part of the Accepted Contract Amount; b) the omission of the work will result (or has resulted) in this sum not forming part of the Contract Price; and c) this cost is not deemed to be included in the evaluation of any substituted work; <p>then the Contractor shall give notice to the Engineer accordingly, with supporting particulars. Upon receiving this notice, the Engineer shall proceed in accordance with New-</p>

	Clause 3.5/PCC [Determinations] to agree or determine this cost, which shall be included in the Contract Price.
New Clause 8	<p>FORCE MAJEURE</p> <p>If at any time, during the continuance of this contract, the performance in whole or in part by either party of any obligation under this contract shall be prevented or delayed by reason of any war, hostility, acts of public enemy, civil commotion, sabotage, serious loss or damage by fire, explosions, epidemics, pandemics, strikes, lockouts or acts of God (hereinafter referred to 'events') provided, notice of the happening of any such event is given by either party to the other within 14 days from the date of occurrence thereof, neither party shall by reason of such event, be entitled to terminate this contract nor shall either party have any claim for damages against the other in respect of such non-performance of delay in performance, and works under the contract shall be resumed as soon as practicable after such event has come to an end or ceased to exist, and decision of the Engineer as to whether the works have been so resumed or not shall be final and conclusive, PROVIDED FURTHER that if the performance in whole or in part of any obligation under this contract is prevented or delayed by reason of any such event for a continuous period exceeding 84 days, either party may at its option terminate the contract by giving notice to the other party.</p> <p>Payment and Release in case of Optional Termination</p> <p>Upon such termination, the Engineer shall determine the value of the work done and issue Payment Certificate which shall include:</p> <ol style="list-style-type: none"> The amounts payable for any work carried out for which a price is stated in the contract 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, the Contractor shall place the same at the Employer's disposal; Other Costs or liabilities supported by necessary documentary evidence which in the circumstances were reasonably and necessarily incurred by the Contractor in the expectation of completing the Works as per mutually agreed programme. the Cost of removal of Temporary Works and Contractor's Equipment from the Site at the return of these items to the Contractor's works in his country (or to any other destination at no greater cost).
New Clause-9	Defect liability period: 365 Days
New Clause-10	<p>Integrated testing and system commissioning</p> <p>Integrated Testing: Tests on Completion shall also include Integrated Testing. The Contractor shall, following satisfactory completion of tests on his works, equipment, sub-systems or system, perform, at the direction of the Engineer, programme of tests to verify and confirm the compatibility and complete performance of his works, equipment, sub-systems or system with the works, equipment, sub-systems or system provided by others.</p> <p>Compilation of Test Results: The results of the Integrated Testing and Commissioning shall be compiled and evaluated by the Engineer and the Contractor</p> <p>Retesting: If the Works, or a part thereof, or a Section, fail to pass the Integrated Testing and Commissioning, the Engineer may order such failed tests to be repeated with the same terms and conditions. If such failure and retesting result from a default of the Contractor and cause the Employer to incur costs, the same shall be recoverable from the Contractor</p>

	<p>by the Employer, and may be deducted by the Employer from any amount due, or to become due, to the Contractor.</p> <p>Failure to Pass Test: If the Works, or a part thereof, or a Section, fail to pass Integrated Testing and Commissioning and the Contractor in consequence proposes to make any adjustment or modification to the Works or a part thereof, or a section, the Engineer may, with the approval of the Employer, instruct the Contractor to carry out such adjustment or modification, at his own cost and to satisfy the requirements of Integrated Testing and Commissioning within such time as the Employer / Engineer may deem to be reasonable.</p> <p>Statutory Requirements: The Contractor shall carry out all statutory tests and trials, under the supervision of the Engineer, necessary for obtaining sanction of the competent authority for opening the system for public carriage of passengers as mentioned in the Special Conditions of Contract.</p>
<p>New clause-11</p>	<p>Conflict of Interest:</p> <p>The Contractor shall carry out all statutory tests and trials, under the supervision of the Engineer, necessary for obtaining sanction of the competent authority for opening the system for public carriage of passengers as mentioned in the Special Conditions of Contract.</p> <p>Conflict of Interest The remuneration of the Tenderer shall constitute the Tenderer's sole remuneration in connection with this Contract or the Services and, the Tenderers shall not accept for their own benefit any trade commission, discount or similar payment in connection with activities pursuant to this Contract or to the Services or in the discharge of their obligations hereunder, and the Tenderers shall use their best efforts to ensure that any Personnel either of them, similarly shall not receive any such additional remuneration Neither the Tenderer nor the Personnel of either of them shall engage, either directly or indirectly, in any of the following activities:</p> <p>(a) during the term of this Contract, any business or professional activities in India which would conflict with the activities assigned to them under this Contract</p> <p>The tenderer shall not be one of the following:</p> <p>(i) A firm which has been engaged by the Employer to provide consulting services for the preparation related to procurement for or implementation of this project.</p> <p>(ii) Any association/affiliation (inclusive of parent firms) of a firm or an organization mentioned in para (i) above.</p> <p>(iii) A Tenderer who lends, or temporarily seconds its personnel to firms or organizations which were engaged in consulting services for the preparation related to procurement for or implementation of the project, if the personnel would be involved in any capacity on the same project.</p> <p>Jurisdiction of Court in case of dispute or differences arising on account of this tender: Any suit or application, arising out of any dispute or differences on account of this tender shall be filed in a competent court at Bangalore, Karnataka only and no other court or any other district of the country shall have any jurisdiction in the matter.</p>
<p>New Clause-12</p>	<p>Special/Acceleration Advance</p> <p>Employer at his sole discretion, may provide Interest bearing Special/Acceleration Advance based on the recommendation of the Engineer to expedite works or to bring forward the</p>

	completion date(s) and on account of immediate additional mobilisation to complete balance works as targeted. The maximum cumulative Special/Acceleration Advance shall be 10% of the Accepted contract amount, which shall be released in stages as and when deemed appropriate as decided by the Engineer/Employer. The advance released at a time shall not exceed 2.5% of the Accepted contract amount.
New Clause-13	<p>Provisional Payment Against Material at Site.</p> <p>A provisional payment on account of main construction materials required for the Permanent Works shall be paid in INR only on request of the Contractor after these materials are brought to Site, against the Bank Guarantee and Insurance. The payment shall be limited to 80% of the actual value or assessed value of these materials on the basis of invoice and the total of such provisional payment on account of construction materials at a time shall be limited to three percent of original contract value or likely average consumption of such materials for three months, whichever is less and at any time the total outstanding provisional payment against material at site shall not exceed four percent of the original contract value. The valuation of the average consumption of such main construction materials shall be approved by the Engineer, whose decision shall be final. Materials which are of perishable nature should be adequately insured. Advances and provisional payments as admissible, shall be payable only on Contractor's written request to the Employer/Engineer.</p>
New Clause-14	Ruling Language- English
New Clause-15	Language for communications- English
New Clause-16	<p>Time for access to Site (After the date of commencement)</p> <p>Starting from the Date of Commencement, the section will be progressively handed over in 180 days.</p>
New clause-17	<p>Employers' Bank details for Letter of Credit</p> <p>(a) Nodal Branch Canara Bank, MG Road, Bangalore 560001 IFSC Code – CNRB0002636 A/c No - 0430201012110</p> <p>(b) Issuance/ reimbursing branch for LC Shall be indicated later.</p>

APPENDIX 1

SALIENT FEATURES OF SOME MAJOR LABOUR LAWS APPLICABLE TO ESTABLISHMENTS ENGAGED IN BUILDING AND OTHER CONSTRUCTION WORK

(The laws as current on the date of bid opening will apply)

- a) **Employees Compensation Act 1923:** The Act provides for compensation in case of injury by accident arising out of and during the course of employment.
- b) **Payment of Gratuity Act 1972:** Gratuity is payable to an employee under the Act on satisfaction of certain conditions on separation if an employee has completed 5 years service or more or on death the rate of 15 days wages for every completed year of service. The Act is applicable to all establishments employing 10 or more employees.
- c) **Employees Provident Fund and Miscellaneous Provisions Act 1952 (since amended):** The Act Provides for monthly contributions by the employer plus workers @ 10% or 8.33%. The benefits payable under the Act are:
 - (i) Pension or family pension on retirement or death, as the case may be.
 - (ii) Deposit linked insurance on the death in harness of the worker.
 - (iii) payment of P.F. accumulation on retirement/death etc.
- d) **Maternity Benefit Act 1951:** The Act provides for leave and some other benefits to women employees in case of confinement or miscarriage etc.
- e) **Contract Labour (Regulation & 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, by the Principal Employer by Law. The Principal Employer is required to take Certificate of Registration and the Contractor is required to take 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.
- f) **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 employments.
- g) **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.
- h) **Equal Remuneration Act 1979:** The Act provides for payment of equal wages for work of equal nature to Male and Female workers and for not making discrimination against Female employees in the matters of transfers, training and promotions etc.
- i) **Payment of Bonus Act 1965:** The Act is applicable to all establishments employing 20 or more employees. 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.7000/-per month or the minimum wage as fixed by the appropriate government whichever is higher. 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 this Act.

- j) **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.
- k) **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 in the Act and get the same certified by the designated Authority.
- l) **Trade Unions Act 1926:** The Act lays down the procedure for registration of trade unions of workmen and employers. The Trade Unions registered under the Act have been given certain immunities from civil and criminal liabilities.
- m) **Child and Adolescent Labour (Prohibition & 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.
- n) **Inter-State Migrant Workmen's (Regulation of Employment & 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, travelling expenses from home upto the establishment and back, etc.
- o) **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 the rate not exceeding 2% of the cost of construction as may be modified 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 accommodations for workers near the work place etc. The Employer to whom the Act applies has to obtain a registration certificate from the Registering Officer appointed by the Government.
As per Central Government's Notification No.S.O.2899 dated 26.09.1996 under this act, the cess shall be levied @1% of cost of construction works which shall be deducted from each bill of the payment due to the contractor.
- p) **Factories Act 1948:** The Act lays down the procedure for approval at 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 persons without the aid of power engaged in manufacturing process.
- q) **The Employees State Insurance Act, 1948 (Act No. 34 of 1948) (Provisions as extended from time to time):**An Act to provide for certain benefits to employees in case of sickness, maternity and 'employment injury' and to make provision for certain other matters in relation thereto.

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SECTION: 8

TECHNICAL SPECIFICATIONS

CPWD and Indian Railways Technical Specifications related to DSR of CPWD Delhi and USSOR / SWR can be seen from the respective departmental website.

ADDITIONAL SPECIAL CONDITION & SPECIFICATION FOR SUPPLY, FABRICATION, ERECTION & LAUNCHING OF STEEL GIRDERS FOR RAILWAY AND ROAD UNDER BRIDGES.

1.0 GENERAL

1.1. This specification covers **supply**, fabrication, assembling, erection and **launching** of Steel superstructure (Girders) and bearings.

1.2. The fabrication of steel girder bridges is being done by various Railway Workshops as well as through trade. The fabrication is governed by the provisions of;

- i)** Indian Railway Standard specification for fabrication and erection of steel girder bridges and locomotive turn-tables. (B1-2001).
- ii)** Indian Railway Standard Code of Practices for metal arc welding for structural steel bridges carrying rail cum road or pedestrian traffic (Adopted 1972 Revised 2001).
- iii)** GUIDELINES ON FABRICATION OF STEEL GIRDERS FOR CONSTRUCTION/FIELD ENGINEERS BS –110 (R)- issued by RDSO.

1.3. THE SCOPE OF WORK SHALL INCLUDE:

- (a) Supply, Fabrication, assembling and Erection of Open Web Steel Girders/Plate Girders and Composite Plate Girders for **Railway Bridges** (as per IR loading) and Bow String Steel Girders/ Composite Plate Girders (as per IRC loading) of specified span(s) as mentioned in GAD including erection and launching (with or without power and traffic power blocks, as applicable) for Rail/ **Road under Bridges** (RUBs.)
- (b) Providing and fixing in position standard fixed type POT bearing, free sliding type POT cum PTFE bearings, Spherical bearings as per approved drawings including designs of bearings wherever required..
- (c) Preparation of temporary Arrangement Drawings (TAD), Launching Scheme, Fabrication/Detailed Shop Drawings including drawing office dispatch lists (DODL) , and other documentation as required by Railway.
- (d) Preparation of Quality Assurance Plan (QAP) for super-structure including bearings.

(f) Other miscellaneous works as listed in Schedules / GCC/ SCC.

1.3.1. The contractors/agencies and officials associated with fabrication work should have thorough understanding of both the codes under para 1.2 (i & ii). However, the “GUIDELINES ON FABRICATION OF STEEL GIRDERS FOR CONSTRUCTION/FIELD ENGINEERS BS -110” , help the field engineers associated with execution of the fabrication work through trade and cover various aspects which require close attention of the field engineers for ensuring quality of the fabrication work. These guidelines are just to facilitate and not to supersede the two codes specified in para 1.2((i) &(ii) above. All engineers associated with fabrication are advised to understand the provision of IRS B1-2001 and Welded Bridge Code and take help from guidelines specified in para 1.2 (iii) above.

1.4. Site Inspection

Tenderers are requested to inspect the site and carry out careful examination to satisfy them as to the nature of work involved and facilities available at the site. They should note carefully all the existing structures and those under construction through other agencies. They should also study the suitability of utilizing the different equipment and the machinery that they intend to use for the execution of the work. The tenderer should also select suitable sites for the purpose of locating their store yard, laboratory, staff quarters etc., and satisfy themselves with regard to the feasibility of transporting the trusses from the yard to the final site of placement etc.

2.0 FABRICATION

2.1 General

The fabrication of the girders and its accessories shall be carried out by the contractor in his factory premises or in a well-established fabrication workshop to be set up by the contractor at bridge site or any other location as approved by the Engineer. The workshop staff shall have requisite experience, proven skill and experience in the technique of fabricating large components.

2.1.1 For Steel Girders of all bridges, other than Important Bridges, (as defined in IRS Substructure Code) including ROBs, the tendering firm shall be from RDSO approved list of firms for Steel Bridge Girder; in case the tendering firm is not in the list of RDSO approved firms for Steel Bridge Girder, then he will have to get the Steel Girder manufactured through an RDSO firm in the RDSO approved premises only. Further subject to condition that tendering firm fulfills other Technical eligibility criteria, as prescribed by the KRIDE in the tender and the Steel Girder to be manufactured in the RDSO approved premises only.

2.1.2. For the Steel Girders of Important Bridges, (as defined in IRS Substructure Code)besides RDSO approved firms, the tendering firm will have to get the Steel Girder manufactured through an RDSO approved firm in the RDSO

approved premises of firm. The agency will be permitted to set up a site fabrication workshop at site of work which meets the ' Standard Technical Requirements' (STR) for Steel Bridge Girder issued by RDSO which is appended in **Clause 31** of this Additional Special Condition and specification. The approval of the site fabrication workshop meeting with STR to be done by RDSO only and not by any other organisation.

- 2.1.3. Accuracy of fabrication shall be realized through controlled high precision jigs, fixtures and templates, which shall be inspected and passed by Inspection Agencies as specified in Clause 9.4 of this 'Additional Special Condition and specification'. The fabrication shall be preceded by **Quality Assurance plans** to be submitted by the contractor and every activity shall be documented in detail. The Quality Assurance Plans shall clearly indicate how individual processes such as cutting of raw steel, making, drilling, assembly riveting /welding, painting, handling etc. shall be monitored for quality. The quality parameters for monitoring shall be identified along with monitoring these identified quality parameters and shall also be specified in these quality plans .The contractor shall get these quality plans approved from Engineer before start of fabrication work. The Engineer shall be empowered to check the manufacturing process from time to time to ensure that the work is executed as per approved quality plans. The quality records shall be submitted to Engineer for record, after completion of fabrication work.
- 2.1.4. The works of fabrication in contractor's fabrication shop will at all times be open for inspection by Engineer or any other agency as nominated by Engineer. Before dispatch of fabricated steel work from the shops, the same will be inspected in the contractor's fabrication workshop by Engineer or any other authority/agency nominated by Engineer who will thereafter issue inspection certificate.
- 2.1.5. Any defect noticed during inspection in the execution of work shall be rectified or replaced by the contractor at his own cost. The decision of Engineer or any other agency nominated for inspection as to be rectified or replaced, shall be final and conclusive.
- 2.1.5. In the fabrication of girder, necessary arrangement and provision shall be kept for inspection facilities underneath the girder and also for carriage of service cables, pipe lines etc as per approved plans.

2.2 FABRICATION DRAWINGS

- 2.2.1. A set of latest approved drawings along with latest revisions should be available in the workshop/ with Agency. On the basis of standard drawings, Fabrication drawings shall be prepared by the fabricating Agency.
- 2.2.2. The contractor shall prepare detailed shop drawings including drawing office

dispatch lists (DODLs) on the basis of design drawings supplied by Engineer in such size and in such details as may be specified by Engineer.

- 2.2.3. The shop drawings shall be submitted to Engineer in triplicate. One copy of which will be returned after flame cutting, machining to obtain correct length and shape, tolerance provisions. Welding sequence, type and size of welding. No work of fabrication will be started without such approval being obtained. **Contractor has to arrange the proof checking of the working fabrication drawings from the nominated Institution/Consultant will be borne by the contractor. Nomination of the Institution/Consultant for proof checking works will be decided by concerned GM/CivilKRIDE. KRIDE will make all efforts to approve the drawings submitted by the contractor within reasonable time but no claim from contractor for any delay on this account shall be entertained by KRIDE.**
- 2.2.4 For Engineer's use and record, the contractor shall supply free of charge, four sets of prints on string paper and one set of neatly executed tracings of all approved detailed drawings and fabrication drawings, soon after communication of approval for use at site.

2.3 MAINTENANCE OF RECORDS BY FABRICATORS

The records of fabrication shall be maintained in the registers as per the formats given in Appendix I of IRS BI - 2001.

2.4 TOLERANCE IN FABRICATION

Fabrication tolerance for girders shall be as stipulated in Appendix II of IRS-BI-2001.

Permissible deviation for driven rivets shall be as stipulated in Appendix IV of IRS- BI-2001.

3.0 BRIEF DESIGN DATA

- (i) Steel Girders of Track Carrying Bridges are designed for 25 T/32.5T axle loading as per Indian Railway Bridge Rules and Standard Specifications.
- (ii) The composite girders of road carrying bridges are designed as per code of practice for Road bridges.
- (iii)** All panel joints are designed for vertical and transverse forces including secondary moments.
- (iv) The structure shall be fabricated to camber as per Steel Bridge Code and as provided in the approved drawings.
- (v) The deflection of girder is expected not to exceed the values as given in the approved drawing.
- (vi) All members of the girder and joints are to be either riveted or welded or bolted as shown in the approved structural drawing.

- (vii) No welding except where approved by the Engineer is to be carried out at site. All welding/riveting/bolting are to be carried out as per relevant IRS Specifications.
- (viii) The materials as well as execution of works shall be confirming to the following specifications and codes of practice (Latest Revision of the Specification /Codes & upto date correction slips to be referred).

3.1 INDIAN RAILWAY STANDARD CODES AND SPECIFICATIONS :

- (i) IR Specification for Fabrication of steel girder bridge & Locomotives turn tables (fabrication specification) - SERIAL NO.BI-2001 issued by RDSO, Reprint -2008 (Upto date)and BS-110 –**March 2016**.
- (ii) IRS : Bridge Rules (2008)
- (iii) IRS : Welded Bridge Code (1989)
- (iv) IRS : Steel Bridge Code (2003)
- (v) IRS : M-28 Specifications for electrodes.
- (vi) IRS : M-39 Specification for wire flux for SAW.
- (vii) IRS : Specification for Erection and Riveting of Bridge Girders.

3.2 INDIAN STANDARD SPECIFICATION

- (i) IS : 2062-2011 Specification for structural steel.
- (ii) IS : 813-1986 Scheme of symbols for welding.
- (iii) IS : 800-2007.
- (iv) IS : 9595-1996(R-2003) Manual for metal arc welding.
- (v) IS : 818-R 2003 Code of Practice for safety and Health requirements in electric and gas welding operations.
- (vi) IS : 2074, Ready mixed paints, Red Oxide Zinc chromate.
- (vii) IS : 2339-1963 : Aluminium paint
- (viii) IS : 2004-1991 Carbon steel forgings for general engineering purposes.
- (ix) IS : 1852-1985 Rolling and cutting tolerances for hot-rolled steel products.
- (x) IS : 1148 Rivet bars for structural purposes.
- (xi) IS : 1929-1982 Hot forged steel rivets for hot closing(12to36mm diameter)
- (xii) IS : 4353-1995 Recommendations of Sub-merged Arc welding of mild steel and low alloy steel.
- (xiii) IS : 3935 (shear connector)

3.3. INDIAN ROAD CONGRESS SPECIFICATION (ROB's)

- (i) IRC: 6 (loading & forces)
- (ii) IRC: 22 (Composite construction)
- (iii) IRC: 24 (Steel Road bridges)
- (iv) IRC: 83(ii) (POT PTFE bearing)

Note : All the codes mentioned under para 3.1,3.2 & 3.3 shall be used /followed with latest updates.

4.0 MATERIALS:

4.1 Steel

4.1.1. Steel grade conforming to IS 2062-2011 (with latest amendment) shall be used for all components of steel girder for all spans with quality as specified in the approved structural drawings.

4.1.2. Structural steel for the work shall be procured from following manufacturers:

1. Steel Authority of India Ltd (SAIL)
2. Tata Iron & Steel Company Ltd .(TISCO)
3. Indian Iron & Steel Company (IISCO)
4. Rastriya Ispat Nigam Ltd. (RINL)
5. JSW Steel Ltd.
6. ESSAR steel Ltd.

In case of non-availability of steel from above sources, it can also be procured from any other manufacturers if so approved by General Manager/Civil/KRIDE concerned, duly satisfying that Structural steel procured is as per specifications mentioned in BIS's document – IS: 2062,. In this case independent tests shall be conducted, to ensure that the materials procured conform to the specifications. Manufacturer's test certificate shall be obtained along with invoice / bill.

4.1.3. It may be noted that quality of steel used for fabrication shall be the essence of the contract & shall be rigidly followed. Steel sections to be supplied by the manufacturers shall be ultrasonically tested as per codal provisions at the manufacturer's premises before dispatch. The contractor on receipt of supply in his factory premises/fabrication workshop may have to carryout random USFD testing as per standards laid down in various codes and verify them with the list received from manufacturers, if instructed by the inspection agency/ Site Engineer. Only tested steel shall be used for fabrication.

4.1.4. All rolled sections shall bear cast mark and shall be of such length as to avoid butt welded joints in components of truss. Such rolled sections shall be within rolling tolerances stipulated as per IS:1852 and shall be defects free.

4.1.5. The tenderer (s) shall supply information in the tender regarding source/manufacturers from where procurement of steel is proposed by him/them. However, the usage of type and grade of steel may vary during the execution of the work depending upon the design requirement and market availability. No claim shall be entertained from the contractor on this account and payment shall be as per relevant items in the schedule of items, quantities and rates.

4.1.6. Steel for rivets shall conform to IS: 1148 for M.S and IS: 1149 for H.T.S. Welding consumables for Manual Metal Arc Welding (MMAW) shall conform to IRS-M-28, wire and flux combination for submerged arc welding to IRS M-3 and filler wires for CO2 welding to RDSO/M&C/Specification issued vide letter No. M & C/W/111/24 dated 1.1.1994/7.2.1994.

- 4.1.7. All welding consumables (electrodes, wire, flux etc.) shall be procured only from the manufacturers approved by RDSO subject to final approval by Engineer.
- 4.1.8. In an extreme eventuality of steel of particular section not being made available locally by Indian Steel manufactures, the tender/s may have to import steel. The imported steel shall be of equivalent specification. Use of built-up sections in place of rolled sections can be permitted. Working out the weight of steel for payment in such cases will be based on the actual sections used. Engineer will not take any responsibility of delays in importing the steel and no cognizance of the same will be given in the completion period.

4.1.9. TEST CERTIFICATES

All materials for the work shall pass tests and/or analysis prescribed by the relevant IS specifications or such other equivalent specifications. For all materials including rivets and bolts, the Contractor shall furnish copies of test certificates from the manufacturers including proof sheets, mill sheets etc. showing that the materials have been tested in accordance with the requirements of various specifications and codal provisions.

- 4.1.10. In addition to the test certificate obtained from the steel producers/suppliers/dealers, for conformity sake, all materials/consumables, i.e. steel, rivets, welding electrodes, paints, etc. shall be got tested from the NABL approved labs/recognized labs. Proper record of all such test results shall be maintained. A copy of the same be given to client/Railway as well. Test result of the supplier and that of the lab should match with each other. In case of major difference, mater has to be investigated. Decision of the KRIDE shall be final in that regard.
- 4.1.11. Even satisfactory outcome of such tests or analysis shall in no way limit, dilute or interfere with the absolute right of the Engineer to reject the whole or part of such materials supplied, which in the judgment of the inspecting authority does not comply with the conditions of the contract. The decision of the Engineer in this regard shall be final, binding and conclusive for all purposes.
- 4.1.12. Rolled steel shall also be ultrasonically tested by the reputed firm. Only ultrasonically tested steel shall be used for fabrication work. Record of ultrasonically tested steel shall be maintained separately. All the testing work shall be done in accordance to the provisions of the relevant codes.
- 4.2.7. Regarding radiographic testing/x-ray testing of the welded joints, matter shall be finalized in consultation with the inspecting authority. Agreed to procedures shall be followed. Necessary arrangement for that has to be got done by the tenderer at their own cost. All testing work shall be got done by the contractor at their

own cost. Nothing extra shall be paid. Tenderers should quote their rate accordingly.

4.3. QUALITY ASSURANCE PLAN (QAP) , WPSS AND WPQR

- 4.3.1. Before fabrication of girder, a Quality Assurance Plan (QAP) is prepared by the Contractor based on RDSO guidelines for fabrication of girders (as per sample given in Annexure-I of BS-110 issued by RDSO) and submitted to Inspection Agency as specified in **clause 9** of this specification for approval to ensure proper quality of fabrication. The QAP shall indicate stage wise manufacturing process covering various steps, test checks and their frequency, sampling plan, authority for grant of clearance etc. for all activities. The QAP submitted by fabricating agency is scrutinized by Inspecting Agency on visiting workshop/ site, inspection of the manufacturing process and the same is approved for the particular work during currency of the work/contract before the Agency proceeding with the work.
- 4.3.2. QAP is to be scrutinized and approved by the Inspection Agency. The QAP should be signed by Fabricator and KRIDE Officials [Minimum AGM Level] before submission to Inspection Agency. Field Engineer should ensure that work is carried out strictly as per the approved QAP and no deviation takes place from QAP. All the stages should be studied in detail, prior to start of work.(BS 110- issued by RDSO.)
- 4.3.3. Girders should be got fabricated by a firm who has full-fledged fabrication workshop and should have valid certification of RDSO for fabrication of girders. Any another procedure will require approval of Engineer.
- 4.3.4. Scrutiny & Approval of Welding Procedure Spec. Sheet (WPSS) (final approval to be done by Inspecting Agency as specified in clause 9.4 of this document):
WPSS is process sheet indicating plate/section used, welding process, type of joint, welding consumables quality, welding parameters, acceptance standard, tests applicable etc. Field Engineer should ensure that welding is carried out as per approved WPSS. Performa for WPSS is given in Appendix-V of IRS B12001. WPSS should be signed by fabricator and KRIDE Officials before sending for approval of Competent Authority (Annexure-II).It is to be ensured that welding consumables to be used are from approved source and a proper record of their consumption is maintained. A sample Performa for record keeping of consumables is enclosed as Annexure–III.
- 4.3.5. Welding Procedure Qualification Records (WPQR) (final approval to be done by KRIDE/Railways):
WPQR is the document indicating approval of various welders who are to be deployed for carrying out welding work for fabrication. It contains Name of the welder with photograph, qualification, experience, qualification tests and records for each welding process and joint, welding parameter. Tests are conducted by Inspecting Agency before qualifying the welders and then approval is granted

through WPQR Proforma given in Appendix-V of IRS B1-2001. WPQR should be signed by fabricator and KRIDE Officials before sending for approval of Competent Authority in the prescribed format (Appendix V of IRS B1-2001). Field engineer should ensure that welding is done only by approved welders and no deviation takes place.

4.4. Handling and Storing of Steel Sections

- 4.4.1. All projecting plates or bars shall be kept in shape by timber or angle bars spiked or bolted to them and the ends of chord lengths, end posts etc. at their shipping joints shall be protected and stiffened so as to prevent damage or distortion in transit as the Engineer may direct.
- 4.4.2. All threaded ends and machined surfaces are to be efficiently protected against damage in transit. The parts shall be transported in convenient lengths.
- 4.4.3. All straight bars and plates except small pieces are to be transported in convenient bundles temporarily riveted or bolted together or bound with wrought iron or suitable wire as the Engineer may direct. All rivets, bolts, nuts washers, plates under 300mm square and small articles generally are to be packed separately for each span in cases each weighing when full not more than 350 kg or in strong petroleum casks, or barrels as approved by Engineer. If not entirely filled by the contents the space left shall be closely packed with wood shaving or other suitable material. Bolts and rivets of different sizes shall be separately packed in bags, each bag having a label indicating its contents. A list of contents shall be placed on top of each case or cask.
- 4.4.4. All rolled steel received from supplier shall be carefully unloaded to avoid twisting, bending and damage to mill scale, stacking area shall be covered and the materials placed on a raised platform above ground level and every care taken to avoid contact with water in order to prevent rusting and pitting.
- 4.4.5. All sections damaged transit or handling shall be stacked separately and damaged portions shall be indicated by paint of distinct colour. Such materials shall be dealt with as per instructions of the Engineer. Badly damaged portions may require replacement. Slightly distorted parts or broken parts must be dealt with as the case demands and as directed by Engineer. The rectified sections shall be used for fabrication only after approval of Engineer.
- 4.4.6. Where the work has been passed in the manufacturers factory premises as strictly interchangeable. All members bearing the same marks can be stacked together without reference to any particular position. Care must be taken by the contractor that the parts at site are available in proper sequence. Every portion of work shall be distinctly stenciled with paint and marked with the punch not less than 15mm dia for guidance in erection in the field, and stamped with the letters specified in the drawings. In the case of non-interchangeable work, the system of marking shall be as shown in

drawing. All field rivets for site riveting, service bolts and drift for assembly of girder, shall be stored under cover.

- 4.4.7. The contractor shall supply without charge, three complete lists of the rivets, bolts, service bolts, washers and drifts required for erecting the work at site, showing the parts of the work to which the various rivets and bolts belong and having each item marked so as to indicate the particular case in which it will be found. List of total rivets required for one girder stating length, numbers, and wastage allowance of 12.5% shall be prepared and supplied along with the span components, the requirements for service bolts = 45% and drifts = 15% covering 60% of field holes in one span plus wastage allowance of 12.5%. Actual requirement for the work shall be assessed by the contractor who shall arrange accordingly.

4.5. STEEL TAPE

- 4.5.1. Contractor shall use steel tape conforming to IS: 1269(Part 2:1997) duly tested and issued with certificate of accuracy by an accredited National testing house for templating, fabrication of drilling jig etc. The tape shall be calibrated under a tension of 1.8 kg at 16.7 degree C. All marking and checking of master gussets, camber layout, etc shall preferably be at the mean temperature of the fabrication zone.

4.6. STRAIGHTENING

- 4.6.1. All rolled sections and plates shall be straight and free from defects like twists and bends before they are used for marking and cutting. If any rolled section of plate has minor defects, it shall with the approval of the Engineer, be cold straightened by pressure with the help of plate and section straightening machine. Pressure applied for straightening shall be such a not to damage the surface or microstructure of grains in the steel member. Flattening, straightening and bending in hot condition shall not be carried out unless specified on drawings or approved by Engineer.

4.7. CUTTING OF MATERIAL

- 4.7.1. All edges shall be machined mechanically (by a sawing machine) or controlled torch oxy-acetylene flame cut after. All flame cut edges shall be ground to secure clean and square edges.
- 4.7.2. No shearing of section or plates is permitted. When flame cutting is deployed on a plate of long length, flame cutting shall be done by multi-torch mechanically controlled equipment to ensure a straight clean cut and prevent lateral distortion due to heat application. All flame cut edges shall be ground or machined to obtain reasonably clean square and true edges. Drag lines formed during flame cutting shall be removed.

- 4.7.3. While chalk marking for flame cutting, following cutting allowance shall be added to the prescribed dimensions:

Thickness	Cutting allowance
Up to 12 mm	+3mm
Above 12 and up to 25 mm	+5mm
Above 25mm	+7mm

- 4.7.4. Templates made from 3 to 4 mm thick steel plate shall be used for cutting Gussets. Long length cutting by marking with white chalk and string may be followed.
- 4.7.5. Minimum edge distance while preparing profile for gussets, cleats and edges of components from center of rivet hole to a flame cut edge shall be 1.75 times the diameter of hole, and for machined edge or rolled edge shall be 1.5 times the diameter of rivet holes, (machined edge means first edge distance kept 1.75 times diameter of hole for flame cutting and reduced to 1.5 times diameter of hold by removal of material by machining).

5.0 METHOD OF FABRICATION

Fabrication, Workmanship shall generally comply with current IRS specification No.B1-2001 and GUIDELINES ON FABRICATION OF STEEL GIRDERS FOR CONSTRUCTION/FIELD ENGINEERS BS -110 (R) with latest correction/amendments thereof unless otherwise specified in special conditions of this contract or as specially directed by the Engineer in writing.

- 5.1. The fabrication of the girders and its accessories shall be carried out by the Contractor in his factory premises or in a well-established fabrication workshop to be set up by the Contractor at bridge site or any other location as approved by the Engineer as shown below.

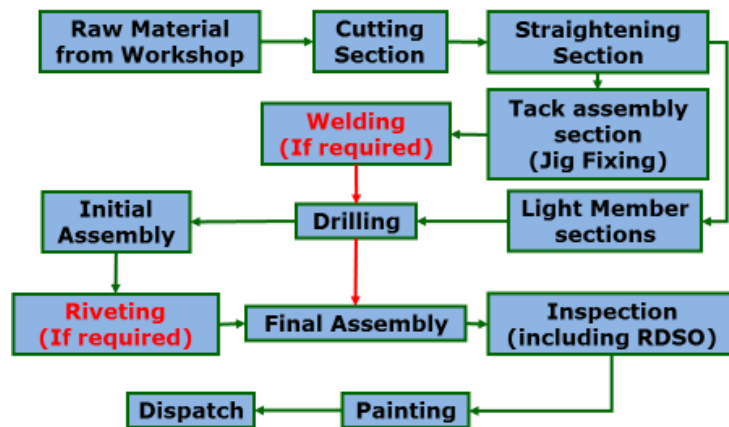
WELL EQUIPPED WORKSHOP

• WORKSHOP MAINLY CONSISTS OF—

1. TEMPLATE/JIG SECTION
2. CUTTING SECTION
3. TACK ASSEMBLY FIT-UP SECTION
4. WELDING SECTION
5. DRILLING SECTION
6. INITIAL ASSEMBLY SECTION
7. RIVETING SECTION
8. FINAL ASSEMBLY SECTION
9. INSPECTION
10. PAINTING SECTION
11. DISPATCH SECTION

- 5.2. The workshop staff shall have requisite experience, proven skill and experience in the technique of fabricating large components. Accuracy of fabrication shall be realized through controlled high precision jigs, fixtures and templates, which shall be inspected and passed by Engineer / any other inspection agency as nominated by Engineer.
- 5.3. The following is a typical "Workshop Flow Chart for Fabrication."

WORKSHOP FLOW CHART FOR FABRICATION



- 5.4. Considering the length and height of span, jigs and fixtures shall be used to guide and support drilling of holes and fixtures during entire fabrication work assembly of components, before riveting / welding of components.
- 5.5. Drilling jigs shall be fabricated with the help of Master gussets fabricated as templates for all panel joints of truss. Jigs after manufacture shall be checked and approved by Engineer or any other Inspecting agency as nominated by General Manager/Civil/KRIDE.. Only approved and stamped jigs shall be used for fabrication. First component after drilling of holes through approved jig for each specific component of truss, shall be checked with the help of Master gusset by the Inspecting Officer before further fabrication.

5.6 TACK ASSEMBLY

- 5.6.1. For fabrication of riveted construction, top and bottom chords of members shall be tack assembled for drilling of holes through jig. Tack assembly of members shall be done by stitch rivets after positioning the drilling jig in true position.

- 5.6.2. Drilling jig and tacked members shall be clamped to a fixture to avoid shifting of jig during handling and drilling.
- 5.6.3. Tack welding may be permitted only at ends or locations, which will eventually be cut and removed. No active part of the component shall be tack welded as this would initiate crack formation in service.

5.7 TEMPLATE

The contractor shall supply and provide templates at his own cost. No separate payment shall be made for this and accepted rates shall be deemed to include this aspect. The templates used for the work shall be of steel of similar category as the member and shall be of tested quality. In case where actual materials from a bridge have been used as templates for drilling similar pieces the inspecting officer will decide whether these are fit to be used as part of finished structure.

5.7.1 Template Shop

Fully covered template shop consisting of uninterrupted steel or concrete floor as approved having true and correct level covering adequate area shall be provided by the contractor. Camber layouts shall be drawn to full scale from end of girder to half span. This camber layout once approved shall be used for fabrication of master gusset profiles and end profile of each member. It shall be used for working out the actual lengths of each member and checked to conform to the calculated length. Master gussets at every panel joint of top chord, bottom chord and middle web panel shall be marked accurately on camber layout drawn of template floor.

- 5.7.2. All precautions shall be taken while drawing camber layout for correct setting of angle of intersection of chord and web member and great accuracy shall be ensured while transferring the same on master gusset. While marking centre point of field rivet holes on master gusset, if there is symmetry of holes on vertical axis, marking shall be made only on half the master gusset across vertical axis, and holes drilled by inscribing each hole. Subsequently remaining half portion shall be drilled through gusset using the same half portion master gusset. This will help realize symmetry of holes in gusset and fairing of field rivet hole during girder assembly.
- 5.7.3. Camber layout and fabrication of Master gusset at every panel joint requires highly skilled and trained staff experienced in accurate fabrication of large girders, drilling jigs and fixtures. At least one jig shall be required for each component. Each jig shall be numbered and a record kept in register for identification.

5.8. DRILLING OF HOLES

- 5.8.1. Holes for riveting / bolting in members shall be carried out by drilling through jig only. No punching or hand drilling of holes is permitted. Sub-punching to a

diameter 6mm less than that of finished holes may be permitted by Inspecting Officer except in the main truss members of open web girders.

- 5.8.2. When the holes are to be sub-punched they shall be marked off with a centre punch and made with a nipple punch or preferably, shall be punched in a machine in which the position of the hole is automatically regulated. The punching shall be so accurate that when the work has been put together before drilling, a gauge 1.5mm less in diameter than the size of the punched holes can be passed easily through all the holes.
- 5.8.3. Drilling jig should be provide with an internal turned and case hardened bush at all holes in jig, for retaining accuracy of all similar units fabricated. Bushes will have a tolerance of $- 0.0/+0.1$ mm for shop riveting. The tolerance shall be periodically checked & replaced when the tolerance exceeds $- 0.00/+0.4$ mm (for hardening). Before fixing to jig, bushes shall be checked with a plug gauge to ensure these tolerances.
- 5.8.4. Drilling of all holes through jig by radial drilling machine for fabrication of top and bottom chords of al members will be allowed. Web members and floor system having welded construction, field holes for riveting shall be drilled through jig.
- 5.8.5. Holes for countersunk heads of rivets, bolts or screws shall be drilled to the correct profile so as to keep the heads flush with the surface.
- 5.8.6. Holes for rivets shall be 1.5 mm greater than the diameter of rivet bars for rivets less than or equal to 25 mm and 2 mm greater than the diameter of rivet bars for rivets greater than 25 mm. Holes for turned bolts, for field connection, where specified on drawing shall be drilled in the shop 1 mm less than diameter of holes shown on the drawing and should be reamed at site to suit diameter of turned bolt.
- 5.8.7. Drilling to enlarge un-faired holes is prohibited. The holes required to be enlarged shall be reamed provided the Engineer permits such reaming after satisfying himself about the extent of inaccuracy and the effect of reaming on the soundness of the structure. The Engineer reserves the right to reject all steel work if the holes are not properly matched.
- 5.8.8. On completion of drilling of holes in each component and before shifting the jig, it shall be ensured that all holes are drilled to their correct diameter to reconfirm quality of work.
- 5.9 Rivets & Riveting of Components
 - 5.9.1. The work shall include supply of all rivets, bolts, nuts, washers etc. required for complete erection at site with allowance for wastage. The contractor shall be responsible for supplying site rivets of correct length. The length of such rivets shall be verified in the presence of Engineers representative by snapping a few rivets of each length to check whether the holes have been completely filled in by rivet material. Particularly in case of rivets with long

grips (with grip exceeding 6 times the diameter), specimen rivets shall be cut to see if the holes are totally filled even though the rivets are tight under the usual hammer tests.

- 5.9.2. All rivets to be used shall be checked with profile gauge for its true shape, contours of head, concentricity of head, diameter as well as correct length to match the thickness of joint. Calibrated gauges for rivet dimensions and contours shall be provided by the contractor for use of the Inspecting Officer and the Engineer.
- 5.9.3. Service bolts and nuts, ordinary plates, washers and drifts for use in the erection of the work shall also be supplied by the contractor at his own cost. On completion of the work these materials may be taken back by the contractor.
- 5.9.4. The dimension on the drawings refer to the diameters of finished rivets and not the diameter of rivet holes. The rivets shall be made to relevant IS specification. The clearance i.e. the difference in diameter of rivet measured under head (before heating) and rivet hole shall not be less than 0.75 mm. The shanks shall be made of length sufficient to fill the holes thoroughly and to form the head.
- 5.9.5. Riveting shall not be started until such time as Engineer or his authorized representative has personally satisfied himself that the alignment of the girders is correct, the vertical members plumb correctly, all the mating surfaces are secure and in full contact with service bolts and field rivet holes in alignment.
- 5.9.6. All rivets shall be properly heated to straw heat for the full length of the shank, firmly backed and closed. The head of the rivet, particularly in long rivets, shall be heated more than the point and in no case shall the point be heated more than the head. Before placing the rivet in drilled holes the rivets shall be smartly jerked to shake off oxide scale. Where it is impossible to back up by normal method of holding up, double gunning may be resorted to. Alternatively pneumatic holding device may be used.
- 5.9.7. Unless permitted by Engineer, all riveting shall be done by machine riveting using hydraulic riveters for sound & perfect riveting. Fabrication workshop should have Hydraulic Riveting facilities for fabrication of heavy duty bridge girders as per IRS/IRC specifications. Pneumatic riveters may be used subject to approval of Inspecting Officer/Engineer. The working pressure to be employed when using pneumatic or hydraulic tools shall be as per manufacturers specifications and approved by the Engineer. Hand riveting shall only be done when specifically allowed by the Engineer. In such cases means shall be adopted to ensure the rivets are sued for their entire length and fill rivet holes completely, the snap being used only to give the correct form of head.
- 5.9.8. All rivets when driven shall completely fill the holes, have the heads concentric with the shanks and shall be in full contact with the surface. Driven

rivets when struck sharply on the dolly side head with a 110 gm rivet-testing hammer shall be free from movement and vibration. While riveting built up members, great care shall be exercised to ensure that the set of holes for field rivets in each flange of the built up member is aligned, dead square in relation to that in the other flange and not aborted. Use of special jigs shall be made to ensure this fit.

- 5.9.9. All sparking, loose and burnt rivets, and rivets with cracks, badly formed eccentric or deficient heads shall be cut out and replaced by others. Permissible deviation of driven rivets shall be as per IRS BI-2001. Rivets shall also be cut out when required for the examination of the work. The Engineer shall approve actual method of cutting out. Recouping and caulking shall in no circumstances be resorted to.
- 5.9.10. Service bolts shall be frequently retightened as the riveting proceeds, the number and position of the drifts used in the joints permitting this. All field rivets shall be tested as directed by the Engineer.
- 5.9.11. Care must be taken to use rivets of correct dimensions but burrs or lips around the rivet heads shall not be removed.
- 5.9.12. Rivets less than 10 mm diameter may be driven cold subject to approval of Engineer. Flattened rivet head may be used in certain places where clearance demands so.
- 5.9.13. When all the rivets at a joint have been finally passed they shall be painted as per specification.

5.10 WELDING OF COMPONENTS

- 5.10.1. All welding work shall be as per IRS/IRC Standard and by such process that the workmanship is flawless. **All welding shall be by automatic and semi-automatic submerged arc welding process**, except where inaccessible. Site welding shall be avoided, but if necessary, shall be carried out only on secondary members having low stresses to transmit across the joint for which approval of the Engineer shall be required.
- 5.10.2. Welded construction shall be carried out generally in accordance with provisions of the Welded Bridge Code and IS:9595 (Metal Arc Welding) and further subject to specifications as under:
 - a) Welding shall be done only by qualified and approved welding operators, whose competency has been verified and certified by Engineer/Inspecting Officer. Routine re-testing of welding operators may be required every six months if deemed necessary by the Engineer who also reserves the right to retest any welding operator at any time during the contract.

- b) All long and continuous welds shall be carried out by automatic Submerged Arc Welding (SAW) process only, in order to obtain sound and uniform shape and cross section CO₂ or Manual Metal Arc Welding (MMAW) may be done for short lengths or for secondary connections where access to the location of the weld does not permit Submerged Arc Welding (SAW), subject to approval of Engineer.

Except for special types of edge preparation, such as single and double U, single and double J, the fusion edges of the plates which are to be joined by welding may be prepared by using mechanically controlled automatic flame cutting equipment and then ground to smooth finish. Special edge preparation should be made by machining or gouging.

- c) The contractor shall appoint welding supervisors whose competence and qualification shall be subject to approval of TPIA (Third Party Inspecting Agency) like WRI-BHEL/Trichy or any other firms specifically approved in prior by General Manager/Civil/KRIDE. All welds shall be carried out under their direction & supervision.

Welding position for fabrication of components shall be Flat or Horizontal position for SAW (flat position preferred) and Flat or Horizontal position for CO₂ or manual metal arc welding. To ensure above position for welding, component shall be placed in a manipulator, tack assembled and rotated in the manipulator to assist welding sequence and prevent distortion of member. In absence of manipulator, special jig and fixtures shall be provided for positioning and careful handling by crane.

5.10.3 **Welding Procedure**

The welding procedure shall be such as to avoid distortion and minimize residual shrinkage stresses. Properly designed jigs should be used for assembly. The welding techniques and sequences, quality, size of electrodes, voltage and current required shall be as prescribed by relevant codes. The contractor should submit full details of welding procedure in proforma given at Appendix-V of IRS BI-2001 (with latest correction slip).

5.10.4. Sequence of welding and welding pass

The sequence of welding and welding pass shall be done as per IRSBI-2001.

5.10.5. PROCEDURE TRIALS

5.10.5.1. Where required by the Engineer/Inspecting Officer, welding and flame cutting trials as per following shall be carried out and completed before fabrication on representative samples of materials to be used in the work.

- i) The samples of material shall be selected and marked by the ENGINEER when the materials for the work are inspected at the mills.

- ii) The trials of flame cutting shall be carried out in material representative of all thicknesses to be used in the work.
- iii) The welding & flame cutting trials shall be commensurate to the satisfaction of Engineer/Inspecting Officer and the procedures to be adopted in the fabrication of work which shall include:
 - a) Welding procedure in accordance with relevant specification.
 - b) Heat control techniques required to ensure that the flame cut surface of steel are suitable for inclusion in welds.
- iv) The trials shall include specimen weld details from the actual construction which shall be welded in a manner simulating the most un-favorable instances of fit-up and preparation. After welding the specimens shall be held as long as possible at room temperature but in any case, not less than 72 hours, and then shall be sectioned and examined for cracking. Six representative samples of each weld joint similar to joint used in fabrication of all components shall be prepared by qualified and certified welding operators.
- v) Following groups of tests shall be carried out:
 - a) Butt welds: Transverse tensile test, transverse & longitudinal bend test with the root of weld in tension and compression respectively, chapter V- notch impact test.
 - b) Fillet welds: Fillet weld fracture test.
 - c) Track welds: Inspection for cracking.
 - d) All welds: Macro examination.

Additional tests may also be carried out as per requirement and instruction of Engineer/Inspecting Officer, the cost of which shall be borne by the contractor.

Following tests are normally performed on welds.3

(a) NON DESTRUCTIVE TESTS (NDT):

- Visual inspection/profile gauge for dimensional check of size and throat thickness of weld.
- Etching test for penetration of joint.
- Magnetic particle or Ultra Sonic Pulse Velocity (USPV)
- Gamma Radiography & x-ray (only for butt welds)
- Dye penetration of all welds joints.

(b) DESTRUCTIVE TEST :

- Tensile test
- Bend test

- Impact test
- Load test.

5.10.5.2. Once samples representing the weld joint used in fabrication of all components are tested and test results are found satisfactory, then approval shall be taken from the Engineer/Inspecting Officer for the welding of built up components by approved welding operators. Welding Procedure Qualification Records (WPQRS) shall include joint details, welding consumables (i.e. electrode/wire & flux combination), weld parameters (i.e. welding current, wire feed speed), welding position, welding equipment carriage speed (for SAW process), arc Length, arc voltage etc.

5.10.6 PRECAUTIONS DURING WELDING

- 5.10.6.1. The Contractor shall submit list of weld joints of different combined thickness for approval of welding procedure for all members.
- 5.10.6.2. The welding of built up component shall be carried out only by approved welding operators and in accordance with Welding Procedure Qualification Records. WPQRs shall be prepared in advance and approved by the Engineer. Proper welding sequence shall be followed to avoid distortion and minimize residual shrinkage stress, and surface defects, within acceptable tolerance limits.
- 5.10.6.3. To ensure sound and defect free welding of built up members, record of welding adopted as per approved qualifying procedure shall be maintained in Performa prescribed in guidelines for welded fabrication issued by TPIA (Third Party Inspecting Agency) like WRI-BHEL/Trichy or any other firms specifically approved in prior by General Manager/Civil/KRIDE.
- 5.10.6.4. Any change during welding for fabrication of built up member, such as welding sequence, welding process, positioning, wire and flux combination joint details, increase or decrease in combined thickness of joint by 5 mm etc. shall be carried out only after representative samples test and procedure qualification, is accepted. In no case deviation from WPQRs without approval of Engineer shall be adopted.

5.11 PREPARATION OF FACES

- 5.11.1. Preparation of joint face: Except for special types of edge preparation such as single or double 'U' & 'J' joints, the fusion edges of all plates which are to be joined by welding shall be prepared by using mechanically controlled automatic flame cutting equipment with the cutting allowance as per clause 4.7 and the extra length machined to obtain correct length.
- 5.11.2. It shall be ensured by Non-destructive tests that the fusion face and

adjacent surface are free from cracks, notches or other irregularities that are likely to cause defects during service or interfere with deposition of the weld.

- 5.11.3. Fusion faces and the surrounding surface up to 50 mm shall be free from mill scale, moisture, oil, paint dirt or any other substance which may affect the quality of the weld, and same shall be removed by grinding or flame cleaning/grit blasting.
- 5.11.4. Details of joint, fusion faces, root face and gap shall be as per details given in fabrication drawing or as stipulated in IS:9595.

5.12. WELDING OPERATION

- 5.12.1. Parts to be welded shall be assembled such that the joints to be welded are accessible and visible to the operator. Assembly jig and fixture shall be used for accuracy.
- 5.12.2. Manipulators should preferably be used to execute the sequence of welding without disturbance, in the most suitable position. Fixture shall maintain the alignment with minimum restraint in order to reduce the possibility of locked up stresses.
- 5.12.3. Run in and run out plate shall be provided for fabrication of built up members or truss to ensure that weld will start on run in plate and weld will stop on run out plate and thus avoid crater defects on the components.
- 5.12.4. The size and length of weld shall not be less than those specified in the drawing nor shall they be in excess of the requirement without prior approval of the Inspecting Officer. The location of weld shall not be changed without prior approval of the Engineer.
- 5.12.5. During design and detailing of component lengths, care is to be taken to avoid butt weld in built up members of truss. Therefore it is essential to use only nearest size and length or rolled sections that have been procured to scheduled sizes and lengths by proper planning. No butt weld shall be carried out without approval of Engineer.
- 5.12.6. Fabrication of components subject to dynamic loading in the structure need careful inspection during fabrication by qualified, experienced and certified Engineer from contractors side and final approval by Inspecting Officer. This inspection shall be carried out as stipulated in Indian Railway Welded Bridge Code before, during and after welding.

5.13 ADDITIONAL PRECAUTIONS DURING WELDING

- 5.13.1. Following precautions shall further be observed during fabrication.
 - All equipments shall be provided with calibrated gauges to observe limits of variation for parameters prescribed in WPQR'S for welding current, arc voltage, speed of travel of equipment etc.

- Covered shed for environmental control (particularly against dust, moisture and initiation in weld or under bed of weld (i.e. Heat Affected Zone HAZ). Also baking of flux use for submerged arc welding in oven for an hour at 200 degree C shall be carried out to ensure that no moisture is contained in flux during welding.
- All tack weld shall be carried out by qualified and approved welder only. As tack weld will become part of the final weld, it shall be free from all cracks and other welding defects.
- If multiple runs are used for fabrication of built up member, inter run cleaning shall be carried out and subsequent weld bed made only after approval of inspecting officer or his authorized representative. This is to check free defects in the weld. Also visible defects such as cracks, cavities, if any, shall be removed by grinding. It shall be ensure during welding that craters are avoided.
- Stray arcing of components, which cause local hard spots or cracking of parent metal, shall be avoided.
- Flux of approved quality will be permitted for use.
- The Auto melt grade wire spools of wires for Submerged Arc Welding and Carbon Dioxide (CO₂) consumables of only the approved quality will be permitted.
- Pre Heat Treatment will be given to the consumables to remove the moisture if any.
- No violation of welding procedure will be permitted on any account.

6.0 GENERAL : RIVETING , WELDING & JOINTING WITH HSFG BOLTS

- 6.1. Qualified trained, and experienced supervision is essential at all times during fabrication, and for maintenance of records.
- 6.2. After riveting of riveted components or welding of welded components, they shall be finished finally by grinding or matching with the help of a profile template. All the butting ends of components shall be faced in milling machine after members haven completely fabricated. In the case of compression members, the face shall be machined so that the faces are of proper angle as shown in drawing and the joint when made will be in close contact throughout within a gap tolerance of less than 0.15 mm. The Inspecting officer may permit a tolerance of (-) 0.4 mm at isolated points in butting line.
- 6.3. **Jointing with HSFG Bolts** shall be as per Para 28.9 to 30.1 of IRS:B1-2001.

7.0 PAINTING

Specification for metallising and painting of bridge girders shall be as per IRS:B1- 2001.

7.1 SURFACE PREPARATION

- 7.1.1. This is the most important factor in ensuring good performance of the steel girder. The surface should be clean, dry and free from contaminants and it should be rough enough to ensure adhesion of the paint film. However it should not be so rough that the film cannot cover the surface peaks.
- 7.1.2. The cleaning of the surface shall be done initially with the use of emery paper, wire brushes, scrapers etc. for spot cleaning to remove rust, scale etc. Subsequently, sand blasting of the surface shall be done to remove rust, mill scale along with some of the base metal. This will be achieved by high velocity impact of abrasive material against the surface in accordance with the provisions of IS:6586, which will also create a base for good adhesion. The abrasive material once used for cleaning heavily contaminated surface should not be reused even though re- screened. Washed salt free angular silica sand of mesh size 12 to 30 with a minimum of 40% retained on a 20 mesh screen shall be used for blasting. The material specifications and other requirements shall be as provided in Indian Railways Bridge Manual, 1998.
- 7.1.3. All site rivets, bolts, nuts and washers shall be thoroughly cleaned and dipped in boiled linseed oil. All machined surfaces are to be well coated with a mixture of white lead conforming to IS:34 and Mutton tallow conforming to IS:887 as per specifications before despatch to site. Nothing extra shall be payable to contractor on this account.
- 7.1.4. All the components in the floor and deck system in open web girders and all members in plate & composite girders shall be metalized as IRS specifications.

7.2 METAL SPRAYING

- 7.2.1. The sprayed coating shall be applied as soon as possible after surface preparation.
- 7.2.2. The wire method shall be used for the purpose of metallising, the diameter of the wire being 3mm or 5mm. Specified thickness of coating shall be applied in multiple layers and in no case less than 2 passes or the metal spraying unit shall be made over every part of the surface. The surface after spraying shall be free from uncoated parts of lumps of loosely spattered metal.
- 7.2.3. The composition of the Aluminium to be sprayed shall be in accordance with BS 1475 Material 1-B(99.5%) aluminium otherwise as per IS:739 and IS:2590. However the selection of metal for spraying, i.e. Zinc or Aluminium

shall be subject to final approval by the Engineer.

- 7.2.4. At least one layer of the coating must be applied within four hours of blasting and the surface must be completely coated to the specified thickness within 8 hours of blasting.
- 7.2.5. Minimum thickness of metal coating applied shall be 165 microns and average thickness shall be 200 micron. The specified thickness of coating shall be applied in multiple layers, not less than three. The metal coating shall be checked for thickness by approved magnetic thickness measuring gauge. At least one reading for each sqm of area painted shall be taken. The calibration of the gauge shall be checked against a standard of similar thickness within an accuracy of 10%.
- 7.2.6. For measurement of dry film thickness, following instruments may be used by the contractor:
 - (i) Electronic coating thickness gauge,
 - (ii) Elcometer (magnetic thickness gauge) Dial type.
 - (iii) Surface profile gauge.
- 7.2.7. After metallising any oil, grease etc. shall be removed by thorough wash with a suitable thinner as approved by the Engineer and shall be allowed to dry for 15 minutes. The first coat shall be applied by brush/airless spray-one coat of epoxy micaceous Iron Oxide to RDSO specification No. M & C/ PCN-103/86 to 100 microns minimum DFT and allowing it to hard dry.
- 7.2.8. The finishing coat shall be applied with two coats of poly urethane aluminium finishing to RDSO specification No. M& C/PCN-110/88 to 40 microns minimum DFT giving sufficient time gap between two coats to enable the first coat to hard dry. The finishing coats to be applied in shop and touched after erection if necessary.
- 7.2.9. The Engineer however reserves the right to select the scheme of painting of the girders and channel sleepers.
- 7.2.10. The Engineer also reserves the right to select the colour scheme for the third and fourth coats.

7.3 MISCELLANEOUS

- 7.3.1. Final dry film thickness in case of metallising shall be average 150 microns and shall be measure before application of final finishing two coats.
- 7.3.2. Surface preparation shall not be done unless approved paints of sufficient quantity (both primer and finishing) are available in stock.
- 7.3.3. Special care should be taken in preparing corners, junctions of members,

head and nuts of bolts, rivets, holes, areas less accessible, hidden pockets etc. Surface preparation at such locations shall not be inferior to that attained over the rest of the area.

7.3.4. Surface preparation shall not be carried out in the following conditions:

- In rainy season from June to September and from December to January.
- In extremely windy/misty/dust blowing conditions.
- At night.
- In winter before 8 A.M.
- In summer between 11 and 15 hrs, in areas, which are likely to be exposed to direct sunlight.

7.4 INSPECTION

7.4.1 **Adhesion:** The sprayed metal coating shall be subjected to an adhesion test using the method described in IRS BI-2001. If any part of the coating between the lines breaks away from the base metal, it shall be deemed to have failed the test.

Articles that have been rejected, shall have the defective sections blasted to clean off all sprayed material prior to re-spraying. Where the rejection has been solely due to too thin a coating, sprayed metal of the same quality may be added provided that the surface has been kept dry and is free from visible contamination.

7.5 PAINTS : SOURCE & QUALITY

7.5.1. Paint and other accessories including those for metallising work will be supplied by the contractor. Paints manufactured by the following firms (or more) may be used subject to their being in the approved list of RDSO and final approval by the Engineer.

M/s. Jenson Nicholson. Paints ,
M/s. British / Barger paints.
M/s. Shalimar Paints
M/s. I.C.I. .paints
M/s. Nerolac. Paints

7.5.2. The contractor shall furnish to the Engineer, the date of manufacture of paint as certified by the manufacturers with the necessary container marking and test certificate for paint conforming to relevant IS code. In addition to this, he shall also submit the necessary vouchers in respect of paint purchased by him.

7.5.3. The Engineer reserves the right to get the paint tested at contractor's expenses as considered necessary by the Engineer. If the test results do not

conform to relevant IS specifications fully, then the lost of paint shall be rejected and got removed from the contractor(s) storage. If the paint has already been applied it shall be removed.

- 7.5.4. In addition to above, the following tests are required to be carried out in the field.
- Weight per litre
 - Consistency test
 - Scratch test.
 - Flexibility and adhesive test.
- 7.5.5. The Engineer reserves the right to reject the lot of paint even on the basis of field results.

7.6 PAINTING - GENERAL INSTRUCTIONS

- 7.6.1. Painting shall not be commenced till the surface preparation has been approved by the Engineer or his representative or inspecting officer.
- 7.6.2. Sealed containers of paint of approved brand shall be used. The paint drums must be rolled, turned upside down and shaken before opening. The paint must be stirred well before use. Over stirring which results in invisible air bubbles etc, shall be avoided.
- 7.6.3. Where brush painting is accepted, the paint must be applied by means of flat brushes not more than 75 mm in width having soft flexible bristles conforming to IS:384.
- 7.6.4. Round and oval brushes of approved quality conforming IS: 487 may also be used as per the instructions of the Engineer or his representative or inspecting officer.
- 7.6.5. All new brushes should be soaked in raw linseed oil conforming to IS:77 for at least 24 hours before use.
- 7.6.6. A little blue paint shall be added, in the first coat of aluminium paint to distinguish it from second coat. For paints of other colours for final and finishing two coats, suitable pigment shall be used as per instruction of the Engineer, to distinguish the first coat from the second coat.
- 7.6.7. The date of painting shall be marked with paint on the member.

7.7 CARE DURING PAINTING

- 7.7.1. Paint should be mixed in small quantities sufficient to be consumed within one hour in the case of red lead paint.

- 7.7.2. The applied coat of paint shall be uniform, and free from brush marks, sack marks, blemishes, scratching, non-uniform thickness, holes, log marks, fuel staining, cracking, scaling, and other defects.
- 7.7.3. Paint shall be applied only on dry and clean surface free from moisture or dust (including scrapping dust).
- 7.7.4. Paint should be used within the prescribed shelf life from the date of manufacture.
- 7.8 Each coat of paint shall be left dry till it sufficiently hardens before the subsequent coat is applied. Each coat of paint shall be inspected by the Engineer or inspecting officer and certified as satisfactory before applying subsequent coat.

7.9 PAYMENT

The payment for complete painting of all components of girders including all accessories, painting of contact surface etc including all labour and material, is included in the accepted rates for item (B.O.Q.) in the schedule of items, rates and quantities and nothing extra shall be paid.

8.0 ASSEMBLY & ERECTION

8.1 General

- 8.1.1 The contractor shall provide at his own cost all tools, machinery, equipment and erection material, including all temporary works and shall assemble all components in every respect as stipulated in the contract and in accordance with approved drawings and specifications.
- 8.1.2. Before starting the work, the contractor shall seek the Engineer's approval as to the method he proposes to follow and the type and suitability of equipment he proposes to use for assembly of girder components and launching of girder. The approval of the Engineer shall however not in any way relieve the contractor of the responsibility for the adequacy and safety of methods and/or equipment he proposes to use for carrying our work in full accordance with drawings and specifications.
- 8.1.3. All temporary works shall be properly designed and fabricated & erected with great care for the loads, which they will be called upon to support. Adequate allowance and provision for the effect of lateral forces and wind loads shall be made to meet unforeseen conditions.
- 8.1.4. When chains are used for lashing care must be taken to protect the edges of members from twisting and distortion, damage to paint and similar effects.

- 8.1.5. Temporary bracing shall be provided to take care of stresses caused by erection equipment or other incidental loads during erection.
- 8.1.6. The method use for lifting and slinging flexible members shall be brought to the notice of the Engineer and shall be subject to his approval.
- 8.1.7. The contractor shall observe sufficient accuracy in the assembly of every part of the work to ensure that all parts fit accurately together.
- 8.1.8. For erection of Open web Girder span, Appendix III of IRS B1- 2001 shall be followed. The launching of girders will be done very near to the existing bridge. Contractor shall take all necessary precautions for the safety of the substructure and superstructure of existing bridge, during assembling & launching works of the girders and nothing extra will be paid, owing to this. In addition, the contractor shall adopt all precautionary measures for safe plying of trains, vehicles etc. and nothing extra will be paid, owing to this.

8.2 PROCEDURE FOR ASSEMBLY IN WORKSHOP & SITE

- 8.2.1. The contractor is required to undertake test assembly of the girders in his fabrication workshop to prove accuracy of templates and jigs. This assembly can be done in horizontal position. In case the fabrication workshop is set up by the contractor at bridge site itself the test assembly may be done at assembly platform and after testing of accuracy of jigs, fixtures & templates and the same assembly can be launched after riveting. The test assembly shall be certified by Inspecting agency of the Engineer.
- 8.2.2. Following procedure may be used by contractor subject to checking of design by contractors consultant and final approval by the Engineer.
 - (i) The joints at the end of each top & bottom chord shall be drifted, bolted and preferably stitch riveted to their Geometrical outline.
 - (ii) The procedure during assembly shall consist of placing camber jacks in position to support the structure. The camber jacks shall be set such that they provide sufficient height to allow for lowering of panel points to obtain and maintain the required camber. Throughout the process of assembly, tilt, shift, twisting etc. shall be repeatedly checked. The jacks shall be spaced so that they will support the ends of the main girders and the panel points.
 - (iii) The bottom chord members shall then be placed on the camber jacks, carefully leveled and checked for straightness and the joints completed by riveting.
 - (iv) The vertical and diagonal web members, except the end verticals shall then be erected with gusset connection outward from centre in their

proper position on the bottom chords. Temporary gussets with correct whole position as on master gusset shall be fixed to connect the top end of diagonals. Strainers shall be used to realize matching of holes in the gussets at top & bottom of the diagonals & verticals, to ensure that the angles between the members at the bottom joints are as given by the nominal outline of the girders. The verticals and diagonals shall then be riveted to the lower chord.

- (v) All panel points, except the central one shall now be lowered by an amount sufficient to produce the correct camber on the main girders as shown on the camber diagram.
- (vi) The top chord shall thereafter be erected piece by piece, working symmetrically outwards from the centre without loss of camber profile.
- (vii) Temporary top gussets, if use, shall be replaced by permanent gussets outwards from the centre.
- (viii) The ends posts shall be erected last. The upper end connection should preferably be made first and if there is not splicing in the end vertical, the final closure be made at the bottom connection. If there is splicing, it shall be made at the splicing.
- (ix) Frequent checks shall be made of the camber of girders during erection and care taken that the correct camber is obtained when the camber is obtained when the girder is completely assembled.

8.3

CARE DURING ASSEMBLY

8.3.1 Drilling & Drifting of Holes

- 8.3.2. Drilling of joints shall be avoided as far as possible and when necessary should be done with great care and under expert supervision. Hammers not exceeding 1kg (2 lb) in weight may be used with turned barrel drifts and a number of holes drifted simultaneously, the effect of drifting shall be checked by observation of adjacent unfilled hole.
- 8.3.3. Any apparent error in shop work which prevents the assembling and fitting of the mating parts by the proper use of drifts, shall be investigated immediately.
- 8.3.4. As all work is rigidly inspected at the fabrication shop before dispatch, these difficulties should not arise and the cause could possibly be due to the use of incorrect components. It is usually important that parts be correctly handed. Should errors still persist, the matter shall be immediately reported to the Engineer who will decide what action is to be taken.

- 8.3.5. **Reaming:** No reaming shall be undertaken without the written authority of Engineer or his authorized representative or Inspecting Officer except for under drilled holes meant for turned bolts. If approved by Engineer, the contractor shall supply at his own expense, special rivets as may be required. Records of all actions relative to the recourse to reaming and the use of oversize rivets shall be reported to the Engineer.

8.4. SERVICE BOLTS & DRIFTS

Joint shall normally be made by filling not less than 50 to 60 percent of the holes with service bolts and barrel drifts in the ratio of four to one. The service bolts are to be fully tightened up as soon as the joint is assembled to secure full contact of the mating parts.

9.0 INSPECTION, TESTING & MARKING

- 9.1. All components shall be offered for inspection prior to painting. All approved components shall be stamped defect free, painted as per specifications prior to dispatch to bridge site.
- 9.2. On final finishing of each component, it shall be marked distinctly with paint with shipping mark for guidance, during assembly of component.
- 9.3. Stud shear connectors shall **conform to the standards specified in Clause 30 of this 'Additional Special Condition and Specification'** and the studs whose weld have failed the tests specified shall be replaced. All other aspects not stated above shall comply with IRS-BI-2001 and Welded Bridge Code.

9.4. INSPECTION OF NEW STEEL BRIDGE GIRDERS

(a) Inspection of new Steel Bridge Girders including Composite Plate Girders :

KRIDE shall carry out inspection (including M&C) on its own or by open line /bridge organization of Railways or RDSO or may engage specialized third party like RITES, WRI or any other expert public sector undertaking e.g. CEIL etc. for fabrication inspection of girders to ensure the quality of fabrication.

(b) Inspection of Steel Bow String Girders for ROBs : shall only be done by RDSO (both at workshop and site).

(c) Inspection of Non-standard Girders for ROBs: shall be done by RDSO only.

(d) The KRIDE/Railway shall be responsible for nominating/selecting third party to ensure quality.

(c) The various stages and corresponding Inspection/Approval agency for Rail & Rail- cum-Road Bridge are as shown in Annexure-VII of BS 110 (R) are indicated below:

(I) Prefabrication stage	Inspection/ Approval
(1) Approval of Quality Assurance Plan (QAP) QAP is to be scrutinized and approved by the inspection agency.	KRIDE/Railway/ RDSO / Third party engaged by agency & approved by K-RIDE for inspection.
(2) Scrutiny of Welding Procedure Specifications Sheets (WPSS)	
(3) Welders Qualification Test i.e. Welding Procedure Qualification Records (WPQR)	
(4) Inspection and clearance of raw material	
(5) Inspection of layout on template floor (Nominal Camber)	
(6) Inspection of jigs and fixtures with master plates	
(II) During Fabrication :	KRIDE/Railway/ RDSO / Third party engaged by agency & approved by K-RIDE for inspection.
(1) Use of approved raw material	
(2) Use of approved welding consumables	
(3) Use of approved welders	
(4) Use of approved welding procedures and parameters (WPDS) Welding Procedure Data Sheet to be maintained for all welds.	
(5) Fabrication with approved set of jigs	
(III) After Fabrication :	
(1) Inspection of welds	
(2) Structural and dimensional inspection	
(3) Trial assembly (First Girder)- Camber Values, Dimensions, Fairness of Holes by Go-No-Go Gauge, Butting of Flange in Top Chord.	
(5) Inspection of Dismantled Components of 1st Trial Assembly – Check for elongation of Holes/Abnormal stress marks/cuts etc. & Removal of shortcomings noted during Trial Assembly.	
(7) Inspect of only components for further spans- welding inspection & Dimensional checks.	
(9) Metalizing/ Painting	

Note: During fabrication, internal inspection to be done by KRIDE to ensure that only RDSO approved welders carry out welding as per approved WPSS, work is as per dimensional tolerances and other quality aspects and should satisfy itself before sending Inspection call to inspection agency for Trial Assembly or components Inspection.

10.0 TRANSPORTS FROM WORKSHOP & STACKING AT SITE

10.1. Loading of various Components and parts of Girders shall be done at the fabrication workshop by the contractor. The contractor/s are required to take following precautions as well due care in the entire process of transportation including loading, carriage and unloading at work site etc.

10.1.1. It should be ensured that while loading of various girder components /

parts, the heavier material are loaded first followed by lighter material on the top so as to avoid any damage to lighter sections by heavy load or weight. All safety precaution is necessarily to be adhere-to as per extent instructions.

- 10.1.2. The contractor should provide all dunnage, rope and lashing in order to secure proper holding of material, for which no extra amount will be paid.
- 10.1.3. Proper wooden blocks, rubber pads shall be provided by the contractor/s so as to avoid direct contact of materials with trailer part which can cause damage to girder component.
- 10.1.4. All threaded ends and machine surfaces are to be efficiently protected against damage in transit.
- 10.1.5. Bolts, rivet, washer of different stages shall be separately packed in bag with label indicating its contents.
- 10.1.6. The payment will be made as per the relevant item of the works as per mode of payment specified in tender schedule after unloading and stacking the Girder components / parts at the site.
- 10.1.7. Utmost care should be taken during the transportation, loading / unloading etc. of the material viz. Girder components / parts. In case of any minor paint damage, proper patch painting should be done, according to relevant standard code, and for which no extra amount will be paid for any such rectification works.
- 10.1.8. The payment will be made as per the relevant item of the work in T/schedule after unloading and stacking at the site i.e. as per method of payment already prescribed in tender schedule.

10.2. INSURANCE:

- 10.2.1. Insurance:- Before commencing of works, it shall be obligatory for the contractor to obtain, at his own cost, insurance cover in the joint name of the contractor and employer from reputed companies under the following requirements:

10.2.2. INSURANCE AGAINST INJURY TO PERSONS AND DAMAGE TO PROPERTY:

The Contractor, as insuring Party, shall insure against each Party's liability for any loss, damage, death or bodily injury which may occur to any physical property (except things insured under Sub-Clause 1.5.12 (b) [Insurance for Works and Contractor's Equipment]) or to any person / animal (except persons insured under Sub-Clause 1.5.12 (c) [Insurance for Contractor's Personnel]), which may arise out of the Contractor's performance of the Contract and occurring before the issue of the Performance Certificate.

- 10.2.3. This insurance shall be for a limit per occurrence of not less than the Rs. 50 Lakh (Rs Fifty Lakh), with no limit on the number of occurrences. The insurances specified in this Sub-Clause: (a). shall be effected and maintained by the Contractor as insuring Party, (b). shall be in the joint names of the Contractor and Employer, (c). shall be extended to cover liability for all loss and damage to the Employer's property (except things insured under Sub-Clause 1.5.12 (b)) arising out of the Contractor's performance of the Contract
- 10.2.4. The insurance policy shall include a cross liability clause such that the insurance shall apply to the Employer, the Contractor and Subcontractors (wherever applicable) as separately insured.
- 10.2.5. 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 Sub-Contractor (whether applicable), other than death or injury resulting from any act or default of the Employer, his agents or employees. 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 against all claims, proceedings, damages, costs, charges, and expenses whatsoever in respect thereof or in relation thereto.
- 10.2.7. **Insurance for Works and Contractor's Equipment:** The Contractor, as insuring Party, shall insure the Works, Plant, Materials and Contractor's Documents for not less than the full reinstatement cost including the costs of demolition, removal of debris and professional fees and profit. This insurance shall be effective from the Date of Commencement, until the date of issue of the Taking-Over Certificate for the Works.
- 10.2.8. The Contractor shall maintain this insurance to provide cover until the date of issue of the Performance Certificate, for loss or damage for which the Contractor is liable arising from a cause occurring prior to the issue of the Taking-Over Certificate, and for loss or damage caused by the Contractor in the course of any other operations. The Contractor shall insure the Contractor's Equipment for not less than the full replacement value, including delivery to Site plus 15% of replacement cost. For each item of Contractor's Equipment, the insurance shall be effective while it is being transported to the Site and until it is no longer required as Contractor's Equipment.
- 10.2.9. The insurances specified in this Sub-Clause:
- (a) shall be effected and maintained by the Contractor as insuring Party,
 - (b) shall be in the joint names of the Parties, who shall be jointly entitled to receive payments from the insurers, payments being held or allocated between the Parties for the sole purpose of rectifying the loss or damage,

- (c) shall cover all loss and damage from any cause not listed as Employer's Risks,
- (d) shall also cover loss or damage to a part of the Works which is attributable to the use or occupation by the Employer of another part of the Works, and loss or damage from the Employer's Risks, excluding (in each case) risks which are not insurable at commercially reasonable terms.
- (e) may however exclude loss of, damage to, and reinstatement of:
 - (i) a part of the Works which is in a defective condition due to a defect in its design, Materials or workmanship (but cover shall include any other parts which are lost or damaged as a direct result of this defective condition and not as described in subparagraph (ii) below),
 - (ii) a part of the Works which is lost or damaged in order to reinstate any other part of the Works if this other part is in a defective condition due to a defect in its design,
Materials or workmanship
 - (iii) a part of the Works which has been taken over by the Employer, except to the extent that the Contractor is liable for the loss or damage.

10.2.10. **Insurance for Contractor's Personnel:** The Contractor shall effect and maintain insurance against liability for claims, damages, losses and expenses (including legal fees and expenses) arising from injury, sickness, disease or death of any person employed by the Contractor or any other of the Contractor's Personnel.

10.2.11. The Employer and the Engineer shall also be indemnified under the policy of insurance, except that this insurance may exclude losses and claims to the extent that they arise from any act or neglect of the Employer or of the Employer's Personnel.

10.2.12. The insurance shall be maintained in full force and effect during the whole time that these personnel are assisting in the execution of the Works. For a Subcontractor's employees, the insurance may be effected by the Subcontractor, but the Contractor shall be responsible for compliance with this Clause.

10.2.13. **Automobile Liability Insurance**
The contractor shall effect and maintain an insurance covering use of all vehicle used by the contractor or its sub-contractors (whether or not owned by them) in connection with the design, construction, testing and commissioning of the facilities under the contract in accordance with statutory requirements.

10.2.14. PROFESSIONAL INDEMNITY INSURANCE

- (a) The Contractor shall provide evidence of professional indemnity insurance carried by its Designer for the Works. The professional indemnity insurance shall cover the risk of professional negligence in the design of the Works. This insurance shall be for a limit of not less than Rs. 50 Lakh and shall be maintained in full force and effect from the Commencement Date of the

Works until 03 years after the date of completion of the Defect Notification period.

- (b) The Engineer will not issue any payment certificate until the Contractor has provided evidence of this insurance and its period of effectiveness. The contractor shall provide evidence to the Employer / Engineer before commencement of work at site that the insurances required under the contract have been effected and shall within 60 days of the commencement date, provide the insurance policies to the Employer/Engineer, the contractor shall, whenever, called upon, produce to the engineer or his representative the evidence of payment of premiums paid by him to ensure that the policies indeed continue to be in force.
- (c) The Contractor shall also obtain any additional insurance cover as per the requirements of the Contract or Law of the Country.
The Employer/Engineer 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 his subcontractor or petty contractor / other contractor working there. The Contractor shall indemnify and keep indemnified the employer / Engineer against all such damages and compensation for which the contractor is liable.
- (d) The Policies of the contractor shall remain in force throughout the period of execution of the works and till the expiry of the defect liability period except for any specific insurance covers necessary for shorter period.
- (e) If the Contractor fails to effect or keep in force or provide adequate cover as acceptable to the engineer in the insurance policies mentioned above, then in such cases, the engineer may effect and keep in force any such insurance or further insurance on behalf of the Contractor. The recovery shall be made at the rate of 1.5 times the premium/premiums paid by the engineer in this regard from the payment due to the Contractor or from the contractor's Performance security. However, the Contractor shall not be absolved from his responsibility and /or liability in this regard.

10.2.15. Accident:-

- (a) The contractor shall, in respect of all staff engaged by him or by his sub-contractor, indemnify and keep the employer at all times indemnified and protected against all claims made and liabilities incurred under Workman's Compensation Act, the Factories Act and the Payment of Wages Act, and rules made there under from time to time or under any other labour and Industrial Legislation made from time to time.
- (b) The contractor shall indemnify and keep the employer indemnified and harmless against all actions, suits, claim demands, costs, charges or expenses arising in connection with any death or injury sustained by any person or persons sustained due to the acts or omission of the contractor, his sub-contractors, his agents or his staff during the executions of this contract irrespective of whether such liability arises under the Workman's

Compensation Act, or Fatal Accident Act or any other statute in force for the time being.

- (c) The contractor's liability to meet third party claims of the type outlined above will be applicable only in cases where accidents have been caused by workmanship, material, execution or negligence on the part of the contractor and further the liability of the contractor will be limited to Rs.50 lakh for any one accident without any limit on the number of accidents.
- (d) The contractor shall be responsible for all repairs and rectification of damages to completed works or works under execution due to KRIDE accidents, thefts, pilferage or any other cause, without delay to minimize or to avoid traffic detentions, in a section until the installation are provisionally handed over to the employer.

11.

ASSEMBLY AND LAUNCHING :

- (i) After completion of fabrication, the girder components will be transported to the site and assembled on the specifically made assembly platform. Care must be taken by the contractor while transporting the materials to see that the parts at site are available in proper sequence.
- (ii) All girders will be launched using suitable capacity cranes.
- (iii) All temporary work shall be properly designed and substantial constructed for the loads which it will be called upon to support. Adequate allowance and provision of lateral forces and wind loads shall be made according to local conditions.
- (iv) Temporary bracing shall be provided to take care of stress from erection equipment or other loads carried during erection.
- (v) The blocks shall be arranged by KRIDE/Railway. The contractor shall have to launch the girders within the block period.

11.1.1.1. COMMENCEMENT OF THE ERECTION WORK AT SITE: The contractor shall commence the erection work when and as soon as, but not until, he receives instructions from n in-charge to do so. On such order being given, possession of site/authority shall be given to the contractor of such portion or portions of the site as the AGM/ivil/KRIDE may determine.

- (a) The assembling of components at site to required camber and grade along bridge axis, preceding additional temporary structures and accessories for launching of girders and all related matters shall be full responsibility of the contractor.
- (b) No pre-camber to be provided at the time of fabrication.
- (c) All members of the girder and joints are to be either riveted or welded or

bolted with HSFG bolts as shown in the approved structural drawings. No welding except where approved by the Engineer is to be carried out at site. All welding and riveting are to be carried out as per relevant IRS Specifications.

- 11.1.2. The launching of girders shall be done as per approved drawings. For this purpose, the contractor shall submit in triplicate, detailed launching schemes of all the girders including design calculations, safety procedures and method statement with such plans, sketches and other details as may be necessary to determine the suitability and adequacy of the schemes proposed. The methods adopted shall not, under any circumstances, cause the stresses in various members of girder spans to exceed permissible and safe limits at any stage of launching. One copy duly approved by the Engineer shall be returned to the contractor.
- 11.1.3. For the Engineer's use and record, the contractor shall supply free of charge, four sets of prints on strong paper and one set of neatly executed tracings on linen of approved detailed drawings for assembly and launching schemes for use at site.
- 11.1.4. The launching system & procedure shown on enclosed drawings are purely indicative of the method proposed for launching for which the permanent members of the girders are designed. The contractor shall provide full structural details of the temporary members and their connections to the girder, along with necessary design calculations not only justifying members sizes but also for the entire launching system adopted. Contractor shall provide full structural details of the temporary member and their connections to the girder, along with necessary design calculations not only justifying members sizes but also of the entire launching system adopted. Contractor will be responsible for getting approval of launching scheme submitted by him from the Engineer.
- 11.1.5. In order to ensure perfect fit of the temporary components, holes may be carefully drilled for the connecting members in between the girders in situ and T & F High tension grip bolts used.
- 11.1.6. The launching system shall be test tried if directed by the Engineer and no separate payment for this shall be made.
- 11.1.7. Nothing extra will be paid to the contractor for adopting any scheme for launching and the costs are to be covered in the relevant item in the schedule of items, quantities and rates. All temporary members shall be removed after launching and may be taken back by the contractor. Erection gussets provided for connecting the members may be cut and edges ground as required by the Engineer.

11.2 TEMPORARY STRENGTHENING

- 11.2.1. The launching arrangement may include fabrication of launching nose or

restraining girders, sway restraining devices such as sway ropes, restraining cables etc. the supply and fixing of members for temporary strengthening of girder members to take care of erection stresses and strains and other relevant components for satisfactory and successful completion of the defined scope of work. Erection stresses must be kept within safe and permissible limits at every stage of erection.

11.2.2. The contractor has to make arrangements at his own cost for the steel for temporary arrangements including sway restraining devices for launching and temporary strengthening of girder, as may be required for the launching operations. The rate quoted should take into account these factors as nothing extra shall be paid.

11.2.3. Crane working:

- a) The Contractor shall follow and comply with all prevailing Safety Rules of crane working, relevant provisions of applicable laws pertaining to the safety of workmen, employees, plant and equipment as may be prescribed from time to time without any demur, protest or contest or reservation. In case of any conflict between statutory requirement and Safety Rules prescribed by the crane manufacturer, the former shall be binding on the Contractor unless the statutory provisions are more stringent.
- b) Any loss or damage to property due to negligence of the crew employed by the contractor is attributable to the Contractor. Railways shall not be responsible for any accident/injury to the Contractor's Crew/staff during operation or otherwise. Contractor has to assume full responsibility of the safety of their crew/staff and to comply with the prescribed security/safety regulations at site.
- c) The contractor shall inspect the Site for space for crane working, it is the responsibility of the contractor to ensure that no existing structure is damaged. In case any structure like boundary wall, footpath etc. is damaged, it should be repaired by the contractor at his own cost to the satisfaction of the owner/Railway.

Some issues that need to be addressed during the inspection/preplanning stage are:

1. The type of crane that can safely perform the lift;
 2. Access to the areas, staging areas, and the amount of space that is required to maneuver the equipment and materials;
 3. The proximity of overhead power lines near the work;
 4. A firm and adequate foundation for the crane;
 5. Proper use and extension of the outriggers;
 6. Guarding of the machine and all pinch points, especially the swing radius; and
 7. Congestion in the work areas.
- d) The Contractor has to make their own arrangement for Accommodation, Transport and other amenities like Medical etc. for their crew/staff at Site at their own cost.
 - e) All the statutory requirements as called for by the Labour Laws and other

statutory authorities are to be met by contractor and proof of compliance should be made available to KRIDE.

- f) Electrical Power/Illumination for Crane Operation/Maintenance works at Site shall be provided by the contractor at his own cost basis. However, the Crane should also have its own lights for movement/working in the working area at Site.
- g) The crane shall be operated by the certified trained operator only under the supervision of the qualified supervisor. The Contractor/crane supervisor shall ensure the cranes are set up and used properly on the construction site. He shall ensure right crane for the job, firm foundation, adequate clearances to handle the materials, guarding of moving parts, proper set up of the outriggers and basic crane operations such as two block, level, load charts, and load moment. The operator/supervisor must calculate loads to ensure they do not exceed the limitations of the equipment and satisfy KRIDE engineer before deploying and actually operating the crane.

11.3 INSPECTION AND RECTIFICATION

- 11.3.1 During erection of girders, the contractor shall provide all facilities and permit the Engineer to inspect the field assembly, site riveting and erection of spans.
- 11.3.2. After inspection by the Engineer / Inspecting agency, the contractor shall identify cause of any defect, imperfection and/or fault noticed during such inspection and initiate corrective action as per the direction of the Engineer. All defects, imperfections or faults for which the contractor is liable under the contract, shall be made good by the contractor to Engineer's satisfaction and the cost of identifying and rectifying such defects, imperfection or faults shall be borne by the contractor.
- 11.3.3. A neat casting bearing the name of the contractor, the place and date of manufacture, the contact number and the standard of loading to be specified by the Engineer shall be bolted conspicuously on all girders. The drawing of the name plate shall be approved by the Engineer.

12.0 METHOD OF MEASUREMENT FOR PAYMENT

12.1 Measurement

- 12.1.1. For the purpose of payment, quoted rates apply to the weights of steel work calculated from final working drawings based on theoretical weights given in the producers hand books and using minimum square overall dimensions, no deductions being made for skew cuts, holes or notches. Each gusset shall be measured as equivalent to the dimension of the smallest enclosing rectangle. The wastage of steel in the form of skew

cuts etc. shall be the property of the contractor.

- 12.1.2. The drawing office dispatch lists (D.O.D.Ls) when prepared according to procedure shall be submitted by the contractor to the Engineer for approval.
- 12.1.3. The payment for steel work as per item in the schedule of items, rates and quantities, shall be released in stages of accepted item rates for quantities executed, as mentioned in the tender schedule. The payment after receipt of material in fabrication shop shall be made on the basis of measurements contained in the suppliers vouchers, if required, these measurements shall be further verified by the representative of Engineer in charge by measuring dimensions/sizes of the sections and multiplying the same by standard weight. Sampling for actual weight of the sections shall also be done by him as per procedure and frequency prescribed by Engineer in charge.

13.0 CONTRACTOR'(S) LIABILITY

- 13.1. Any fitting, accessory or apparatus which may not have been mentioned in this specification or the drawings, but which are usual or necessary in the execution of such work, are to be provided by the Contractor without extra payment. The whole work must be completed in all details, whether mentioned in this specification or not, with the exception of such work as has been specified in the schedule of items to be separately provided for in the Contract.
- 13.2. Notwithstanding the specifications and conditions stated in the contract, the contractor shall keep the Engineer/ Employer authority fully indemnified and free from all liabilities and risks consequential to any lapse on his part in respect of material quality, standard of workmanship, accuracy of fabrication and the like. He shall provide all labour and material required for execution of the work as per listed standards and in absence of any IRS & IS specifications.

14.0 TECHNICAL ORGANISATION/TOOLS, EQUIPMENT AND PLANTS.

- (A) Contractor should have qualified and trained manpower suitable to do the work in terms of technical specifications and contract conditions.
- (B) Contractor should have suitable and adequate plants, machinery and equipments required to execute the work like:
 - I. Cutting machine
 - II. Radial drilling machine.
 - III. Edge milling machine, end milling machines.
 - IV. Plate/structural steel straightening machine.
 - V. Pneumatic grinding machine, drilling machines, chipping machines and wrenches etc..
 - VI. Sand blasting equipment and metalizing equipments.

- VII. Welding machines.
 - a. SAW
 - b. MIG/MAG
- VIII. Welding transformers
- IX. Cranes of adequate capacity.
- X. Suitable digs and fixtures.
- XI. To test the raw material and girders to conform to relevant specification, testing facilities, for the following should be available either in house or through outsourcing.
 - a. Elcometer for measurement of thickness of paints.
 - b. Steel measuring taps duly calibrated.
 - c. Ultrasonic flow detection testing facilities for checking internal flaws.
- XII. Suitable Welding manipulator.
- XIII. Macro etching/DP or MP testing facilities.
- XIV. Tongue tester for measuring current and voltage.
- XV. Gauges for checking weld size throat thickness and edge preparation etc..
 - a. All equipment must meet the requirements of corresponding IS, IRS or other international specifications.

- (C) Manpower: Adequate No. of trained qualified welders shall be available with the tenderer. The welder must be trained in accordance with the provision of IS: 817. They must be trained either from recognized welding institutes or by in house training, where proper training facilities exist. The welder must be tested as per requirements of IS: 7310 and proper records maintained.

List of equipments mentioned above is only indicated and not exhaustive. The firm shall be required to deploy all other machineries, tools & plants etc. required for successful completion of the work of fabrication, assembly and launching of the girders.

- 15.0** KRIDE desires that successful tenderer should establish (at his own cost) the fabrication workshop near the site only for close monitoring of all the quality aspects of this contract work. Contractors request for establishing workshop/using workshop proposed/located away from the bridge site shall require prior approval.

- 16.0** Contractor shall establish fully equipped laboratory for all the tests required on materials/processes/products as per provisions of the contract, Specifications and the direction/approval of the Engineer. Costs of these are deemed to be included in the quoted rates. Prior approval of the engineer shall be obtained for non installation of such testing equipment which cannot be installed in normal course due to any reason. However, Engineer's decision (for installation non-installation) in this regard shall be final binding and conclusive.

17.0 SITE FACILITIES BY THE CONTRACTOR:

- 17.1. Contractor shall provide following office/site facilities at the bridge site/other locations for ensuring smooth and efficient communication and work execution. Cost of these facilities deemed to be included in the quoted rates and nothing extra shall be paid for this item.
- (i) Contractor shall supply round the clock electricity in site offices of Railways located at the bridge during the entire contract work. Contractor shall also maintain the electric fittings/writings/plants of both the offices in the good condition.
 - (ii) To provide proper communication the contractor shall (at his own cost) establish inter office communication system between KRIDE offices, fabrication workshops and contractor's offices at site. Adequate number of intercom/ telephone/mobile sets or are similar suitable equipments as decided/approved by Engineer fully communicable shall be established in each of the above fabrication shops & at site of bridge work. The entire expenditure incidental to running and maintenance of above shall be borne by the contractor within quoted rates.
 - (iii) Contractor shall (at his own cost) depute/nominate safety officers(s) for supervising safety aspects of all works/process including enabling arrangements for execution and inspection of the work. Safety systems/arrangements should be made for each activity of fabrication/erection and its inspection and same should be certified by nominated safety officer. Special care/arrangements are required to be made for supervising the erection/launching process of such high girders and concreting in road deck: arrangements should facilitate satisfactory and fearless inspection of each activity of launching/erection.
 - (iv) CCTV camera installation with WIFI facility at all the bridge site locations to be installed by the agency for online monitoring of work for which no extra payment is admissible.

18. COMPUTERIZED NUMERICAL CONTROL(CNC) MACHINE:

A machine based on advanced technology in the fields of fabrication of steel members known as Computerized Numerical Control(CNC)Machine is preferably be used. By this machine, cutting, drilling can be done at required distance and in required patterns. This machine is guided by a computer programme and drawings of the joints and components to be fabricated are prepared in AUTOCAD and fed in the computer programme. This machine is capable of reading the drawings in 3D image and after giving command, this machine cuts the steel plates, angles, channels etc. in desired length and pattern duly measuring very accurately in parts of mm. Drilling of holes are also done at required pitch and pattern as per drawing and hence the use of Jigs are done away with; thus eliminating the human error in measuring and marking etc. and further to enhance production.

19. CONTRACTOR TO STUDY DRAWING & SPECIFICATION ETC. AND HIS LIABILITY:

The contractor shall be responsible for close scrutiny of the approved drawings supplied by the Railway, For any discrepancies, error or omission in the drawings or other particulars indicated therein, the contractor shall approach the Railway immediately for rectification of such discrepancies, errors and omission. If any dimension/figure/features etc. on approved drawings or plans differ from those drawings or plans issued to the tenderers at the time of calling the tender, the dimensions as figured upon the approved drawings or plans shall be taken as correct.

20. FURTHER DRAWING AND INSTRUCTIONS:

- (i) General Manager (Civil)/KRIDE, MD/KRIDE shall have full power to make and issue further drawings or instructions or direction from time to time as may appear necessary and proper to the contractor for efficient construction, completion and maintenance of the works. The contractor shall be bound by the same as fully as be if they had been mentioned or referred to in the contract, and the contractor shall not be entitled to any extra payment in respect of any work or materials shown or directed to be done supplied by such further drawings or instructions required for completion of unless the General Manager (Civil)/KRIDE, MD/KRIDE shall have given an extra order for the same in writing.
- (ii) The tenderer's rate should provide for cutting M. S. Plates for making out M. S. Flats from plates, in case M. S. Flats are not available, No extra payment for such cutting and rinding that may be necessary for converting M. S. Plates to Flats will be admissible.
- (iii) If the works are required to be done in by Rly. Yards and Tracks are to be crossed, the tenderer shall inspect the site and make himself thoroughly acquainted with site condition and quote proper rate including provision for making suitable facilities at site for the work.
- (iv) The work shall have to be done in such a manner that the normal working of the Railway within the railway yard does not get disturbed. Proper protection is to be ensured by the contractor for allowing their labourers to cross the Railway lines with head-leads. No material/temporary structures should be kept adjacent to the running track within 3M from the centre line of track which may infringe rail traffic. The contractor shall take necessary precaution to prevent/cause damage to the Railway property & staff during the execution of the work.

21. CONTRACTOR TO SUBMIT HIS TIME TABLE:

The contractor shall submit a monthly progress of work done during the month by the 4th day of the following month. He will also give the programme of coming month by 25th of each month. The programme will be subject to alteration at the discretion of the KRIDE officials.

22. ANY DOUBTED POINTS TO BE REFERRED TO THE GM/CIVIL/KRIDE :

Should there be any doubt or obscurity as to anything to be done or not to be done by the contractor or as to these instructions or as to any matter or thing, the contractor must set forth such doubt or obscurity in writing and submit the same to GM/Civil/KRIDE. Only such reply as the said GM/Civil/KRIDE may be in writing given shall be taken as the authoritative interpretation of the point in doubt or obscurity. Neither the Engineer nor any staff in the employ of the KRIDE have or has any authority to make any representative or explanations to the contractor as to the meaning of the Form of contract. General Condition and specification, schedule of quantities and rates, drawing or other documents or as to the conditions of the work or site or as to the works, or as to these instructions or as to any other matter or things.

23. LAND:

The KRIDE will at its discretion may request Railway Administration to arrange free of cost land to the extent sparable for contractors office at sites, field work shop, stores, assembly and erection yard. Land required by the contractor for labour or staff colony or other purpose will have to be arranged by him at his own cost.

24. TRANSPORTATION AND HANDLING OF MATERIAL & PLANT:

The contractor shall be responsible to arrange at his own cost wagons (if required) for transportation of materials and stores (other than those which are being arranged by the KRIDE) required for the works. The KRIDE undertake no responsibility for delay in its supply. The contractor shall be responsible for all handling and timely loading and unloading as per Railway commercial rule for public.

25. LOADING OF MATERIALS: REFER CLAUSE 44.1 TO 44.3 OF IR FABRICATION SPECIFICATION SERIAL BI-2001 ISSUED BY RDSO.

26. GUARANTEE AGAINST DEFECT:

(a) The Contractor shall guarantee that all the works executed under this contract shall be free from all defects and faults in material, workmanship and manufacture and shall be of acceptable standards for the contracted work and in full conformity with the technical specifications, drawings and other contract stipulations, for a period of 24 months from the date of taking over by the Employer.

(b) During the period of guarantee the Contractor shall keep available an

experienced engineer /manpower to attend to any defective works / installations resulting from defective erection and/or defect in the installation supplied by the Contractor. This engineer shall not attend to rectification of defects which arise out of normal wear and tear and come within the purview of routine maintenance work. The contractor shall bear the cost of modifications, additions or substitutions that may be considered necessary due to faulty materials or workmanship for the satisfactory working of the equipment. The final decision shall rest with the Engineer his successor(s)/Nominee.

- (c) During the period of Guarantee the Contractor shall be liable for the replacement at site of any parts which may be found defective in the executed work whether such parts / structural elements of his own manufacture or those of his sub-contractor / supplier whether arising from faulty materials, workmanship or negligence in any manner on the part of the Contractor provided always that such defective parts as are not repairable at site are promptly returned to the Contractor if so required by him at his (Contractor's) own expenses. In case of parts of executed work detected during guarantee period, contractor should replace all such items irrespective of the fact whether all such items have failed or not. The Contractor shall bear the cost of repairs carried out on his behalf by the Employer at site. In such a case, the contractor shall be informed in advance of the works proposed to be carried out by the Employer.
- (d) If it becomes necessary for the Contractor to replace or renew any defective portion of the structural elements until the expiration of six month from the date of such replacement or renewal or until the end of the above mentioned period whichever is later. Such extension shall not apply in case of defects of a minor nature, the decision of the General Manager/KRIDE or his successor/nominee being final in the matter. If any defect be not remedied within a reasonable time during the aforesaid period the Employer may proceed to do work at the Contractor's risk and expense, but without prejudice to any other rights and remedies which the Employer may have against the Contractor in respect of such defects or faults.
- (e) The repaired or renewal parts structure shall be delivered / supplied and erected / executed on site free of charge to the employer.
- (f) Any materials, fittings, components or equipment / structure supplied under items for supplying / providing and fixing in schedule shall also be covered by the provisions of this paragraph. The liability of the Contractor under the guarantee will be limited to re-supply of components / structure installation and fittings.

27. INCLUSIVE PRICE:

- (i) The cost of all painting, temporary erection and testing at the Tenderer's workshop, Packing and delivery at the site of work as specified in the schedule, is to be included in the price quoted on the tender.

- (ii) Any fittings, accessories or apparatus which may not have been mentioned in the specification, but which are considered necessary for the execution of this work, are to be provided by the contractor without any extra payment. The work must be completed in all details.

28. TRAFFIC BLOCKS / POWER BLOCKS / SHUT DOWN:

- 28.1. KRIDE shall obtain Power / Traffic / Shut down as per the readiness and request of the contractor. Engineer/Engineer's representative will facilitate to make arrangements to obtain power blocks / shutdown (hereinafter referred to as blocks) for works to be carried out along or adjacent to the track work. Works such as foundations of abutments/piers shall generally be done without blocks. However if block is required due to safety considerations, the construction shall be done under block. The requirement of shut down, power blocks etc. shall be assessed by the contractor and will be submitted to the Engineer/Engineer's representative. All the erection of girders etc. shall be done under minimum power block/shut down. Contractor will arrange minimum two gangs of labours i.e. expert of TR line fitters, Semi-skilled fitters, labour, etc. with super visors and sufficient tools and tackles required as per site conditions. Work will be done day & night with war foot level with the approval of the Engineer/Engineer's representative. Block will be provided for each Bridge/ROB individually.
- 28.2. Blocks will be granted during day & night hours continuous. The Contractor shall confirm that he will equip himself to carry out all construction during night blocks efficiently by suitable special lighting equipment without any extra cost.
- 28.3. Block period shall be counted from the time the TR-line is placed at the Contractors disposal at the work-spot till it is cleared by the Contractor.
- 28.4. Blocks will be subject to normal operating conditions and rules of the Railway. All formalities of exchanging private number etc. with the traffic control/traction power controller will be carried out by the Engineer staff and for this purpose the Engineer will depute a representative for each bridge/ROR, who will be responsible for imposing power blocks/shut down and also removing the same after men, material and equipment have been cleared by the Contractor from running tracks and the same declared safe for traffic by Engineer/Engineer's representative in case of works involving safety of running tracks.
- 28.5. The works required to be done under traffic block shall be carried out only in the presence of KRIDE officials. The KRIDE/ PMC supervisor shall certify safe conditions for passage of trains before resumption of traffic. The works to be done under traffic block shall be carried out under the provision of banner flag and protection of engineering flagman.
- 28.6. Any charges which may be levied by IR on account of "Possessions" shall

be payable by the contractor but shall be reimbursed by the Employer. However penalties, if any, levied by Indian Railways caused due to any careless working or otherwise of violation of the Terms and Conditions of the track block, shall be payable by the contractor.

29. DECLARATION OF DESIGNED FABRICATION/ASSEMBLY YARD AS A PART OF SITE:

- 29.1. KRIDE may issue necessary declaration on specific request of the contractor subject in the condition that the workshop area are earmarked exclusively for fabrication of girder components for this bridge with separate entry/exit arrangements. This is with further stipulation that such an arrangement should be acceptable to excise department by way of a no objection certificate. Necessary follow up with Excise Department will be solely the contractors responsibility. In the event of excise department not agreeing to such an arrangement, the contractor shall not have any claims whatsoever, and shall pay excise tax and other extant taxes as per extant rules within quoted rates and nothing extra would be payable to them on this account.

30. STUD SHEAR CONNECTOR:

In the case of Composite Girders wherein the steel structure of a bridge is fixed to the concrete structure of the deck so that the steel and concrete act together, so reducing deflections and increasing strength. This is done using 'shear connectors' fixed to the steel beams and then embedded in the concrete. Shear connectors can be welded on, perhaps using a 'stud welder', or better still on export work, by fixing nuts and bolts.

30.1

MATERIAL:

The stud shear connector and ceramic ferrules shall conform to type SD1/UF as per BS EN ISO 13918-2008. The diameter of ceramic ferrule D 7 as per Figure 13/Table 18 of BS EN ISO 13918 shall be 26. Mechanical properties of stud shear connectors shall be as per ISO 6892/BS EN ISO 13918–2008. Shape of tip of stud shear connectors may be chosen by manufacturer. The stud tip shall be supplied with flux in the form of press fitted aluminum ball or Aluminum spray coating.

- 30.2 **Welding:** The welding of stud shear connectors shall be done by “Drawn arc stud welding with ceramic ferrule” Technique. The stud and the surface to which studs are welded shall be free from scale, moisture, rust and other foreign material. The stud base shall not be painted, galvanized or cadmium plated prior to welding. Welding shall not be carried out when temperature is below 10 degrees Celsius or surface is wet or during periods of strong winds unless the work and the welder are adequately protected. The welds shall be visually free from cracks and shall be capable of developing at least the nominal ultimate strength of studs. The procedural trial for welding the stud shall be carried out when specified by the Engineer.

30.3

TESTING:-

(a) Appearance test

1. The weld to a stud shear connector should form a complete collar around the shank and free from cracks, excessive splashes of weld material, free from injurious laps fins, seams, twist, bends or other injurious defects.
2. Weld material should have a 'Steel Blue' appearance.

(b) Test to check the fixing of shear studs

All studs need to be checked by a ring test.

1. Ring Test: Involves striking the side of the head of the stud with a 2 kg hammer. A Ringing tone achieved after striking indicates good fusion whereas dull tone indicates a lack of fusion (BS 115).
2. Bend Test: Test requires the head of a stud to be displaced laterally by approximate 25% of its height using a 6 kg hammer.
 - The weld should then be checked for signs of cracking or lack of fusion
 - Stud should not be bent back as this is likely to damage the weld
 - The testing rate should be 1 in 50 (BS 115).

30.4. **Measurements:** The work shall be enumerated. It's unit is "each".

30.5 **Rates:** -The rate shall include the cost of material, labour, equipment, tools and plants, etc. complete required for all operations described above. The rate for Stud Shear Connected is not included in the respective item for girder fabrication, so separate payment for this item will be made.

31. SCHEDULE OF TECHNICAL REQUIREMENTS (STR) FOR FABRICATION OF STEEL GIRDERS. (LATEST VERSION TO BE FOLLOWED)

A. Procedure for supply of steel girder:

1. For the steel girders of all bridges other than important bridges (as defined in IRS Sub Structure Code), the tendering firm shall be from RDSO approved list of firms for Steel Bridge Girders only further subject to the condition that the tendering firm fulfils other technical and financial eligibility criteria as prescribed by the Railway in the tender and the steel girders to be manufactured by the tendering firm in RDSO approved premises only.
2. For Steel Girders of important bridges (as defined in IRS Sub Structure Code), besides RDSO approved firms, the tendering firm can also be other than RDSO approved firm for Steel Bridge Girders subject to the firm fulfilling technical and financial eligibility criteria as prescribed by the Railway in the tender and the site fabrication workshop of the firm shall be set up at site of work which meet with the Schedule of Technical Requirement (STR) for Steel Bridge Girders issued by RDSO time to time. The approval of the site fabrication workshop meeting with the STR to be done by RDSO only and not by any other organization. The existing system of approval by Railway officer not below JA Grade is discontinued.
The tenderers besides satisfying similar work eligibility criteria and financial eligibility criteria have also to fulfill the following technical requirements.

B. THE FIRM WILL ENSURE AVAILABILITY OF

- i) The required infrastructure, machinery & plant.
- ii) Testing and measuring equipment duly calibrated.
- iii) Trained technical manpower and quality assurance programme.
- iv) Equipment meeting the requirements of relevant specifications.
- v) Space required for manufacturing, testing and storage viz. manufacturing floor, godown, store, office and test lab also.

C. GENERAL AND INFRASTRUCTURAL REQUIREMENTS FOR STEEL GIRDERS.

- i) The fabricator must have adequate organization including supervisors, skilled workers and adequate manpower to execute the fabrication work in competent manner.
- ii) A proper organization must exist to perform the functions of purchasing of various raw materials and consumables etc. and maintaining related inspection certificates, test certificates etc.
- iii) Previous experience of fabricating steel structures capable of withstanding dynamic loads such as bridge girders, microwave towers, heavy industrial steel structures etc. is essential.
- iv) A proper procedure for maintenance of records for receipt and consumption of raw material should be in vogue or developed so as to permit verification by Railway's representative.
- v) Adequate power supply should be available through distribution agencies and adequate backup shall be available through captive generation.
- vi) Covered pay area served by EOT cranes or by mechanically operated machines should be provided to handle day to day fabrication of girder components.
- vii) Enough area to store raw material, subassemblies and finished product should be available. The area provided should be enough to store raw material to execute the work order for requirement of steel. Suitable material handling facilities in form of EOT/mobile cranes should be available.
- viii) A separate line for inspection and testing of girders should be provided for final inspection and testing of bridge girders by KRIDE/ PMC inspecting engineers.
- ix) Covered shed area protected from rain, dust etc. should be provided for surface preparation/painting/metalizing of steel girders. As no part of the work shall be painted unless it has been finally passed and cleared by inspecting officer, adequate space for storing fabricated component awaiting painting shall be available.
- x) For full scale layout of drawings to which girders are to be manufactured, template shop with steel/concrete floor should be available. For symmetrical girders, central half of the layout may be done and for non-symmetrical girders full-length layout shall be required. Further, for development of jigs and fixtures this shop should have in – house jigs manufacturing facilities.
- xi) Sufficient space for trial erection of the girder after manufacture shall be available. For this purpose, proper handling equipment, stacking space and other facility shall be available.
- xii) An adequately equipped and staffed drawing office is required for preparation

of fabrication drawings.

D. MACHINERY & PLANTS.

Following machinery and plants shall be available with the fabricator.

- i) EOT/Portal/mobile crane of min.10t capacity or suitable material handling facility to serve the handling of material for fabrication of girders, unloading of raw material and loading of finished product.
- ii) Compressors of adequate capacity suitable for riveting and for other simultaneous applications.
- iii) Oxy – Acetylene gas cutting equipment.
 - a) Profile cutting equipment of adequate size.
 - b) Self-propelled straight cutting equipment preferably consisting of multiple torches.
- iv) Radial drilling machines of adequate capacity to drill holes of 12 to 50 mm diameter.
- v) End milling machine.
- vi) Plate & structural sections straightening machine.
- vii) Pneumatic/hydraulic yoke riveting machine.
- viii) Adequate number of portable pneumatic tools such as grinders, drilling machines chipping machines, wrenches etc.
- ix) Dumpy level or theodolite instrument for recording of camber/deflection of trial erected girder.
- x) Facility for surface preparation/painting/metalizing as per IRS B-1 specification.
- xi) A) To test the raw material and girders to conform it for relevant specification, testing facilities for the following must be provided:
 - a) Elcometer for measuring thickness of paint.
 - b) Steel measuring tape duly calibrated.

B) Following facilities for testing of material can be in house or may be arranged from external agencies :

 - (a) Equipment required for testing of mechanical properties, chemical composition and microstructure etc.
 - (b) Ultrasonic flaw detection testing facilities for checking internal flaws and thickness of section.
- xii) System of periodical maintenance of M& P must be in vogue and proper records maintained.

E. QUALITY INFRASTRUCTURE.

- i) Fabricator shall have proper quality infrastructure to ensure the quality product as required under latest issue of IRS B1 specification and IRS Welded Bridge Code as applicable.
- ii) A system should be in force for analysis of defects noticed during internal and external inspections of the final product and sub-assemblies. A dynamic arrangement for a feed back to the source of defects and for rectification should be in vogue.

- iii) The fabricator should have adequate infrastructure and facilities like checking gauges, templates etc. during fabrication required from time to time so as to ensure that the finished product is as per requirement of IRS : B1 and Welded Bridge code.
- iv) Following specifications/codes commonly referred in connection with fabrication or riveted steel girders must be available with fabricator.

IRS B -1	Fabrication and erection of steel girder bridges
IRS	Steel bridge code
IS : 1148	Hot rolled steel rivet bars (up to 40 mm dia) for structural purpose.
IS: 1149	High tensile steel rivet bars for structural purpose
IS : 1852	Rolling and cutting tolerance for Hot Rolled Steel Products
IS : 2062	Hot rolled low, medium and high tensile structural steel.

The latest version of BIS Codes/Specifications referred herein including their amendments issued from time to time are to be followed:

- v) All equipment must meet the requirements of corresponding BIS or other international specifications.

F. ADDITIONAL GENERAL AND INFRASTRUCTURAL REQUIREMENTS FOR FABRICATION OF WELDED GIRDERS.

- i) The following facilities should be available for fabrication of welded girders.
 - a) Welding transformers/rectifier for Manual Metal Arc Welding(MMAW)
 - b) Inert gas (Carbon Dioxide) welding equipment sets.
 - c) Automatic sub – merged arc welding equipment.
 - d) Suitable welding manipulators.
 - e) Macro-etching/ Dye Penetrant or Magnetic Particle testing facilities.
 - f) Arrangement for radiographic test either in house or from external agency.
 - g) Tongue tester for measuring current and voltage.
 - h) Gauges for checking weld size, throat thickness and edge preparation etc.
- ii) Machine for edge preparation before welding.
- iii) Fabricators must ensure that welding and gas cutting equipment/accessories meet BIS or other international standard requirements. It will be fabricators responsibility to satisfy the inspecting engineer that all the welding equipment/accessories conform to the BIS standard or any other standard in the absence of proper marking on such equipment/accessories.
- iv) Only trained and qualified Welders shall be deployed for welding. The welders must be trained in accordance with the provisions of IS:817. They must be trained either from recognized welding institutes or by in – house training, if proper facilities exist. The welders must be treated as per requirements of IS: 7310 and proper records maintained.
- v) All welding shall be carried out under the overall supervision of a qualified welding supervisor who has been trained in 'Welding Technology from any recognized welding institute.
- vi) Welding instructions shall be prominently displayed on the shop floor. Requirement of the job in hand must be clearly explained to the welder before

he is permitted to work.

- vii) Following specifications/codes commonly referred in connection with fabrication of welded steel girders must be available with fabricator.

	IRS Welded Bridge Code
IS: 817	Code of practice for training and testing of metal arc welders.
IS : 818	Code of Practice for Safety and health requirements in electric and gas welding operations.
IS : 822	Code of Procedure for inspection of welds
IS : 4353	Recommendations for sub-merged arc welding of mild steel and low alloy steels.
IS : 7307 (Pt.I)	Approval tests for welding procedure.
IS : 7310 (Pt.I)	Approval tests for welders working to approved welding procedure – fusion welding of steel.
IS : 9595	Recommendations for metal arc welding of carbon and carbon manganese steel.

The latest version of BIS Code/Specifications referred herein including their amendments issued from time to time are to be followed. Wherever to the standards mentioned above appears in the specification it shall be taken as a reference to the latest version of the standard.

LIST OF APPROVED MAKE / LIKELY SUPPLIERS

All the materials and products shall conform to the relevant Standard Specifications, IS codes and other relevant codes etc. and shall be of approved make and design.

The list of approved makes for products and materials given below. Other equivalent manufacture can only be considered with prior approval of the Employer subject to testing of the material for equivalent specification and properties.

SI. No	Material Description	Brand	Make
1	Ordinary Portland cement	ACC	ACC Cements Ltd
		Ultra Tech	Ultra Tech Cement Ltd
		Birla	Birla Corporation Ltd.
		Dalmia	Dalmia Cement Bharat Ltd.
		Zuari	Zuari Cement Limited
		Jaypee Cement	Jaypee Cement Ltd.
		J.K.Cement	J.K.Cement Pvt.Ltd.
		Ambuja Cement	Ambuja Cements Ltd.

		Konark Cement	Konark Cement
		Coromandal	India Cements Ltd.
		Chettinadu	Chettinadu Cements Corportion Ltd.
		Century Cement	Birla Gold Cement
2	Damp Proof material	MAPEI	MAPEI Construction Products India P Ltd.
		Ferrous Crete	Ferrous Crete (India) Pvt. Ltd.
		Impermo	Snowcem Paints
		Duraseal	Apurva India Pvt. Ltd.
		ACCO Proof	ACC Cements Ltd
		Dr.Fixit	Pidilite Industries
		Fosroc	Fosroc Chemicals India Pvt. Ltd.
		CICO	CICO Industries
		SIKA	Sika Inida Pvt Ltd.
		PIDILITE	Pidilite Industries Ltd
		BASF	BASF India Ltd
		MYK	MYK LATICRETE India Pvt. Ltd
3	Reinforcement steel TMT Bar Fe- 500/500D	SAIL	Steel Authoirty of India Ltd.
		VIZAG	Rastriya Ispat Nigam Ltd.
		TISCO	TATA Steel Ltd
		JSW	JSW Steel Ltd
		* RDSO approved vendors as on date of supply	
4	Plasticiser & Super Plasticiser	BASF	BASF India Ltd
		CICO	CICO Industries
		Plastiment, Sikament	
		Contrament, Power flow	MC Bauchemie (India) Pvt. Ltd
		Conplast SP430	FOSROC India
		MYK Schomburg	MYK Arments Pvt. Ltd.
		Chryso-HP / Delta / Optima	Chryso India Pvt. Ltd.,
		Sunanda Chemicals	Sunanda Chemicals Ltd.
5	Expansion Joint Bitumen board	Dura board HD100	Supreme Industries
		STP	Shalimar Tar Products
		DURAFILL	Supreme industries
6	Post tensioning	CRUX	Crux Processing systems Pvt Ltd.,

	System	VSL	VSL India Pvt Ltd.
		Ultracon	Ultracon Structural Systems Pvt Ltd
		BBR	BBR (India) Pvt . Ltd
7	PT Strands	DP wires	D.P Wires Ltd.
		TATA wiron	TATA Steel Ltd
		Usha Martin	Usha Martin Ltd
8	Adhesive	Dunlop	India Tyre & Rubber Co (India) Ltd.
		Vamorganic	Vamorganic Ltd.,
		Sika	Sika Inida Pvt Ltd.
		Fevicol	Pidilite Industries
		CICO	CICO Industries
		Proofex of adhesive	FOSROC India Ltd
9	Grout	Ardex	Ardex Endura Adhesive India Pvt. Ltd
		Ferrous crete	Ferrous Crete (India) Pvt. Ltd.
		LATA POXY	MYK LATICRETE India Pvt. Ltd
		BASF	BASF India Ltd
		Fosroc GP2	Fosroc India Ltd
		MYK Schomburg	MYK Arments range of products
		Fugabella, Porcelana	Kerakoil India Pvt. Ltd
		Dr.Fixit	Pidilite Industries
		Weber	Saint-Gobain India Pvt. Ltd
10	AAC Blocks / Building Blocks	Xtralite	ULTRATECH Cement Ltd
		Birla Areocon	HIL
		Siporex	SIPOREX
		Nucon	Green way building materials India Pvt. Ltd
		NCL	NCL VEKA Ltd
		Renacon	Renaatus Procon Pvt. Ltd
11	Wooden Flush door shutters	Indian Timber Products	Indian Timber Products
		Greenlam	Greenlam Ply Industries Ltd.
		Mayur	Mayur Ply Industries
		Kitply	Kitply Industries Ltd
		Duro Flush doors	Duro Ply Industries Ltd.
		Kenwood	Kenwood Ply & Board

		Century	Century Flush Doors
12	Water Proof Plywood, Commercial ply, Fire retardant ply and Block boards	Green Ply	Green Ply Industries Ltd.
		Kitply	Kitply Industries Ltd
		Duroply	Duro Ply Industries Ltd.
		Archidply	Archid ply industries Ltd.
		Century ply	Century Flush Doors
13	Laminate	Green Lam	Green lam Industries Ltd.
		Centuary	Centuray laminates
		Merino	Merino laminates
		Archidply	Archid ply industries Ltd.
		Kitmica	Kitply Industries Ltd
		Sunmica	Sunmica Industries
		Formica	Formica Laminates (India) Pvt Ltd
		Decolam	Decolam India Pvt Ltd.
14	Prelaminated particle board Exterior Grade	Novapan	GVK Novapan Industries Pvt Ltd.,
		Merino	Marino laminates
		Kitlam	Kitply Industries Ltd
		TESA Action Co.	TESA Action Co.
		Ecoboard	Ecoboard Industries Ltd.
		Associate	Associate Decor Limited
		Archid ply	Archid ply industries Ltd.
		Centuary	Centuary MDF
		Green Lam	Green lam Industries Ltd.
15	High Density (HDF) Prelaminated board	Pergo	Red Floor India
		Green Ply	Green Ply Industries Ltd.
16	Gypsum board	Gyproc Saint Gobain	Saint Gobain Gyprock India Ltd.,
		Lafarge	Lafarge Gypsum India Pvt. Ltd
		USG Boral Board	USG Board India (P) Ltd.
		Armstrong	Armstrong World Industries
17	Glass door hardware	Dorma	Dorma India Pvt Ltd
		Kich	Kich Architectural Products Ltd.
		Classic	Classic hardware
		Squash	Squash glass doors

		Hafele	Hafele India Pvt. Ltd
		Ozone	Ozone Hardware.
		Geze	GEZE GmbH
		Dorset	Dorset Industries Pvt Ltd
18	Hydraulic door closers/Floor springs	Godrej	Godrej locking solutions & systems
		Hardwyn	Hardwyn hardware
		MAGNUM KIT	Mukund Overseas
		Dorma	Dorma India Pvt Ltd
		Everite	Everite agencies
		Dorset	Dorset Industries Pvt Ltd
19	Locks & Latches	Dorset	Dorset Industries Pvt Ltd
		Godrej	Godrej locking solutions & systems
		Hitech	Globe Locks India
		Hafele	Hafele India Pvt. Ltd
		Harrison	Harrison locks
		Plaza	Bharat lock House
		Yale	ASSA ABLOY India (P) Ltd.
		Link	Link Locks
20	Metalic / Steel Fire Door	Shakthi Hormann	Shakthi Hormann Pvt Ltd
		Promat	Promat fire & Insulation (P) Ltd
		MPP Schodders	MPP Technology Pvt.Ltd.
		NAVAIR	NAVAIR International Pvt Ltd
		Signumfire Protection	Signumfire Protection Pvt. Ltd
		Sukri	Sukri Fire doors Pvt.Ltd
		Kenwood	Kenwood Ply & Board
		Godrej	Godrej Security solutions
21	Fire Smoke Seal	Hilti	Hilti India Pvt Ltd
		Promat	Promat fire & Insulation (P) Ltd
		Atroflame	Atroflame Ltd.
		Raven	Raven Global
22	Fire rated hardware	Dorma	Dorma India Pvt Ltd
		Ingersolrand	Ingersolrand (India) Ltd
		Dorset	Dorset Industries Pvt Ltd

		Backers FS	Backers FS
		Geze	GEZE GmbH
23	Non Metallic Fire door	NAVAIR	NAVAIR International Pvt Ltd
		Promat	Promat fire & Insulation (P) Ltd
		Godrej	Godrej Security solutions
		Kenwood	Kenwood Ply & Board
24	Butt Hinges openable window shutters	Hafela	Hafele India Pvt. Ltd
		Earl Bihari	Earl Bihari India Pvt Ltd.
		Dorma	Dorma India Pvt Ltd
		Dorset	Dorset Industries Pvt Ltd
		Alu Alpha	Alu Alpha India
25	Mild Steel Butt Hinges/ Piano hinges	Jolly	Jolly Engineering works
		Supreme	Supreme
		Saswat	Saswat
		Deepak	Deepak
		Swift	Swift screws
		Garg	D P Garg & Company
		Amit	Lovely metal industries Pvt Ltd.
		Jyoti	Jyoti Architectural Pvt Ltd.
26	Stainless steel Butt hinges	Prayag	Prayag Polymers (P) Ltd
		Ozone	Ozone Hardware.
		Dorma	Dorma India Pvt Ltd
27	Concealed tower bolt	Dorma	Dorma India Pvt Ltd
		Ingersolrand	Ingersolrand (India) Ltd
		DORSET	Dorset Industries Pvt Ltd
		Alu Alpha	Alu Alpha India
28	UPVC doors. door frames and windows	Fenesta	Fenesta DCM Shriman
		Encraft	Encraft India Pvt.Ltd.
		LG	LG India Pvt. Ltd.
		Rehau	Rehau Unlimited Polymer Solutions
		Aluplast	Alu Alpha India
		Komarling	Profile India Window Technology Pvt.Ltd.
		Duroplast	Duroplast Extrusion Pvt Ltd

29	PVC Doors and Frames	Accucel	Accura Polytech Pvt.Ltd
		Sintex	Sintex plastic technology Ltd.,
		Duroplast	Duroplast Extrusion Pvt Ltd
		Polyline	Polyline extrusion Pvt Ltd
		Rajshri	Rajshri Productions Pvt. ltd.
		NCL VEKA	NCL VEKA Ltd
30	Stainless friction hinges	Hettich	Hettich India Pvt .Ltd.
		Hafele	Hafele India Pvt. Ltd
		Securistyle	Securistyle India Pvt .Ltd.
		Earl Bihari	Earl Bihari India Pvt Ltd.
		EBCO	EBCO
		ROTO	ROTO Frank Asia
31	Float Glass	Saint Gobain	Saint Gobain India Pvt Ltd
		Modiguard	Gujarat Guardian Ltd.
		Asahi	Asahi India glass Ltd.
		Pilkinton	Pilkinton India Pvt
32	Reflective glass	Saint Gobain	Saint Gobain India Pvt Ltd
		Asahi	Asahi India glass Ltd.
		Pilkinton	Pilkinton India
		Modifloat	Gujarat Guardian Ltd.
		Glaverbel	Glaverbel India
33	Tempered reflective/clear glass	Saint Gobain	Saint Gobain India Pvt Ltd
		FUSO	FUSO Glass India Pvt .Ltd.
		Gurind	Gurind India
		Asahi	Asahi India glass Ltd.
		Modiquard	Gujarat Guardian Ltd.
		Impact safety	Impact safety glass works Pvt Ltd
34	Fire rated glass	Contra flam /Pyroswiss of Saint Gobain	Saint Gobain India Pvt Ltd
		Promat	Promat fire & Insulation (P) Ltd
		Pyran of Schott	Schott glass India Pvt Ltd.
		Pilkinton	Pilkinton India
		Hilti	Hilti India Pvt Ltd
35	Anchor / SS Stone	Hilti	Hilti India Pvt Ltd

	Cladding Clamps Dash fasteners	Fischer	Fischer India
		Anchor	Anchor Ltd
		Nutech	Nutech fasteners
		Canon	Cannon
		Wuerth	Wuerth India Pvt. Ltd
		Trixel	Axel India Pvt.Ltd
		Helpen	Helpen Gmbh
		BOSCH	BOSCH Ltd
36	Structural Steel	SAIL	SAIL
		VIZAG	RINL
		TISCO	TATA STEEL
		JSW	JSW
37	M.S.Pipe. Tubes	SAIL	SAIL
		TISCO	TATA STEEL
		JINDAL	JSW
		Apollo	
38	Stainless steel	Salem	SAIL
		Connect	Connect Ltd.
		Jindal	JSW
		SAIL	SAIL
		KINGSTON	KINGSTON Brass
39	Stainless steel Bolts.washers, nuts	Kundan	Kundan Industires Ltd
		Atul	Atul fasteners Ltd
		Hilti	Hilti India Pvt Ltd
40	Stainless steel pressure plate screws	Kundan	Kundan Industires Ltd
		Pooja	Pooja steel corporation
		Atul	Atul fasteners Ltd
41	Welding rods	Advani	Advani oerlikon Ltd.
		ESAB	ESAB India Pvt. Ltd
42	Metal Deck Sheet	TATA	TATA STEEL
		SAIL	SAIL
43	Shear Stud / Connector	KOCO	KOSTER & Co.
44	Vitrified tiles	Jhonson	Prism Jhonson Ltd

		Kajaria	Kajaria Ceramic Ltd
		Somany	Somany Ceramic Ltd
		NITCO	NITCO Ltd
		RAK	RAK Ceramic India Pvt Ltd.
		Varmora Granito	Varmora Granito Granite Pvt. Ltd
45	Glazed Ceramic tiles (Also wall tiles)	Jhonson	Prism Jhonson Ltd
		Kajaria	Kajaria Ceramic Ltd
		Somany	Somany Ceramic Ltd
		NITCO	NITCO Ltd
		RAK	RAK Ceramic India Pvt Ltd.
		Varmora Granito	Varmora Granito Granite Pvt. Ltd
46	Synthetic Sports flooring	Armstrong	Armstrong flooring
		LG	LG Hausys India
		Wondorfloor	RMG Polyvinyl India Ltd.
47	Linoleum sports flooring	Armstrong	Armstrong flooring India Pvt Ltd.
		Forbo	Forbo flooring India Pvt. Ltd.
		Gerflor	Gerflor flooring
48	False floor	Hewetson	Hewetson India
		Access floor system	Access Floor System
		Unifloor	Unifloor India Ltd
		Unitile	Unitile office systems Pvt. Ltd
		PINNACLE	PINNACLE
		Kebao	Inner Space (Distributors)
49	Engineered wood floor	Armstrong	Armstrong flooring
		Mikasa Real wood floors	Green Lam Industries
		New wood	New Wood India Ltd
		Werner	Durafloor werner GmbH
		Pergo	Red Floor India
50	Floor spring	Dorma	Dorma India Pvt Ltd
		Ingersolrand	Ingersolrand (India) Ltd
		OZONE	Ozone Hardware.
		GEZE	GEZE GmbH
51	Cement concrete	NITCO	NITCO Ltd

	parking tiles	Ultra	Ultra tile Private Ltd
		Eurocon	Eurocon tiles India
		Dazzle	Dazzle Designer Tiles Pvt Ltd
		NTC	NTC Parking tiles
		Hindustan tiles	Hindustan tiles, Ranchi Pune
52	Synthetic Carpet tiles	TOLI	TOLI corporation
		Hollitex	Hollitex carpet tiles
		Standard Carpets	Standard Carpets
53	Vitrified paving tiles	PAVIT	PAVIT Ceramics Pvt Ltd
54	Glass mosaic tiles	Italia	Tile Italia mosaics Pvt Ltd.
		Coral	Coral tiles
		Mridul	Mridul tiles
		Palladio	Palladio Mosaics
		Bisazza	Bisazza Italy
		Birla White	Birla Corportion Ltd.
		JK White	J. K. Cement Ltd
		PAVIT (Eco Tile)	PAVIT Ceramics Pvt Ltd
55	Thermal Insulation treatment	Pidilite	Pidilite Industries
		Elastospray	BASF
56	Acoustic Insulation	Twingerinsul	U.P.Twiga fiber glass Ltd
		Lloyd Insulation	Lloyd Insulation (India) Ltd
		Saint Gobain Gyproc	Saint Gobain Gyproc India
		Himalyan Acoustics	Himalyan Acoustics
		Knauf	Knauf Gypsum India Pvt. Ltd.
		Anutone	Anutone Accoustics Ltd.
57	UPVC Pipes and fittings (Rain water pipes)	Supreme	Superme Industries Ltd
		Prince	Prince Pipes and finttings Ltd
		Finolex	Finolex Industries Ltd.
		Prepoly	Premier PVC Industry
		Astral	Astral polytechnik Ltd
		Ashirwad	Ashirwad PVC Pipes
		Flow Guard	Flow Guard
58	Sandwich PUF	Lloyd Insulation	Lloyd Insulation (India) Ltd

	panelled roofing sheets	JINDAL MECTEC	JINDAL Mectec Pvt. Ltd
		Danpalon	Danpal Light architecture
		GE Plastic	GE Silicones
		LEXAN	LEXAN Ltd
59	Polycarbonate Sheet	MG Polyplast	MG Polyplast
		GE Lexon	GE Silicones
		Danpalon	Danpal Light architecture
		Alcox	Hindeggan Alcox Ltd.
		Polygal	Polygal India Pvt Ltd.
60	False ceilings	Saint Gobain Gyproc	Saint Gobain Gyproc India
		Armstrong	Armstrong World Industries
		USG Boral	USG Boral
		Aerolite	Andhra Polymers Pvt. Ltd./Aerolite Industries
			Pvt.Ltd.
		Hunter Dougals	Hunter Dougals
		Gridsquare	Gridsquare Ceilings
		Knauf	Knauf Gypsum India Pvt. Ltd.
Anutone	Anutone Accoustics Ltd.		
61	False Ceiling Members (Perimeter, Ceiling section, intermediates, angles etc.,)	Armstrong	Armstrong World Industries
		Aerolite	Andhra Polymers Pvt. Ltd./Aerolite Industries
			Pvt.Ltd.
		Gridsquare	Gridsquare Ceilings
		Gypframe steel	British Gypsum
		Knauf	Knauf Gypsum India Pvt. Ltd.
		Lloyd	Lloyd Insulation (India) Ltd
Saint Gobain	Saint Gobain Gyproc		
62	Synthetic enamel Paint	Premium gloss enamel	Asian paints Ltd
		Dulux	ICI dulux Ltd
		Nerolac	Nerolac Paints Ltd
		Berger	Berger Paints
		Nippon	Nippon Paint India Ltd.
63	Pink primer	Wood primer	Asian Paints
		Dulux	ICI Dulux

		Nerolac	Nerolac Kansia Nerolac Paints Ltd.,
		Berger	Berger Paints
		Nippon	Nippon
64	Red Oxide Zinc Chromate primer	High performance yellow metal primer	Asian Paints
		Dulux	ICI Dulux
		Nerolac	Nerolac
		Berger	Berger Paints
		Nippon	Nippon
65	Oil Bound Distemper	Tractor Agalock	Asian Paints
		Dulux (Maxilite)	Dulux
		mG Polyplast	Nerolac
		Berger (Bisom)	Berger Paints
66	Acrylic emulsion	Premium emulsion	Asian Paints
		Dulux (Super Cover)	ICI Dulux
		Nerolac (Beauty Gold)	Nerolac
		Berger(BISM)	Berger Paints
67	Water Proof Cement paint	Asian exterior wall primer	Asian Paints
		Berger	Berger Paints
		Surfa	Surfactoats (India) Pvt. Ltd.
		ICI DULUX	ICI Dulux
		Cem Colour	Snowcem Paints
68	Acrylic smooth exterior paint	Dulux	ICI Dulux
		Apex	Asian Paints
		Nerolac	Nerolac
		Berger	Berger
		Nippon	Nippon
69	Premium Acrylic smooth exterior paint with silicon additives	ULTIMA	Asian Paints
		Dulux	ICI Dulux
		Nerolac	Nerolac
		Berger	Berger
70	Cement based wall putty	J.K.wall putty	J. K. Cement Ltd
		Birla wall care	Birla Cements Ltd.

		Asian paints	Asian paints Ltd
		Altek	NCL Alltek & seccold Ltd.
		Berger	Berger
		Ardex Endura	Ardex Endura India Pvt. Ltd.
		Ferrous Crete	Ferrous Crete (India) Pvt. Ltd.
71	Acrylic textured plaster	Apex Duracast	Asian Paints
		Spectrum paints	Spectrum paints Ltd.
		Heritage	Heritage Rajkamal Group
		Asian paints	Asian Paints
		Nerolac	Nerolac
72	Ready mix cement plaster	Readi Plast	Ultra Tech Cement Ltd
		Gyproc Plasters	Saint Gobain Gyproc India
		Ultra tech	Ultra Tech Cement Ltd
		Ferrous Crete	Ferrous Crete (India) Pvt. Ltd.
73	Melamine Polish	Asian paints	Asian Paints
		Melamine Gold wudfin	Pidilite Industries
		Polycure	Polycure Malaysia
74	Fire retardant paint	Jotun	Jotun paints
		Hilti	Hilti India
		Akzonobel	Dulux Akzonobel Paints
		Asian Paints	Asian Paints
		STPL	STPL Ltd.
75	Anticorrosive bitumastic paint	Berger	Berger Paints India Ltd
		Shalimar	Shalimar paints India Ltd.
		Bituminous black	Asian Paints
76	Cement Primer	Asian paints	Asian Paints
		JK Primaxx	J. K. Cement Ltd
		Berger	Berger Paints India Ltd
77	Epoxy paint	Asian epoxy	Asian Paints
		Berger	Berger Paints India Ltd
		Shalimar	Shalimar paints
		STP	Shalimar Tar Products
		Ardex Endura	Ardex Endura India Pvt. Ltd.

		Nerolac	Nerolac
78	Epoxy coating	BASF	BASF India Ltd
		Fosroc	Fosroc India
		Laticrete	MYK Laticrete India
		Ardex Endura	Ardex Endura India Pvt. Ltd.
		Ferrous Crete	Ferrous Crete (India) Pvt. Ltd.
79	Silicon coating	Dow corning	Dow corning India
		BASF	BASF India Ltd
		GE	GE Silicones
		Wacker	Wacker silicones.
80	Interlocking Concrete Paver Blocks	NITCO (ROCKARD)	NITCO
		Ultra	Ultra tile Private Ltd
		REGENCY	Regency
		Hindustan tiles	Hindustan tiles, Ranchi , Pune
		Vyara tiles	VYARA TILES Pvt Ltd./ Surat
		BHARAT (NILSAN)	Bharat
		Dazzle	Dazzle Designer Tiles Pvt Ltd
		Shree	Shree Bharat Paver blocks
		Basant Betons	Basant Betons
81	Solar studs/ Median markers	3M	3M Science
		Avery Dennison	Avery Dennison India Pvt Ltd.
		Nikkalite	Nippon carbide Industires (USA)
82	Polycarbonate Convex mirrors, Rubberised road hump	Unique safety solutions	Unique safety solutions
83	Mirror	Modi Guard	Gujarat Guardian Ltd.
		Saint Gobain	Saint Gobain Glass India Ltd.
		AIS mirror	Asahi India glass Ltd.
		Atul	Atul glass Industries Ltd.,
84	Vitreous Commodes/ Wash basin	Hindware	HSIL Ltd
		Roca	ROCA Bath room products
		Parryware	ROCA Bath Pvt. Ltd.
		Kohler	Kohler world wide
		CERA	CERA Sanitaryware Ltd.

		Jaquar	Jaquar Group
85	Flushing Cistern	Parryware	ROCA Bath Pvt. Ltd.
		Kohler	Kohler world wide
		Hindware	HSIL Ltd.
		CERA	CERA Sanitaryware Ltd.
		Jaquar	Jaquar Group
86	SWR PVC Pipes & fittings	Supreme	Superme Industries Ltd
		Astral	Astral polytechnik Ltd
		Finolex	Finolex Industries Ltd.
		Flowgard	Ashirwad PVC Pipes
		Prince	Prince Pipes and fittings
87	Stainless Steel Kitchen Sink	Jhonson	Prism Jhonson Ltd
		Diamond	Pheonix Appliances Pvt. Ltd.
		Jindal	Centuary polytech
		Nilkanth	Nilkanth
		Nirali	Jyoti (India) metal Industries Pvt Ltd.
		Hindware	HSIL Ltd
		Silver shine	Blue stone sanitary Industries Pvt. Ltd.
		Joyna	Joyna
		Navkar	Shri Navkar Metals Ltd.
		Franke	Franke India Ltd.
		Futura	Futura Kitchen Sinks India Pvt. Ltd.
88	Centrifugally Caste (Spun) Iron Soil Pipes	Neco	Jayaswal Neco Ltd
		SKF brand	SKF Industries
		HEPCO	Hepco
		Bengal Iron Corporation	Bengal Iron Corporation
		RPMF	Raj Pattern Makers and Founders Pvt. Ltd.
89	PE-AL-PE Composite pipes	Kitec	Kitec Industries (India) Pvt. Ltd.
90	G I Pipes	TATA	TATA Steel Ltd
		Zenith	Zenith Birla (India) Ltd.
		HISSAR	HISSAR
		Jindal	Jindal Pipes Ltd.

91	G I Pipe fittings	Zoloto	Zoloto Industries
		Unik	Unik malleables
		HB	HB Industries
		ICS	Shree samarth Engineers
92	Water supply Valves	Zoloto	Zoloto Industries
		Leader	leader valves Ltd.
		ARCO	Arco valves Pvt. Ltd.
93	CPVC pipes and fittings	Supreme	Superme Industries Ltd
		Finolex	Finolex Industries Ltd.
		Astral	Astral polytechnik Ltd
		Prince	Prince Pipes and fittings Ltd
		Truflor	HIS Ltd.
		Birla Aerocon	HIL Ltd.
		Ashirwad	Ashirwad PVC Pipes
		Flowgard	Flow Guard
94	PVC / HDPE water storage tanks	Sintex	Sintex plastic technology Ltd.
		Vectus	Vectus Industries Ltd
		Supreme	Superme Industries Ltd
95	DI Pipes	Electrosteel	Electrosteel
		Jindal	Jindal
		Tata Ductura	Tata Ductura
96	DI Fittings	Electrosteel	Electrosteel
		Jindal	Jindal
		Tata Ductura	Tata Ductura
97	Water supply fixtures like bibcock, Shower panels	Jaquar	Jaquar Group
		Parryware	Roca bath room products Pvt. Ltd.
		Johnson	Prism Jhonson Ltd
		MARC	MARK Showers
		HINDWARE	HSIL Ltd
		Prayag	Prayag Polymers (P) Ltd
98	Air release valve	Kirloskar	Kirloskar brothers Ltd
		RBM	AFS Ltd.
		Kartar	Kartar valves private Ltd.

99	Centrifugally (Spun) Cast Iron	Electrosteel	Electrosteel castings Ltd.
		Lanco/Sripipes	Electrosteel castings Ltd.
		Jindal	Jindal saw Ltd.
		Kesoram	Kesoram Industries Ltd
100	Spun cast iron fittings	Neco	Jayaswal Neco Ltd
		Kartar	Kartar Valves Private Ltd.
		Electrosteel	Electrosteel castings Ltd.
		Kapilansh Centrifugal	Kapilansh Dhatu Udyog(P)Ltd.
		SKF brand	SINGHAL IRON FOUNDRY Pvt. Ltd
101	CI double flange sluice valve	Kirloskar	Kirloskar brothers Ltd
		RBM	AFS Ltd.
		Kartar	Kartar valves private Ltd.
		IVS	Indian valves private Ltd.
		Zoloto	Zoloto Industries
		BURN	BURN
		Leader	Leader valves Ltd.
102	CI double flanged non return valve	Kirloskar	Kirloskar brothers Ltd
		Fluidtech	Fluidtech
		Zoloto	Zoloto Industries
103	Gun metal Valves	Zoloto	Zoloto Industries
		Leader	Leader valves Ltd.
		Sant	Sant valves Pvt Ltd
		Audco	L&T Valves
104	PTMT/PVC water supply sanitary fittings, bib cocks,	PEARL	Precision Products
		Prayag	Prayag Polymers (P) Ltd
		Supreme	Supreme Industries
105	RCC Pipes	Indian Hume Pipe	Indian Hume Pipe Ltd.
		Madurai spun pipe	Madurai spun pipe company
		Lakshmi Sood & Sood	Lakshmi Sood & Sood Pipe Co.
		Jain & Co	Jain spun pipes Co.
106	CI Manhole cover	Neco	Jayaswal Neco Ltd
		HEPCO	Binay Udyog Pvt. Ltd.
		BIC	Bengal iron corporation

107	SFRC Cover and grating	KK	KK Manhole and gratings Co Pvt Ltd.
		Advent	Advent concrete vision
		Kutty	Kutty Industries
		Nu-TEC	Nu-Tech concrete products (P) Ltd.
108	Plastic Encapsulated Foot Rest	KK India	KK Manhole and gratings Co Pvt Ltd.
		KGM	KGM Exports
		Accurate Buildcon	Accurate Buildcon company.
109	Spun cast iron covers & gratings	Neco	Jayaswal Neco Ltd
		Jagannath	Sri Jagannath Iron Foundry Pvt Ltd.
		Kapilansh Centrifugal	Kapilansh Dhatu Udyog(P)Ltd.
		SKF brand	SINGHAL IRON FOUNDARY Pvt. Ltd
110	Aluminium doors/windows sections	Hindalco	Hindalco Industries Ltd.
		Jindal	Jindal Aluminium Ltd.
		Padmavathi Extrusion	Padmavathi Extrusion Private Ltd.
		Hyd	Hydro Extrusion
		Omalco Extrusion	Omalco Extrusion Pvt. Ltd.
		Bhoruka	Bhoruka Aluminium Ltd.
		Indal	Indian Aluminium Ltd
111	Aluminium systems/Anodised aluminium fittings for doors/windows	Define	Define Overseas Pvt. Ltd.
		Schueco	Schueco India Pvt. Ltd.
		Bhoruka	Bhoruka Aluminium Ltd.
		Kawneer	Kawneer India
		Hardima	Hardima sales corporation
		Everite	Everite Agencies
		Jyothi	Jyothi Industries
		Sigma	Sigma Corporation
112	Friction stay hinges	Earl Bihar	Earl Bihari Pvt. Ltd.
		KINLONG	Kinlong Industries
113	EPDM Gaskets	Anand	Anand NVH products (P) Ltd.
		Roop	Roop Polymers Ltd
		Bohra	Bohra rubber Pvt Ltd.
		Hanu	Hanu Industries
		Ame Rubber	Ame Rubber Industries Pvt Ltd.

114	Silicon Gaskets	Sree Gaurav	Sree Gaurav Rubber products
115	Masking Tapes	3M	3M
		Sun	Sun
		Wonder polymer	Wonder Tape Industries
		Roop	Roop Polymers Ltd
116	Water proofing compound	Fosroc	Fosroc India
		Ferrous Crete	Ferrous Crete (India) Pvt. Ltd.
		Sika	Sika India
		MYK Schomburg	MYK Arments Pvt. Ltd.
		Penetron	Penetron India Pvt Ltd
		Dr. Fixit	Pidilite Industries
		Accoproof	ACC Cements Ltd
		Ardex Endura	Ardex Endura (India) Ltd
		Alchemica	Alchemica Ltd.
117	Membrane Water proofing system	BASF	BASF India Ltd
		Ferrous Crete	Ferrous Crete (India) Pvt. Ltd.
		STP Ltd	Shalimar Tar Products
		MYK Schomburg	MYK Arments range of products
		SmartCare Membranes	Asian paints
		Dr Fixit	Pidilite Industries
		Alchemica	Alchemica Ltd.
		Ardex Endura	Ardex Endura Ltd
118	Chemical water proofing system	BASF	BASF India Ltd
		Ferrous Crete	Ferrous Crete (India) Pvt. Ltd.
		MC-Bauchemie	MC-Bauchemie India Ltd
		Sika	Sika India
		Sunanda speciality coating	Sunanda speciality coating Pvt Ltd.
		Perma construction Aid	Perma construction Aid Pvt Ltd,
		Fosroc	Fosroc India
		Dr. Fixit	Pidilite Industries
119	Water stops	Hydrotite	Sika India
		BASF	BASF India Ltd

		Dr. Fixit	Pidilite Industries
		Ardex Endura	Ardex Endura Ltd
		Ferrous Crete	Ferrous Crete (India) Pvt. Ltd.
		Hydroswell	Sika India
120	Aluminium composite panels	Alucobond	3A Composites India Pvt.Ltd.
		Eurobond	M/S Euro panel products Pvt. Ltd
		Aludecor	M/S Aludecor Lamination Pvt. Ltd
		Reynobond	Reynobond
		Alpolic	Alpolic
		Alstrong	Alstrong
121	Epoxy	Fosroc	Fosroc India
		Ferrous Crete	Ferrous Crete (India) Pvt. Ltd.
		Shalibons	Shalimar Tar Products
		Asian paints	Asian Paints
		Ardex	Ardex Endura India Pvt. Ltd.
122	PVC Door Frames & Shutters	Rajshri	Rajshri Productions Pvt. Ltd.
		Plastiwood	Plasiwood
		Sintex	Sintex plastic technology Ltd.
		Accucel	Accura Polytech Pvt.Ltd
123	PVC Flooring	LG Hausys	LG Hausys
		Gerflor	Gerflor flooring
		Armstrong	Armstrong World Industries
124	Grass Paver	Unistone	Unistone
		Ultra	Ultra Ltd.
125	FRP Door Frames & Shutter	Meena Fibre Glass.	Meena Fibre Glass
		Duroplast	Duroplast Extrusion Pvt Ltd
		Cactus	Cactus
		Polyline.	Polyline
126	Non Metallic Floor Surface Hardners	Ironite	Ironite
		Hardonite	Hardonite
		FOSROC	Fosroc India
		SIKA	SIKA India
		BASF	BASF India Ltd

		CICO	CICO Technologies Ltd.
		Pidilite	Pidilite Industries Ltd
127	PU Enamel Metallic Paints on MS Structure & Epoxy paints (Premium Quality)	SKK	SKK Ltd
		Akzonobel	Akzonobel
		Asian	Asian Paints
		Berger	Berger Paints India Ltd
		MRF	MRF Paints
128	Rockwool/Glasswool insulation	Twigafiber	Twigafiber glass Ltd
		Lloyd Insulation	Lloyd Insulation Ltd.
		Superme	Superme Industries Ltd
129	Actactic Polypropylene (APP) Modified Water proof Membrane	STP	Shalimar Tar Products
		Ferrous Crete	Ferrous Crete (India) Pvt. Ltd.
		Bitumat	Bitumat Co. Ltd
		Pidilite	Pidilite Industries Ltd
		Ardex Endura	Ardex Endura
		Hydrotech Ltd.	Hydro tech Ltd
130	Structural Glazing	Modi	Modi Guard
		Saint Gobain	Saint Gobain Glass India Ltd.
		Asahi	Asahi India glass Ltd.
		Glaverbel	Glaverbel India
131	Adhesive for AAC Block/Tiles	Ultratech	Ultra Tech Cement Ltd
		Ardex Endura/Gold Star	Ardex Endura
		Ferrous Crete	Ferrous Crete (India) Pvt. Ltd.
132	Aluminium Framework	MFE(MIVAN)	MIVAN
		S-Form	S-Form
		MFS	MFS
133	EPDM Water Proofing Membrane	Smart Care	Asian Paints
		Ferrous Crete	Ferrous Crete (India) Pvt. Ltd.
		Pidilite	Pidilite Industries
		STP	Shalimar Tar Products
		Fosroc	Fosroc India
134	PU Coating (UV Resistant Liquid Applied Coating)	Smart Care	Asian Paints
		Pidilite	Pidilite Industries

		BASF	BASF
		Fosroc	Fosroc India
		SIKA	SIKA India
135	High end Exterior Textures	Allura/Graniza Range	Asian Paints
		SKK Brand	SKK Ltd
		Berger	Berger Paints India Ltd
136	Acrylic Exterior Textures	Asian paints	Asian Paints
		Berger	Berger Paints India Ltd
		Akzonobel	Akzonobel
		Ebco	Ebco
		Nerolac	Nerolac Paints Ltd
137	Puff Insulations	Smart Care	Asian Paints
		Lloyd Insulation	Lloyd Insulation (India) Ltd
		Fosroc	Fosroc India
		BASF	BASF
		Pidilite	Pidilite Industries Ltd
		Supreme	Supreme Ltd
138	Galvolume sheet for roofing, cladding, Sandwich panel	Lloyd Metal Craft	Lloyd Insulations.
		Tata Blue Scope	Tata Bluescope
		Bhushan	Bhushan steel
		JSW	JSW
		Essar	Essar group
139	Aluminium composite panels	Hynadecor	Hynadecor
		Alstone	Alstone
		Eurobond	Eurobond Pvt.Ltd.
140	Mechanical Coupler for Reinforcement	Dextra	Dextra India Pvt. Ltd.
		Sanfield	Sanfield India Ltd.
		Usha Ismal	
		BBR	
		Moment	
141	Pot/Elastomeric Bearings	Prequalified manufacturers as per ministry of Road Transport & highways letter no. RW/NH-34057/1/95-S&R dated Nov 2022 & any amendments to the same	

		RDSO, Lucknow prequalified/ approved manufacturers.
142	Testing Labs	Civil AIDS, Karnataka test house and any other engineering college as directed by Engineer-in-charge.
143	Pile Integrity Test	CBRI, FUGRO-KND, Pile Dynamic, AIMIL, Geotech, Geo Dynamic struct Geotech Research laboratories Pvt. Ltd., Bangalore
144	Pile Testing	Civil Aid, Geo Dynamics22, MS rounds/hollow sectors Bihar Fabs Ltd.
145	Prestressing system	Freyssinet, BBR, VSL, Dynamic, Killick, Nixon, Tensacciai (Italy), macalloy, Dwyidag, Ushamartin.
146	Prestressing stranda	TATA SSL Ltd, Indore wire (LRPC), Usha Martin, Sumitomo wire corporation.
<p>Materials are to be supplied from approved suppliers list only. In exceptional circumstances suitable alternatives can be permitted by KRIDE at its discretion on sufficient reason and details to be furnished by the contractor for such change. Engineer-in-charge decision is final in this regard and binding to the contractor.</p>		

K-RIDE

SECTION – 9
BILL OF QUANTITIES

Name of Work : - “Baiyyappanahalli - Hosur Doubling Project: Construction of 1 x 76.2m span open web girder (welded through type) for Bridge No. 533, 1 x 18.30m span composite welded girder + 2 x 7.5m RCC box extension for Bridge No. 531, Prestressed concrete (PSC) Box girders for Br. No. 519A (only super structure) and steel girder bridge to carry pipe line for Br No. 516A for new doubling line between Baiyyappanahalli “A” panel and Belandur Road Station in Bangalore Division of South Western Railway”.	
SUMMARY OF BILL OF QUANTITIES	
Particulars	Department Value (Rs.)
SCHEDULE - A (Items of works that are covered under CPWD DSR-2018 Vol-I & Vol-II)	32,67,305.25
SCHEDULE - B (Items of works covered under Chapter 1 of SWR USSOR-2021)	12,76,362.60
SCHEDULE - C (Items of works pertaining to Supply of Cement as per item no. 25050 of chapter 2 of SWR USSOR-2021)	1,43,82,833.50
SCHEDULE - D (Items of works pertaining to Concrete works and other bridge items covered under chapter 2, 3, 5 & 19 of SWR USSOR-2021)	3,96,71,482.60
SCHEDULE - E (Items of works pertaining to Supply of Reinforcement Steel as per SWR USSOR-2021)	4,83,30,450.00
SCHEDULE - F (Items of works of Contractors own earth, Blanketing as per Chapter 1 of SWR USSOR - 2021)	44,12,544.00
SCHEDULE - G (Superstructure steel items covered under Chapter -4 of SWR USSOR-2021)	11,11,27,041.98
SCHEDULE - M (Non-Schedule items of works)	34,14,072.00
Total	22,58,82,091.93

SCHEDULE - A (Items of works that are covered under CPWD DSR-2018 Vol-I & Vol-II)						
SL. NO	USSOR CODE	Description of Item	Unit	Total Qty.	Rate	Amount
1	16.68	Providing and laying 60mm thick factory-made cement concrete interlocking paver block of M -30 grade made by block making machine with strong vibratory compaction, of approved size, design & shape, laid in required colour and pattern over and including 50mm thick compacted bed of coarse sand, filling the joints with line sand etc. all complete as per the direction of Engineer-in-charge.	Sqm	50	859.35	42967.50
2	16.69	Providing and laying at or near ground level factory made kerb stone of M-25 grade cement concrete in position to the required line, level and curvature, jointed with cement mortar 1:3 (1 cement: 3 coarse sand), including making joints with or without grooves (thickness of joints except at sharp curve shall not to more than 5mm), including making drainage opening wherever required complete etc. as per direction of Engineer-in-charge (length of finished kerb edging shall be measured for payment). (Precast C.C. kerb stone shall be approved by Engineer-in-charge).	CUM	5	8376.15	41880.75
3	7.1.1	Random rubble masonry with hard stone in foundation and plinth including levelling up with cement concrete 1:6:12 (1 cement: 6 coarse sands: 12 graded stone aggregate 20 mm nominal size) upto plinth level with: 7.1.1 Cement mortar 1:6 (1 cement: 6 coarse sand)	CUM	110	6,120.80	673288.00
4	7.2.1	Random rubble masonry with hard stone in superstructure above plinth level and upto floor five level, including leveling up with cement concrete 1:6:12 (1 cement : 6 coarse sand : 12 graded stone aggregate 20 mm nominal size) at window sills, ceiling level and the like. 7.2.1 Cement mortar 1:6 (1 cement : 6 coarse sand)	CUM	110	7489.95	823894.50
5	10.2	Structural steel work riveted, bolted or welded in built up sections, trusses and framed work, including cutting, hoisting, fixing in position and applying a priming coat of approved steel primer all complete	Kg	10000	101.75	1017500.00

6	13.61.1	13.61 Painting with synthetic enamel paint of approved brand and manufacture to give an even shade : Two or more coats on new work	Sqm	200	121.55	24310.00	
7	15.2.1	Demolishing cement concrete manually/ by mechanical means including disposal of material within 50 metres lead as per direction of Engineer - in - charge. 15.2.1 Nominal concrete 1:3:6 or richer mix (i/c equivalent design mix)	CUM	30	1737.45	52123.50	
8	15.3	Demolishing R.C.C. work manually/ by mechanical means including stacking of steel bars and disposal of unserviceable material within 50 metres lead as per direction of Engineer - in- charge	CUM	210	2534.7	532287.00	
9	15.9.2	Demolishing stone rubble masonry manually/ by mechanical means including stacking of serviceable material and disposal of unserviceable material within 50 metres lead as per direction of Engineer-in-charge : In cement mortar	CUM	30	1754.3	52629.00	
10	15.59	Dismantling of flexible pavement (bituminous courses) by mechanical means and disposal of dismantled material up to a lead of 1 kilometre, as per direction of Engineer-in-charge.	CUM	20	321.25	6425.00	
No. of Items Ten only			Schedule A: Departmental Value			32,67,305.25	
			Tenderer's / Contractor's percentage				
			Total				

SCHEDULE - B (Items of works covered under Chapter 1 of SWR USSOR-2021)						
SL. NO	SWR USSOR code	Description of Item	Unit	Total Qty	Rate	Amount
1	013120	Driving rails 90R/52 Kg section below average ground level within the slope/toe of embankment including making of nose with contractor's own arrangement complete in all respect {Note - Payment will be made as per actual driven length of rail which will be supplied free by Railways at site of work}	Metre	300	114.91	34473.00
2	013130	Shoring with 'Z' section MS sheet piles side by side in all kinds of soil mechanically or manually as per approved drawing with contractor's own arrangement complete in all respects and removal of sheet piles after completion of the work as directed by engineer in-charge {Note - Payment will be made as per actual driven length of pile}	sqm	360	886.27	319057.20
3	014020	Supplying & laying of drainage composite for use behind abutments, wing walls, return walls and Retaining walls Geocomposite drain (Vertical) as per RDSO Specification No. RDSO/2018/GE: IRS-0006 latest version with all material, labour, equipment, tools and plants, lead, lift etc. complete in all respects as per the direction of Engineer-in-Charge.	Sqm	840	1098.61	922832.40
No. of Items Three only			Schedule B: Departmental Value			12,76,362.60
			Tenderer's / Contractor's percentage			
			Total			

SCHEDULE - C							
(Items of works pertaining to Supply of Cement as per item no. 25050 of chapter 2 of SWR USSOR-2021)							
SL. NO	SWR USSOR code	Description of Item	Unit	Total Qty.	Rate	Amount	
1	025061	025060 Supply and using cement at worksite Ordinary Portland Cement 43 grade (no rates reqd.)	MT	2150	6689.69	14382833.50	
No. of Item one only			Schedule C: Departmental Value			1,43,82,833.50	
			Tenderer's / Contractor's percentage				
			Total				

SCHEDULE - D (Items of works pertaining to Concrete works and other bridge items covered under chapter 2, 3, 5 & 19 of SWR USSOR-2021)						
SI No.	USSOR code	Description of Item	Unit	Total Qty.	Rate	Amount
1	021011	021010 Exploratory drilling of Boreholes down to required depth, drilling of 150mm diameter boreholes in all type of soils except hard rock and large boulders (boulder core more than 30 cm), including refilling and reinstating surface, and disposing off surplus material including use of mechanical rigs with power operated winches as well as percussion / chiselling tool for advancing through occasional seams of hard strata to be employed, where necessary in Dry area 0m to 10m	Metre	20	832.42	16648.40
2	021022	021020 Exploratory drilling of Boreholes down to required depth, drilling of 150mm diameter boreholes in all type of soils except hard rock and large boulders (boulder core more than 30cm), including refilling, reinstating surface and disposing off surplus material including use of mechanical rigs with power operated winches as well as percussion / chiselling tool for advancing through occasional seams of hard strata to be employed where necessary in River bed area including standing/flowing water with all necessary arrangements except making of platform under water which shall be paid under relevant item of SOR. 10m to 20m	Metre	20	1202.78	24055.60

3	021023	021020 Exploratory drilling of Boreholes down to required depth, drilling of 150mm diameter boreholes in all type of soils except hard rock and large boulders (boulder core more than 30cm), including refilling, reinstating surface and disposing off surplus material including use of mechanical rigs with power operated winches as well as percussion / chiselling tool for advancing through occasional seams of hard strata to be employed where necessary in River bed area including standing/flowing water with all necessary arrangements except making of platform under water which shall be paid under relevant item of SOR. 20m to 30m	Metre	10	1823.62	18236.20
4	021051	021050 Drilling of NX size borehole (75 mm dia) in all types of hard rock (fresh rock) and collection of rock core samples from boreholes and preserving in boxes 0m to 10m	Metre	10	4526.69	45266.90
5	021052	021050 Drilling of NX size borehole (75 mm dia) in all types of hard rock (fresh rock) and collection of rock core samples from boreholes and preserving in boxes 10m to 20m	Each	4	4879.01	19516.04
6	021110	Taking out 100mm dia & 450mm long undisturbed samples of soil from bore holes, including provision of air tight containers for packing and, labelling incl. transporting the samples to laboratory. Piston sampler shall be used for extracting undisturbed samples where necessary. Samples shall be collected as per IS 2720	Each	4	163.90	655.60
7	021120	Taking out 100mm dia & 450mm long disturbed samples of soil from bore holes, including provision of air tight containers for packing, labelling and transporting the samples to laboratory. Samples shall be collected as per IS 2720	Each	4	183.97	735.88
8	021130	Conducting standard penetration test as per IS 2131 at approximate 1.5 m intervals in bore holes, as directed by the Engineer in charge	Each	4	971.34	3885.36
9	021140	Collection of water samples at required intervals	Each	4	260.90	1043.60

SECTION – 9: BOQ

10	021151	021150 Conducting laboratory Tests on collected soil samples as per relevant IS code Moisture contents/ Dry density	Each	4	341.17	1364.68
11	021152	Atterberg Limit	Each	4	622.14	2488.56
12	021153	Specific Gravity	Each	4	627.64	2510.56
13	021154	Grain size analysis including Hydrometer analysis	Each	4	876.35	3505.40
14	021155	Direct Shear Test	Each	4	2341.39	9365.56
15	021156	Natural density	Each	4	686.80	2747.20
16	021157	Consolidation test	Each	4	7960.73	31842.92
17	021158	Unconfined compression test	Each	4	2466.26	9865.04
18	021159	Tri-axial test	Each	4	2408.29	9633.16
19	021161	Conducting Laboratory test on collected ROCK SAMPLES as per relevant IS code: Density test	Each	4	327.79	1311.16
20	021162	Water absorption & Porosity	Each	4	327.79	1311.16
21	021163	Hardness	Each	4	160.55	642.20
22	021164	Unconfined compression test	Each	4	2414.98	9659.92
23	021165	Point load test	Each	4	1256.77	5027.08
24	021166	Modulus of elasticity	Each	4	6300.20	25200.80
25	021167	Abrasion Testing	Each	4	735.87	2943.48
26	021180	Conducting chemical analysis of ground water samples to determine suitability for concreting and aggressiveness in relation to attack on concrete / reinforcement including determination of pH value	Each	4	1625.59	6502.36
27	021190	Conducting chemical analysis of soil samples to determine aggressiveness in relation to attack on concrete / reinforcement including determination of pH value	Each	4	1625.59	6502.36
28	021200	Preparation and submission of Final report giving complete and comprehensive record of investigations, laboratory test reports and calculations in approved format	Each	4	93536.33	374145.32

29	022011	022010 Earth work in excavation by mechanical means (Hydraulic Excavator)/ Manual Means for foundations and floors of the bridges, retaining walls etc., including setting out, dressing of sides, ramming of bottom, getting out the excavated material, back filling in layers with approved material and consolidation of the layers by ramming and watering etc. including all lift, disposal of surplus soil upto a lead of 300m, all types of shoring and strutting with all labour and material complete as per drawing and technical specification as directed by Engineer in charge. Note : the item will be used for excavation work in connection with other miscellaneous works also. like side drains, foundation for OHE masts and other miscellaneous structures in connection with Gauge Conversion, Doubling, New lines. All kinds of soils	CUM	2590	195.82	507173.8
30	022012	022010 Earth work in excavation by mechanical means (Hydraulic Excavator)/ Manual Means for foundations and floors of the bridges, retaining walls etc., including setting out, dressing of sides, ramming of bottom, getting out the excavated material, back filling in layers with approved material and consolidation of the layers by ramming and watering etc. including all lift, disposal of surplus soil upto a lead of 300m, all types of shoring and strutting with all labour and material complete as per drawing and technical specification as directed by Engineer in charge. Note : the item will be used for excavation work in connection with other miscellaneous works also. like side drains, foundation for OHE masts and other miscellaneous structures in connection with Gauge Conversion, Doubling, New lines. Ordinary Rock	CUM	830	450.7	374081

31	022014	022010 Earth work in excavation by mechanical means (Hydraulic Excavator)/ Manual Means for foundations and floors of the bridges, retaining walls etc., including setting out, dressing of sides, ramming of bottom, getting out the excavated material, back filling in layers with approved material and consolidation of the layers by ramming and watering etc. including all lift, disposal of surplus soil upto a lead of 300m, all types of shoring and strutting with all labour and material complete as per drawing and technical specification as directed by Engineer in charge. Note : the item will be used for excavation work in connection with other miscellaneous works also. like side drains, foundation for OHE masts and other miscellaneous structures in connection with Gauge Conversion, Doubling, New lines. Hard rock (blasting prohibited)	CUM	100	1310.21	131021
32	025020	Providing and applying two coats of coal tar or bitumen conforming to IS:3117-1965-Latest version on the top and sides of RCC box/slabs @ 1.70 kg/sqm after cleaning the surface with all labour and materials complete job as directed by the Engineer	Sqm	840	180.76	151838.4
33	025031	025030 Centring and shuttering including strutting, propping etc. and removal of form for: All types of bridge sub-structures, e.g. pier, abutment, wing wall, retaining wall, RCC box type foundations, Abutment cap, Pier Cap, Inspection Platform & Pedestal over Pier cap, Fender wall, Diaphragm wall etc. upto 5m above ground level	Sqm	1815	709.89	1288450.35
34	025032	025030 Centring and shuttering including strutting, propping etc. and removal of form for: All types of bridge super-structures, e.g., slabs, I-girders, T-girders, Box girders etc. upto 5m above ground level	Sqm	2070	925.88	1916571.6

35	025033	Extra for additional height over item no. 025031 & 025032 wherever required with adequate bracing, propping etc. over initial height of 5 metres for every additional height of 1 metre or part thereof	Sqm	5292	115.50	611226
36	022040	Providing and laying in position machine batched, machine mixed, machine and machine vibrated Design Mix Cement Concrete of specified grade (Cast in-Situ) using 20mm graded crushed stone aggregate and coarse sand of approved quality in RCC raft foundation & Pile cap including finishing, using Admixtures in approved proportions (as per IS:9103), to modify workability & other properties without impairing strength and durability complete as per specifications and direction of the Engineer in charge. Payment for cement, reinforcement and shuttering shall be paid extra.	cum	2580	3238.23	8354633.4
37	022051	022050 Providing and laying in position machine batched, machine mixed, machine and machine vibrated Design Mix Cement Concrete of specified grade (Cast in-Situ) using 20mm graded crushed stone aggregate and coarse sand of approved quality for the following Reinforced cement concrete structural elements up to height of 5m from foundation top level, including finishing, using Admixtures in approved proportions (as per IS:9103), to modify workability & other properties without impairing strength and durability complete as per specifications and direction of the Engineer in charge. Payment for cement, reinforcement and shuttering shall be paid extra. Abutment & Pier	Cum	1415	3562.05	5040300.75

38	022052	022050 Providing and laying in position machine batched, machine mixed, machine and machine vibrated Design Mix Cement Concrete of specified grade (Cast in-Situ) using 20mm graded crushed stone aggregate and coarse sand of approved quality for the following Reinforced cement concrete structural elements up to height of 5m from foundation top level, including finishing, using Admixtures in approved proportions (as per IS:9103), to modify workability & other properties without impairing strength and durability complete as per specifications and direction of the Engineer in charge. Payment for cement, reinforcement and shuttering shall be paid extra. Wing wall and Return wall	Cum	220	3562.05	783651
39	022053	022050 Providing and laying in position machine batched, machine mixed, machine and machine vibrated Design Mix Cement Concrete of specified grade (Cast in-Situ) using 20mm graded crushed stone aggregate and coarse sand of approved quality for the following Reinforced cement concrete structural elements up to height of 5m from foundation top level, including finishing, using Admixtures in approved proportions (as per IS:9103), to modify workability & other properties without impairing strength and durability complete as per specifications and direction of the Engineer in charge. Payment for cement, reinforcement and shuttering shall be paid extra. Abutment cap, Pier Cap, Inspection Platform & Pedestal over Pier cap, Fender wall, Diaphragm wall etc.	Cum	156	3723.96	580937.76

40	022054	022050 Providing and laying in position machine batched, machine mixed, machine and machine vibrated Design Mix Cement Concrete of specified grade (Cast in-Situ) using 20mm graded crushed stone aggregate and coarse sand of approved quality for the following Reinforced cement concrete structural elements up to height of 5m from foundation top level, including finishing, using Admixtures in approved proportions (as per IS:9103), to modify workability & other properties without impairing strength and durability complete as per specifications and direction of the Engineer in charge. Payment for cement, reinforcement and shuttering shall be paid extra. Approach slab at formation level, Dirt wall/ballast wall at formation level	Cum	205	3400.14	697028.7
41	022055	Extra for every increase of 1m or part thereof in the height above 10m	Cum	100	88.17	8817
42	022060	Providing and laying Plain Cement Concrete 1:3:6 with graded stone aggregate of 40mm nominal size, in foundation and floors, retaining walls of bridges including mechanical mixing, vibrating, pumping and bailing out water where ever required with all materials and labour complete but excluding the cost of cement and shuttering as per drawings and technical specifications as directed by Engineer	Cum	165	3457.22	570441.3
43	022070	Providing and fixing Weep Holes in Abutments, Wing walls and Return walls etc., of new bridges with 110mm dia UPVC pipe Type A ISI marked with all contractor's men, material, transportation, all taxes as per specifications and as directed by Engineer-in-Charge.	Meter	330	587.96	194026.8

44	024010	Providing and laying in position machine batched, machine mixed and machine vibrated Design Mix Cement Concrete of specified grade (Cast in-Situ/Pre-cast RCC Box) in bottom/top slab, side walls, toe wall and sumps haunch filling head walls or any other component using 20mm graded crushed stone aggregate and coarse sand of approved quality of RCC box of any size including finishing, Admixtures in approved proportions (as per IS:9103), to modify workability & other properties without impairing strength and durability, complete as per drawings and technical specifications as directed by Engineer in charge. Payment for cement, reinforcement, admixtures and shuttering shall be made extra.	Cum	370	3562.05	1317958.5
45	025010	Deduct if 40mm graded stone aggregate is used in place of 20mm graded stone aggregate in any grade of concrete. (deduction to be made for quantity of concrete)	Cum	100	139.74	-13974
46	031020	Providing and laying in position machine batched, machine mixed and machine vibrated Design Mix Cement Concrete of specified grade using 20mm graded crushed stone aggregate and coarse sand of approved quality for the Precast Prestressed (Post tensioned) concrete girder/Box (spans upto 30.5m) in approved proportions (as per IS:9103), to modify workability & other properties without impairing strength and durability, complete as per specifications and direction of the Engineer. Payment for Shuttering, Cement, reinforcement, HTS cables, anchorage cones, stressing of cables and grouting of the ducts will be done extra. Launching of girder/slab in position is not included in this item.	Cum	320	3238.23	1036233.6

47	031040	Providing, fabricating & fixing in position to exact design profiles, prestressing H.T.S. cables of all classification made from Low Relaxation strands conforming to IS:14268 latest version in Prestressed (Post tensioned) Concrete girders/slabs etc. including supplying, cutting, making into cables with necessary spacers, colour coding, protecting with water soluble oil at all time, anchoring of cables, supplying and placing spiral corrugated type galvanized metal steel ducts sheathing made up of Cold Rolled Cold Annealed (CRCA) mild steel conforming to IS:513 of required diameter/ thickness, vent pipe, placing, bending, routing, fixing, stressing & grouting of cable ducts with cement grout, Anchorage sets in required number with provision for future prestressing if any including all lead and lift with equipments etc. complete as per drawings & specifications. Rate also includes covering anchorage pads with epoxy mortar of approved quality to avoid corrosion. Cement for grouting to be paid separately. Payment shall be made in terms of weight of HTS cables as per drawing.	MT	6	216659.48	1299956.88
48	031060	Extra for using HDPE sheathing in place of CRCA sheathing	MT	6	207.38	1244.28
49	031070	Making suitable designed staging for cast in-situ PSC girders/slabs upto 10.5m height from bed level upto soffit of girder/slab with all contractors materials, machinery, tools and plants, transportation complete in all respects required for casting and removal of the same after completing the work and restoring the site to original. The payment for staging shall be made on the cubical quantity of main Girders/slabs.	Cum	320	2539.86	812755.2

50	031090	Design, manufacturing, supplying and fixing in position elastomeric bearing true to line and level conforming to IS:3400, IS:226, BS-5400 under prestressed concrete girders/ Steel Girders, for Pre-cast as well as cast-in-situ girders as per approved drawing. The rate shall include cost of load test of one no. bearing from Railway approved firms and all fixing materials, equipment's, machineries, labour, taxes, loading, unloading, leading, lifting etc. complete. Rates include getting the drawing approved from Railway and cost of inspection during manufacturing from railway approved organization. (Note : 1. The rate is for finished item complete and paid only after fixing in position below the girder. 2. The volume shall be given in the drawing and no deduction shall be made for inserted steel plates etc.)	Cubic Cm	327100	2.09	683639
51	031101	031100 Providing and fixing in position of standard preformed sealed and slab type or strip seal elastomeric type expansion joints for Railway bridge or Road Over Bridges as per approved drawings and latest MOST/IRC specifications. The rates are inclusive of supp materials, e.g. inserts, bolts, socket tubes, Neoprene sheet/cap etc., equipment's, machineries, labour, all taxes, royalty, all lead & lifts, transport, testing, surface preparations, complete For 40mm expansion	Metre	100	6545.02	654502
52	031111	031110 Load testing of one or more spans of bridge as selected by the Engineer as per approved load test procedure following relevant measuring instruments, loading materials, recoding and analysing the load testing results including all lead & lift, etc. complete as required. The rates are all inclusive and will be paid after load test is finished and girder is cleared of the kentledges/loading material etc. The load shall be 1.25 times the stipulated design load, based on design load & not span For Span design load upto 100 MT	Each	1	92466.59	92466.59
53	031112	Extra for every increase 1 MT or part thereof in the span design load capacity upto 800 MT	MT	500	911.31	455655

54	031142	031140 Providing and fixing in position GI Drainage Spouts of required length with Grating in RCC slab and filling bitumen along kerb as shown in drawing with contractor's pipes, bitumen, tools, equipment, lead, lifts etc. complete as per specifications and as directed by Engineer in-charge 100mm dia. Drainage Spouts	Metre	50	1253.1	62655
55	051030	Supplying of stone boulders weighing not less than 35 kg each at specified bridge locations	Cum	1000	1003.45	1003450
56	031150	Applying Epoxy Poly-sulphate Paint three coats on existing bottom surface of deck slab including cleaning surface of dirt, dust & other foreign matter, sand papering, wire brushing as scaffolding, lead, lifts etc. complete as per specifications and as directed by Engineer in-charge	Sqm	750	338.77	254077.5
57	051060	Providing and laying Pitching with Stone Boulders, weighing not less than 35kg each with voids filled with spalls 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 (filter media to be paid separately under the relevant item)	Cum	300	2458.62	737586
58	051070	Providing and laying Pitching with Stone Boulders, weighing not less than 35kg each with voids filled with cement sand mortar 1:4 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 (filter media to be paid separately under the relevant item). Rate is excluding cost of cement which shall be paid extra under relevant item.	Cum	1000	531.29	531290
59	051080	Providing and laying Filter Material as per RDSO Specifications underneath pitching in slopes complete as per drawing and Technical Specification	Cum	144	3379.50	486648

60	052030	Supply and laying of quarry dust including consolidation, supply of all materials, labour, lead, lift, tools, plants, crossing of tracks as per drawing and technical specification as directed by the Engineer in charge in case loose slush is encountered at site of foundation before casting the foundation or laying the filtering media.	Cum	235	1274.26	299451.1
61	052170	Providing and laying of filter media consisting of granular materials of GW, GP, SW groups as per IS:1498 (latest) in required profile behind boulder filling of abutments, wing walls / return walls etc. above bed level with all labour and material complete job as per drawing and technical specification of RDSO Guidelines.	Cum	1080	3079.26	3325600.80
62	052230	Providing cast in situ bridge number plaques as per Railway drawing in cement concrete 1:2:4 mix using 20mm hard stone aggregate embedded in 30mm notch in Bridge parapet coping duly engraving the letter and figures and an arrow indicating the direction of flow and finishing the top exposed surface with cement mortar 1:3, painting letters and figures with two coats of black enamel paint on two coats of white background with all labour, tools, cement, paint etc. with all leads and lifts.	Each	3	932.46	2797.38
63	052240	Providing cast in-situ plaques for bridge foundations details of size 45cmx45cmx5cm in cement concrete 1:2:4 mix using 20mm hard stone aggregate embedded in 30mm deep notch over abutment & piers, engraving the letters & figures with CM 1:3 and finished smooth including painting letters and figures with 2 coats of black enamel and plaque with white enamel with all labour, tools, cement, paint, curing etc. as a complete job.	Each	3	362.42	1087.26
64	052270	Providing Boulder Backing behind wing wall, return wall, retaining wall with hand packed boulders & cobbles with smaller size boulders toward the back including all lead, lift, labour & other incidental charges as complete work in all respect. Payment for boulder/cobbles will be done extra.	Cum	1000	531.29	531290.00

65	053051	053050 Designing and developing Detailed structural and working Drawings for following items for ROB/RUB/Bridge based on Railway's approved GADs, duly collecting necessary data from Railways and R&B authorities, duly designing members and submission of check plot duly getting proof-checked by Railway approved institutes, submitting for Railway's verification and approval, making corrections duly incorporating suggestions in drawings/designs, further submission of original in transparent film paper and soft copy (CD) for Railways approval etc. with contractor's technical expertise and instruments, labour, consumables, repeatedly attending till final approval etc., complete as directed by Engineer in-charge. Open / Pile / Well Foundation for piers/abutments	Set	3	30270.84	90812.52
66	053052	053050 Designing and developing Detailed structural and working Drawings for following items for ROB/RUB/Bridge based on Railway's approved GADs, duly collecting necessary data from Railways and R&B authorities, duly designing members and submission of check plot duly getting proof-checked by Railway approved institutes, submitting for Railway's verification and approval, making corrections duly incorporating suggestions in drawings/designs, further submission of original in transparent film paper and soft copy (CD) for Railways approval etc. with contractor's technical expertise and instruments, labour, consumables, repeatedly attending till final approval etc., complete as directed by Engineer in-charge. RCC Bed Block	Set	3	15720.77	47162.31

67	053053	053050 Designing and developing Detailed structural and working Drawings for following items for ROB/RUB/Bridge based on Railway's approved GADs, duly collecting necessary data from Railways and R&B authorities, duly designing members and submission of check plot duly getting proof-checked by Railway approved institutes, submitting for Railway's verification and approval, making corrections duly incorporating suggestions in drawings/designs, further submission of original in transparent film paper and soft copy (CD) for Railways approval etc. with contractor's technical expertise and instruments, labour, consumables, repeatedly attending till final approval etc., complete as directed by Engineer in-charge. Foundation and sub-structure for RCC retaining wall, abutment and approach slab	Set	3	24885.64	74656.92
68	191240	Fabrication & supply of Galvanized H-beam Sleepers made out of the materials confirming to IS 2062 of standard Rolled sections as per approved drawing Nos RDSO/B/1636/4/R,5&9 complete and as directed by Engineer in charge. NOTE: Cost of steel fittings and GRSP shall be paid separately	MT	32	117407.98	3757055.36
69	191260	Supplying & fixing MS chequered plates 6 to 8mm thick between guard rails on un-ballasted deck bridge for gang pathway, overlapping at regular intervals of 2m to 2.5m with rail screws or bolts duly drilling holes in chequered plate, as directed [Note: Overlapping of chequered plates shall not fall in between sleepers]	Kg	10	94.94	949.40
70	191290	Providing temporary shoring arrangements to protect existing track structures, made of released rails at 1 metre or suitable intervals in vertical and horizontal directions, if required for a maximum height of 3 metre. Rail gap to be filled with wooden blocks of 15 cm thickness to retain earth with all leads & lifts, materials, tools & plants, as directed (Rail will be supplied by Railways)	Running Metre	90	2983.87	268548.30

71	191310	Fabrication, supplying and fixing 600mm x 450mm Bridge Board made from 16 SWG MS Sheet duly welded or riveted to back support of two 600mm long horizontal angles of size 25mm x 25mm x 3mm & two 2.5-metre-long vertical support of MS Angle of size 50mm x 50mm x 5mm, welded / riveted to board. Vertical supports shall have split ends for proper fixing in ground. Vertical supports of board shall be embedded in ground in M 20 Cement Concrete blocks of size 300mm x 300mm x 300mm, complete job including painting & writing of subject matter on bridge board, as directed by Engineer - In charge {Note: Excavation & concrete work will be paid separately}	Each	3	3038.78	9116.34	
No. of Items Seventy-One only						Schedule D: Departmental Value	3,96,71,482.60
						Tenderer's / Contractor's percentage	
						Total	

SCHEDULE - E						
(Items of works pertaining to Supply of Reinforcement Steel as per SWR USSOR-2021)						
SL No.	SWR USSOR code	Description of Item	Unit	Total Qty.	Rate	Amount
1	025072	Steel reinforcement for R.C.C work including straightening, cutting, bending, placing in position and binding all complete Thermo-mechanically Treated bars of grade Fe-500D or more	Kg	687000	70.35	48330450
No. of Item one only			Schedule E: Departmental Value			48330450
			Tenderer's / Contractor's percentage			
			Total			

SCHEDULE - F						
(Items of works of Contractors own earth, Blanketing as per Chapter 1 of SWR USSOR - 2021)						
Sl. No.	SWR USSOR code	Description of Item	Unit	Total Qty.	Rate	Amount
1	012010	Earthwork in filling in embankment, guide bunds, around buried type abutments, bridge gaps, trolley refuges, rain bunds, if provided, platforms etc. with earth, suitable for embankment as per RDSO latest Specifications and guidelines GE: G-14 of Soil Quality Class SQ1, excavated from outside railway boundary entirely arranged by the contractor at his own cost including all leads, lifts, ascents, descents, crossing of nallahs or any other obstructions. The item shall include demarcation and setting out of profile, site clearance, removing of shrubs, roots of vegetations growth, heavy grass, benching of existing slope of old bank, all handling/re-handling, spreading in layers with motor grader, bringing the moisture content to OMC, mechanical compaction to specified density and dressing of bank to final profile as a complete job. The payment shall be made as per finished profile and the rate shall include all costs including taxes, octroi, royalty etc. except for mechanical compaction which shall be paid extra under relevant item. Cut trees shall be property of railways and to be deposited in the railway godown unless specified otherwise in the Special Conditions of Contract.	cum	2500	351.52	878800.00

2	012020	<p>Earthwork in filling in embankment, guide bunds, around buried type abutments, bridge gaps, trolley refuges, rain bunds, if provided, platforms etc. with earth, suitable for embankment as per RDSO latest Specifications and guidelines GE: G-14 of Soil Quality Class SQ2, excavated from outside railway boundary entirely arranged by the contractor at his own cost including all leads, lifts, ascents, descents, crossing of nallahs or any other obstructions. The item shall include demarcation and setting out of profile, site clearance, removing of shrubs, roots of vegetations growth, heavy grass, benching of existing slope of old bank, all handling/re-handling, spreading in layers with motor grader, bringing the moisture content to OMC, mechanical compaction to specified density and dressing of bank to final profile as a complete job. The payment shall be made as per finished profile and the rate shall include all costs including taxes, octroi, royalty etc. except for mechanical compaction which shall be paid extra under relevant item. Cut trees shall be property of railways and to be deposited in the railway go down unless specified otherwise in the Special Conditions of Contract. Note: Payment under this item shall be made only upto the thickness as approved by Engineer-in-charge. Any additional thickness in embankment for Soil Quality Class SQ1.</p>	cum	2500	456.33	1140825.00
3	012040	<p>Extra for mechanical compaction of soil in embankment with contractor's rollers of suitable capacity, type and size to achieve specified density as per specification, testing as per IS codes including cost of water, T&P, consumable and all labour as a complete job. The work is to be executed as per Latest edition of "Guidelines for Earthwork in Railway Projects" issued by RDSO, Lucknow.</p>	cum	5000	20.59	102950.00

4	012050	<p>Providing of Blanketing over finished formation as per latest RDSO specifications and procedures by supplying materials of approved quality, spreading in layers not exceeding in 30cm in thickness in loose conditions and levelling by motor grader and compacting by vibro roller of required capacity upto desired degree of compaction, finishing to correct profile with all lead and lift, complete in all respect to the satisfaction of the Engineer-in-Charge. Rate includes all labour, material, tools, plants, machinery, testing equipment, testing charges, taxes, Royalties, Octroi etc. and all other incidental charges including compaction. Note: (i) The work shall be carried out as per RDSO Guidelines and specifications for Design of Formation for Heavy Axle Load (Report No. RDSO/2007/GE: 0014 of November, 2009) for mechanically produced blanketing material for Railway Formation. (ii) The Quality Control tests as prescribed vide Para 12 & 13 of RDSO/2007/ GE:0014 shall be arranged at site by the Contractor, for which no separate payment will be made. (iii) The tenderer is requested to go through specifications of blanketing material as per GE-0014 RDSO specifications. The blanketing material is expected to be manufactured in quarry/ site with pug mill type blender from stone crushed material of required quality as per specification with the grading falling in the enveloping curve. The rate includes the CBR tests, Los Angeles Abrasion test, Impact tests, Atterberg limits, Grain size analysis, MDD and all quality tests as per specifications to be carried as per the laid down frequency on blanketing material/ compacted finished blanket surface. (iv) Measurement will be made on finished profile after compaction.</p>	cum	1100	2081.79	2289969.00	
No. of Items Four only						Schedule F: Departmental Value	44,12,544.00
						Tenderer's / Contractor's percentage	
						Total	

SCHEDULE - G (Superstructure steel items covered under Chapter -4 of SWR USSOR-2021)						
SI No.	SWR USSOR code	Description of Item	Unit	Total Qty.	Rate	Amount
1	041013	<p>041010 Supplying, fabrication, assembling of all types of steel girders of specified spans with structural steel conforming to Quality "B0" Grade Designation E250 conforming to IS:2062, erection / slewing / end launching of steel girders with cranes or any other approved launching methods as per site conditions (not requiring traffic block) on sub-structure including provision of trolley refuges etc., complete as per approved QAP and drawings conforming to IRS-B1-2001 and other relevant codes and specifications.</p> <p>Open Web Girder above 45.7m clear Span (The item is operated for 76.2m span 25 ton loading RDSO Drg. no. 17183 series)</p> <p>Note: 1. Detailed fabrication and erection drawings & launching methodology will</p>	MT	340	178659.09	60744090.60

		<p>be prepared by the contractor and got approved from Railway.</p> <p>2. The item includes fabrication of all types of battens, bracings, ties, stiffeners, packing, diaphragms, shop rivets / welding, T&F bolts, drifts, SAW, templates, jigs, fixtures, accessories, transporting various components from fabrication shop to site including loading & unloading, assembly of girders with drifts/bolts, field riveting /welding /HSFG Bolting, assembling of temporary support for side slewing, raising of girders to the bed block level, providing sliding arrangements and slewing the girder in position, lowering of girder on bearings and bed plates with all temporary arrangements or any other method of launching complete.</p> <p>3. The bearing sets to be provided with the girders will be paid separately as per relevant item.</p> <p>4. Payment for addition in weight for rivets / welds shall be made as per clause 45 of IRS B-1-2001.</p> <p>5. In case of composite work (welding and HSFG bolts), addition in weight shall be 1% for welding and HSFG bolts shall be paid separately under relevant item.</p> <p>6. Painting of girders will be paid separately under relevant item.</p> <p>7. Payment Schedule:</p> <p>(i) Receipt of material at site: 40%</p> <p>(ii) Fabrication of girders: 20%</p> <p>(iii) Erection/Launching: 20%</p> <p>(iv) Completion in all respects: 20%</p>				
2	041014	Extra over above items for launching girders under traffic block. (The item is operated for 76.2m span 25-ton loading RDSO Drg. no. 17183 series)	MT	340	17865.909	6074409.06

3	041021	<p>041020 Supplying, fabrication, assembling of all types of steel Composite girders of specified spans with structural steel conforming to Quality "B0" Grade Designation E250 conforming to IS:2062, erection / slewing / end launching of steel girders with cranes or any other approved launching methods as per site conditions on sub-structure including provision of stud bolts / shear connectors, complete as per approved QAP and drawings conforming to IRSB1- 2001 and other relevant codes and specifications.</p> <p>Composite steel girder of span length up to 36.0m</p> <p>Note: 1. Detailed fabrication and erection drawings & launching methodology will be prepared by the contractor and got approved from Railway.</p>	MT	104	125936.83	13097430.32
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		<p>2. Rate includes fabrication of all types of battens, bracings, ties, stiffeners, packing, diaphragms, shop rivets / welding, T&F bolts, drifts, SAW, templates, jigs, fixtures, accessories, transporting various components from fabrication shop to site including loading & unloading, assembly of girders with drifts/bolts, field riveting /welding /HSFG Bolting, assembling of temporary support for side slewing, raising of girders to the bed block level, providing sliding arrangements and slewing the girder in position, lowering of girder on bearings and bed plates with all temporary arrangements or any other method of launching complete.</p> <p>3. The bearing sets to be provided with the girders will be paid separately as per relevant item.4. Payment for addition in weight for rivets / welds shall be made as per clause 45 of IRS B-1-2001.</p> <p>5. In case of composite work (welding and HSFG bolts), addition in weight shall be 1% for welding and HSFG bolts shall be paid separately under relevant item.</p> <p>6. Painting of girders will be paid separately under relevant item.</p> <p>7. Payment Schedule: (i) Receipt of material at site: 40% (ii) Fabrication of girders: 20% (iii) Erection/Launching: 20% (iv) Completion in all respects: 20%</p>				
4	041030	Supplying and fixing HSFG bolts of any dia and any length with suitable nuts including DTI washers conforming to IRS-B1-2001 for bridges and steel structures with contractor's labour, tools and plants and lead and lift etc., complete.	Kg	200	443.9	88780.00

5	041040	<p>Assembling and erection/launching of fabricated Steel girders on bearings with crane/derrick / any other approved means at site on sub structure with labour, equipment, T&P including site riveting/welding/bolting with all temporary arrangements, scaffolding etc. with contractor's design and scheme for longitudinal launching/side slewing (not requiring traffic block) approved by Railway. Rate includes field rivets / welding, drifts, service bolts etc. as per drawings.</p> <p>Note: Payment for HSFG bolts used if any will be made separately under relevant item.</p> <p>Open web Girder above 45.7m clear span (The item is operated for 76.2m span 25-ton loading RDSO Drg. no. 17183 series)</p>	MT	340	52082.38	17708009.20
6	041044	<p>041040 Extra over above item for launching girders under traffic block.(The item is operated for 76.2m span 25 ton loading RDSO Drg. no. 17183 series)</p>	MT	340	5208.238	1770800.92
7	041050	<p>Metalizing of steel work of girders with sprayed aluminium after surface preparation by Sand/grit blasting, followed by one coat of etch primer (IS:5666) & one coat of Zinc Chrome primer (IS:104) and two coats of aluminium paint (IS:2339) with all labour, T&P and material as a complete job duly conforming to all relevant specifications and process given under Clause 39 of IRS-B1-2001</p> <p>Note: Nominal Thickness of Aluminium coating shall be 150 microns. DFT of Zinc chrome primer shall be 25-30 microns and DFT of each coat of Aluminium paint shall be 12-14 microns.</p>	Sqm	5200	999.77	5198804.00
8	041090	<p>Supplying, Fabricating and fixing access ladders, inspection platforms, Trolley refuges etc., on bridges with structural steel conforming to IS:2062 including welding / bolting, priming painting with one coat of ready mixed paint of Zinc Chromate (IS:104) with DFT of 25-30 microns followed by one coat of Zinc Chrome Red Oxide (IS:2074) with DFT of 25 microns with all material, labour, T&P as a complete job.</p>	MT	40	96009.65	3840386.00

9	041110	Supplying, fitting and fixing in position true to line and level forged steel roller bearing of different load bearing capacity conforming to IS :7666, IS:9565, IS:1030, IS:919, IS:3073 and IRS Bridge Code including all accessories as per drawing and Technical Specifications with all material, labour, T&P as a complete job. The payment shall be made for the load bearing capacity in Metric Tonne as per approved drawing.	MT	1700	877.26	1491342.00
10	041131	041130 Design, supply, fitting and fixing in position true to line and level POT-PTFE bearing of 300MT Capacity, consisting of a metal piston supported by a disc or un reinforced elastomer confined within a metal cylinder, sealing rings, dust seals, PTFE surface sliding against stainless steel mating surface, complete assembly to be of cast steel / fabricated structural steel, metal and elastomer elements complete as per IS:2062, IS:1030, AISI:304, AISI:316, IS:6911, BS:3784, IS:3400, IS:226, BS- 5400, Bridge Code and as per approved drawing and Technical Specifications. The design of the bearings shall be submitted by the manufacturers / contractor and got approved from Railway before fixing. Test report after inspection of the bearings shall be submitted and got approved before the materials are lifted from the manufacturer premises (The bearing is used for 30.5m through PSC Box Girder) 041110 POT-cum -PTFE Bearing (Free end)	Each	1	118651.44	118651.44
11	041132	041130 POT Bearing-Fixed Type	Each	1	119162.25	119162.25
12	041133	041130 POT-cum -PTFE Guided (L)Bearing	Each	1	117909.58	117909.58
13	041134	041130 POT-cum -PTFE Guided (T)Bearing	Each	1	119162.25	119162.25

14	041181	<p>041180 Design, supply and fixing 300MT capacity Spherical Bearing in position to true line and level consisting of set of concave and convex mating steel backing plate with a low friction sliding interface, flat sliding elements ,guides and restraining rings; with all components conforming to approved drawing and technical specifications & Bridge Code including grouting of holes for anchor bolts and underside of baseplate with approved nonshrink epoxy grout with all material, labour, T&P as a complete job.Note: Sliding surface with PTFE or UHMWPE low friction thermoplastic material and steel for backing plate of Mild steel in accordance to IS:2062 grade-B. Cast steel in accordance with IS1030 Grade 280-520W. Stain less steel in accordance with AISI 304/316.Low friction thermo -plastic sliding PTFE material either pure polytetrafluorethylene (PTFE) Or Ultra High Molecularweight Polyethylene (UHMWPE). Austenitic steel is of stainless steel for the sliding interface shall be in accordance with AISI 316L or O2 Cr17 NI12 of IS-6911. The thickness of the stain less steel sheet shall be 3mm minimum. The stainless-steel sheet shall be attached to its backing plate either by screwing/riveting or by continuous fillet weld. Hard chromium plated surface shall be entire curved surface of the convex steel plate mating with concave sliding surface shall be hard chromium plated. The thickness of the hard chromium plating shall be at least 100 microns and the final surface roughness of the plated surface shall not exceed 3 microns. Bearing manufacturer shall give the guarantee for satisfactory performance of bearing for period specified.Spherical Fixed BearingThe girder to layed in 1 in 100 grade bearing is to be designed. Accordingly, the above rate includes design proof checking of bearing by reputed institution like IIT, IISC, Govt of Egg Institutes as approved by GM/Civil/Projects/K-RIDE</p>	Each	1	159526.09	159526.09
15	041182	<p>Spherical Free Float Bearing The girder is layed in 1 in 100, bearing is to be designed. Rate includes design and proof checking.</p>	Each	1	159526.09	159526.09

16	041183	Spherical Slide Guide (L) Bearing The girder is layed in 1 in 100, bearing is to be designed. Rate includes design and proof checking.	Each	1	159526.09	159526.09
17	041184	Spherical Slide Guide (T) Bearing The girder is layed in 1 in 100, bearing is to be designed. Rate includes design and proof checking.	Each	1	159526.09	159526.09
No. of Items Seventeen only			Schedule "G" : Departmental Value		111127041.98	
			Tenderer's / Contractor's percentage			
			Total			

SCHEDULE - M (Non Schedule items of works)						
SI No.	Item code	Description of Item	Unit	Total Qty.	Rate	Amount
1	1	Providing safety barricading as per drg. No. SWR/CN/BNC/SK/165-2018/R with contractor's materials and labour including all leads and lifts complete as directed by Engineer in charge. (Size 100 mm x 1650 mm RCC pole) Note: 1. Casting of RCC pillars shall be carried out in nominated depot and submerged water curing. 2. The precast RCC posts shall be transported to date duly handling carefully without causing any damage and erect it at nominated locations as per dig duly ensuring safety of running trains. 3. Maintenance of the rope, RCC pillars etc shall be at the cost of contractor. 4. 90% of the payment shall be released after erecting fencing to the satisfaction of Engineer in charge.	RM	300	327.60	98280.00
2	2	Providing and laying of sand bags layer by layer filled with sand in each bag of standard cement bag size with all contractor's own bags, sand, labour, tools and plants including transportation to the site of work complete as directed by the Engineer - in - charge	Each	2500	20.00	50000.00
3	3	Supply, fabrication, painting and erection of road traffic warning boards of suitable height for various purposes such as NO PARKING, NO ENTRY, HTV PROHIBITED, etc., as per IRC standards made of 50x50x5 mm MS Angles and 3mm thick MS plate for the board of appropriate size, painting 2 coats with appropriate enamel paint and pasted with reflective stickers/reflective paint on the board erected into the ground with cement concrete 1:3:6 for 0.30x0.30x0.60 metre including earthwork excavation, etc., as directed by the Engineer-in-Charge	Each	18	1400.00	25200.00
4	4	Supplying, providing 150mm dia UPVC rainwater down take pipe of 6 Kg/sqm pressure pipe with accessories like bends, collers etc., as required including providing suitable MS clamps with Bolts & Nuts 3 Nos per stanchion with stanchion with contractor's materials like clamps, Bolts & nuts	Meter	400	410.00	164000.00

		etc., labours, tools & plants, with all lead, lifts complete as directed by the Engineer-in-charge				
5	5	<p>Providing site office and office equipments for employer with contractor's material, Labour, Tools and Plant, Equipment etc. including provision of Water Supply, Drainage, Power arrangements, office maintenance as per the details mentioned in Chapter 3 (Site Facilities & office equipment for the Employer and the Engineer) of Section 5 (Works Requirement) of Tender Documents.</p> <p>Note 1: This item is provided with the contention that new site offices will be constructed for this purpose and 75% payment of the accepted rates will be made after making available functional office balance 15% paymane shall be made at the end of the completion period and the remaining 10% will be paid after clearance of site by the contractor</p> <p>Note:2 Alternatively if suitable accommodation is available on hire basis at suitable location acceptable to the employer, the contractor cab arrange same under he item but in such a case the payment shall be regulated as below</p> <p>(a) 10% payment shall be made on completion of one month from the date of making available the office fit for functioning.</p> <p>(b) Remaining 90% payment shall be paid in equal monthly instalments that is $(0.9 \times \text{quoted rate}) / (\text{stipulated Completion period in months} + \text{defect liability period in months})$</p> <p>Note 3 : In case stipulated period gets extended, payment on monthly basis will be made prorata basis.</p>	per Sq. M of Plinth area	62	13788.00	854856.00
6	6	<p>Providing Furniture as given under chapter 3 (Site Facilities & office equipment for the Employer and the Engineer) of Section 5 (Works Requirement) of Tender Documents. Note: Payment shall be made @ 75% of the accepted rate after making available furniture items functional in office, balance 15% paymane shall be made at the end of the completion period and the remaining 10% will be paid after clearance of site by the contractor</p>	LS per site office	1	200000.00	200000.00

7	7	Providing Maruti Swift DZIRE / Toyota Etios or similar approved road vehicle(s)	per month	36	40000.00	1440000.00
8	8	Extra payment for providing any of the vehicles mentioned in item no. 7 as per the criteria/ stipulations/specifications/conditions mentioned therein including the notes and, in the ASC, with Driver(s) cum Attendant(s) beyond 12 hours a day	Vehicle Hours	100	150.00	15000.00
9	9	Extra payment for extra distance run, over and above 3000 km per month on certification by the user official For the class/type of the vehicle mentioned in item no. 7	Vehicle KM	1800	12.00	21600.00
10	10	Extra payment for extra days of run, over and above 26 days per month on certification by the user official For the class of the vehicle mentioned in item no. 7 with all conditions therein	Vehicle day	30	1600	48000.00
11	11	Supply of Motor Bike 150CC or more as per relevant special conditions	Per month	36	8000	288000.00
12	12	Extra payment for extra distance run, over and above 3000 km per month on certification by the user official	Vehicle KM	100	2.5	250.00
14	13	Excavation along the alignment of signalling cable/OFC/power cable carefully and exposing the same without any damage, and excavating the new trench along the railway alignment or along the alignment as specified by the railway Engineer-in-charge, laying or removed cable, filling up all complete with sand and laying a layer of brick with contractor's own material, tools and plants etc., as directed by the Engineer-in-charge. NOTE: 1. In case the cable is damaged cost of restoration and the cost of cable will be recovered from the contractor. The decision of the railways with regard the cost to be recovered will be final.	MTR	300	207	62100.00

14	14	Preparation and submission of GAD/Completion drawing for the Major bridges/ROBS/RUBs based on soil exploration and water way calculation for fixing suitable span as per RDSO design and drawing in AutoCAD on 100micon film double mat finish as per Railway standard approved by the Engineer-in-charge to specified scales including submission of check print for proof check to incorporate suggested corrections and modifications and supply final copy in compact disk and 6 copies in ammonia print in A0 size with all contractor's materials, labours, tools, plants etc., complete.	EACH	6	14,427.00	86562.00
15	15	Testing of neoprene/ elastomeric bearing at any of the IITs/ NITs/ other reputed Govt. Engineering laboratories as per the instruction of Engineer in charge. Tests are to be conducted as per UIC-772-2R/ IRC-83 (Pt.II) with latest ammendments. Cost of the bearing shall be paid under the relevant item of this schedule.	Complete JOB	4	15,056	60224.00
No. of Items Fifteen only			Schedule "M" : Departmental Value			3414072.00
			Tenderer's / Contractor's percentage			
			Total			

SECTION-10

FORMAT OF BANK GUARANTEE FOR SECURITY DEPOSIT ETC.,

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NOTE: *This Section contains forms which, once completed, will form part of the Contract. The forms for Performance Security and Advance Payment Security, when required, shall only be completed by the successful Bidder after contract award.*

All italicized text is for guidance how to prepare the various forms and shall be deleted from the final documents.

FORMAT OF BANK GUARANTEE FOR SECURITY DEPOSIT

To,.....(Name of the Employer)
.....(Address of the Employer).

Whereas(Name and Address of the contractor) (herein after called the Contractor) has undertaken, in pursuance of contract no.....
Dated:.....(Name of the contract and brief description of the work) (herein after 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 by a recognized bank 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 THEREFORE 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 28 days from the date of expiry of the Defects Liability Period.

Signature and seal of the guarantor _____
Name of Bank _____
Address _____
Date _____

FORM OF BANK GUARANTEE FOR PERFORMANCE SECURITY

(On non-judicial stamp paper of the appropriate value in accordance with stamp Act. The stamp paper to be in the name of Executing Bank).

From:

Name and Address of the Bank.....

To:

The Managing Director,
 Rail Infrastructure Development Company (Karnataka) Limited,
 "Samparka Soudha" , 1st Floor,
 B.E.P Premises (Opp. Orion Mall),
 Dr. Rajkumar Road,
 Rajajinagar 1st Block,
 Bangalore - 560 010

WHEREAS, Rail Infrastructure Development Company (Karnataka) Limited, hereinafter called the **Employer**, acting through **[Insert Designation and address of the Employer's Representative]**, has accepted the bid of **[Insert Name and address of the Contractor]**, hereinafter called the **Contractor**, for the work of **[Insert Name of Work]**, vide Notification of Award No **[Insert Notification of Award No...]**
AND

WHEREAS, the contractor is required to furnish Performance Security for the sum of **[Insert Value of Performance Security required]**, in the form of bank guarantee, being a condition precedent to the signing of the contract agreement.

WHEREAS, **[Insert Name of the Bank]**, with its Branch **[Address]** having its Headquarters office at **[Address]**, hereinafter called the **Bank**, acting through **[Designation(s) of the authorised person of the Bank]**, have, at the request of the **[Insert name of the JV partner]**, a JV partner on behalf of the contractor, agreed to give guarantee for performance security and additional performance security as hereinafter contained:

- 1 KNOW ALL MEN by these present that I/We the undersigned **[Insert name(s) of authorized representatives of the Bank]**, being fully authorized to sign and incur obligations for and on behalf of the Bank, hereby, unconditionally and irrevocably guarantee to pay the Employer the full amount in the sum of **[Insert Value of Performance Security required]** as above stated.
- 2 The Bank undertakes to immediately pay on presentation of demand by the Employer any amount up to and including aforementioned full amount without any demur, reservation or recourse. Any such demand made by the Employer on the Bank shall be final, conclusive and binding, absolute and unequivocal notwithstanding any disputes raised/ pending before any Court, Tribunal, Arbitration or any Authority or any threatened litigation by the Employer of Bank.

- 3 On payment of any amount less than aforementioned full amount, as per demand of the Employer, the guarantee shall remain valid for the balance amount i.e. the aforementioned full amount less the payment made to the Employer.
- 4 The Bank shall pay the amount as demanded immediately on presentation of the demand by Employer without any reference to the contractor and without the Employer being required to show grounds or give reasons for its demand or the amount demanded.
5. The Bank Guarantee shall be unconditional and irrevocable.
- 6 The guarantee hereinbefore shall not be affected by any change in the constitution of the Bank or in the constitution of the Contractor.
- 7 The Bank agrees that no change, addition, modifications to the terms of the Contract Agreement or to any documents, which have been or may be made between the Employer and the Contractor, will in any way release us from the liability under this guarantee; and the Bank, hereby, waives any requirement for notice of any such change, addition or modification to the Bank.
- 8 This guarantee is valid and effective from the date of its issue, which is ***[insert date of issue]***. The guarantee and our obligations under it will expire on ***[Insert the date twenty-eight days after the expected end of defect liability period]***. All demands for payment under the guarantee must be received by us on or before that date.
- 9 The Bank agrees that the Employers right to demand payment of aforementioned full amount in one instance or demand payments in parts totaling up to the aforementioned full amount in several instances will be valid until either the aforementioned full amount is paid to the Employer or the guarantee is released by Employer before the Expiry date.
- 10 The Bank agrees that its obligation to pay any amount demanded by the Employer before the expiry of this guarantee will continue until the amount demanded has been paid in full.
- 11 The expressions Bank and Employer herein before used shall include their respective successors and assigns.
- 12 The Bank hereby undertakes not to revoke the guarantee during its currency, except with the previous consent in writing of the employer. This guarantee is subject to the Uniform Rules for Demand Guarantees, ICC Publication No. 758.
- 13 The Guarantee shall be in addition to and without prejudice to any other security Guarantee (s) of the contractor in favour of the Employer available with the Employer. The Bank, under this Guarantee, shall be deemed as Principal Debtor of the Employer.
14. This guarantee shall be valid for 28days from the date of expiry of defect liability period.

Date

Place.....

.....

[Signature of Authorized person of
Bank/Guarantor]

.....
[Name in Block letters]

.....
[Designation]

.....
[P/Attorney] No.

.....
Bank's Name and Seal

[P/Attorney] No.....

Witness:

1. *Signature*
Name & Address & Seal

2. *Signature*
Name & address & Seal

Note :

1. *All italicized text is for guidance on how to prepare this bank guarantee and shall be deleted from the final document.*

2. *In case the guarantee is issued by a foreign Bank, which does not have operations in India, the said bank shall have to provide a counter-guarantee by State Bank of India.*

3. *In case the Contractor is a JV, the Performance Security is required to be furnished on behalf of the JV in favour of the Employer by the JV Partners in proportion of their respective percentage share specified in the JV Agreement. The percentage share of M/s **[Insert Name of the JV Partner]** in the JV is **[Fill share % in the JV]** percent. All the Bank Guarantee of JV Partners are liable to be encashed cumulatively.*

FORM OF BANK GUARANTEE FOR ADDITIONAL PERFORMANCE SECURITY

(On non-judicial stamp paper of the appropriate value in accordance with stamp Act. The stamp paper to be in the name of Executing Bank)

From:

Name and Address of the Bank.....

.....

To:

The Managing Director,
Rail Infrastructure Development Company (Karnataka) Limited,
"SamparkaSoudha" , 1st Floor,
B.E.P Premises (Opp. Orion Mall),
Dr. Rajkumar Road,
Rajajinagar 1st Block,
Bangalore - 560 010

WHEREAS, Rail Infrastructure Development Company (Karnataka) Limited, hereinafter called the **Employer**, acting through **[Insert Designation and address of the Employer's Representative]**, has accepted the bid of **[Insert Name and address of the Contractor]**, hereinafter called the **Contractor**, for the work of **[Insert Name of Work]**, vide Notification of Award No. **[Insert Notification of Award No.]**.

AND

WHEREAS, the contractor is required to furnish Performance Security for the sum of **[Insert Value of Performance Security required]**, in the form of bank guarantee, being a condition precedent to the signing of the contract agreement.

WHEREAS, **[Insert Name of the Bank]**, with its Branch **[Address]** having its Headquarters office at **[Address]**, hereinafter called the **Bank**, acting through **[Designation(s) of the authorised person of the Bank]**, have, at the request of the **[Insert name of the JV partner]**, a JV partner on behalf of the contractor, agreed to give guarantee for performance security and additional performance security as hereinafter contained:

- 1 KNOW ALL MEN by these present that I/We the undersigned **[Insert name(s) of authorized representatives of the Bank]**, being fully authorized to sign and incur obligations for and on behalf of the Bank, confirm that the Bank, hereby, unconditionally and irrevocably guarantee to pay the Employer the full amount in the sum of **[Insert Value of Performance Security required]** as above stated.
- 2 The Bank undertakes to immediately pay on presentation of demand by the Employer any amount up to and including aforementioned full amount without any demur, reservation or recourse. Any such demand made by the Employer on the Bank shall be final, conclusive and binding, absolute

and unequivocal notwithstanding any disputes raised/ pending before any Court, Tribunal, Arbitration or any Authority or any threatened litigation by the Employer of Bank..

- 3 On payment of any amount less than aforementioned full amount, as per demand of the Employer, the guarantee shall remain valid for the balance amount i.e. the aforementioned full amount less the payment made to the Employer.
- 4 The Bank shall pay the amount as demanded immediately on presentation of the demand by Employer without any reference to the contractor and without the Employer being required to show grounds or give reasons for its demand or the amount demanded.
5. The Bank Guarantee shall be unconditional and irrevocable.
- 6 The guarantee hereinbefore shall not be affected by any change in the constitution of the Bank or in the constitution of the Contractor.
- 7 The Bank agrees that no change, addition, modifications to the terms of the Contract Agreement or to any documents, which have been or may be made between the Employer and the Contractor, will in any way release us from the liability under this guarantee; and the Bank, hereby, waives any requirement for notice of any such change, addition or modification to the Bank.
- 8 This guarantee is valid and effective from the date of its issue, which is ***[insert date of issue]***. The guarantee and our obligations under it will expire on ***[Insert the date twenty-eight days after the expected end of defect liability period]***. All demands for payment under the guarantee must be received by us on or before that date.
- 9 The Bank agrees that the Employers right to demand payment of aforementioned full amount in one instance or demand payments in parts totaling up to the aforementioned full amount in several instances will be valid until either the aforementioned full amount is paid to the Employer or the guarantee is released by Employer before the Expiry date.
- 10 The Bank agrees that its obligation to pay any amount demanded by the Employer before the expiry of this guarantee will continue until the amount demanded has been paid in full.
- 11 The expressions Bank and Employer herein before used shall include their respective successors and assigns.
- 12 The Bank hereby undertakes not to revoke the guarantee during its currency, except with the previous consent in writing of the employer. This guarantee is subject to the Uniform Rules for Demand Guarantees, ICC Publication No. 758.
- 13 The Guarantee shall be in addition to and without prejudice to any other security Guarantee (s) of the contractor in favour of the Employer available with the Employer. The Bank, under this Guarantee, shall be deemed as Principal Debtor of the Employer.

Date
Place..... [Signature of Authorised person of Bank]

.....
[Name in Block letters]

.....
[Designation]

.....
[P/Attorney] No.

.....
Bank's Seal

[P/Attorney] No.....
Witness:

3. Signature
Name & Address & Seal

4. Signature
Name & address & Seal

Note :

- 1 All italicized text is for guidance on how to prepare this bank guarantee and shall be deleted from the final document.
- 2 In case the guarantee is issued by a foreign Bank, which does not have operations in India, the said bank shall have to provide a counter-guarantee by State Bank of India.
- 3 In case the Contractor is a JV, the Performance Security is required to be furnished on behalf of the JV in favour of the Employer by the JV Partners in proportion of their respective percentage share specified in the JV Agreement. The percentage share of M/s **[Insert Name of the JV Partner]** in the JV is **[Fill share % in the JV]** percent. All the Bank Guarantee of JV Partners are liable to be encashed cumulatively.

ADVANCE PAYMENT SECURITY

(On non-judicial stamp paper of appropriate value in accordance with stamp Act. The stamp paper to be in the name of Executing Bank)

From

[Name and Address of the Bank]

To

The Managing Director,
Rail Infrastructure Development Company (Karnataka) Limited,
"Samparka Soudha" , 1st Floor,
B.E.P Premises (Opp. Orion Mall),
Dr. Rajkumar Road,
Rajajinagar 1st Block,
Bangalore - 560 010

Beneficiary/Employer: Rail Infrastructure Development Company (Karnataka) Limited.

Guarantee No.: *[.....reference number of the guarantee.....]* **Dated:** *[.....]*

WHEREAS, Rail Infrastructure Development Company (Karnataka) Limited (**hereinafter called the Employer**) has entered into Contract No. *[.....reference number of the Contract.....]* dated *[.....]* for the execution of *[name of the contract]* (**hereinafter called the Contract**) with *[.....name of the Contractor.....]* (**hereinafter called the Contractor**).

WHEREAS, according to the Conditions of the Contract, an advance payment is admissible to the contractor against submission of bank guarantee(s).

At the request of the Contractor, we *[.....name of the Bank.....]* with our branch at *[.....address.....]*, having our Head Office at *[.....address.....]* (**hereinafter called the Bank**) have, at the request of *[.....Insert name of the JV partner.....]*, a JV partner on behalf of the Contractor, agreed to give the said guarantee as hereinafter contained:

1. KNOW ALL MEN by these present that I/We the undersigned *[.....Insert name(s) of authorized representative(s) of the Bank.....]*, being fully authorized to sign and incur obligations for and on behalf of the Bank, confirm that the Bank, hereby, unconditionally and irrevocably guarantees

to pay the Employer the sum of Rs.*[.....value in figure.....]* (Rupees *[.....value in words.....]* only) (**hereinafter called the Full Amount**).

2. The Bank undertakes to immediately pay to the Employer, without any demur, reservation or recourse, any amount up to and including aforementioned full amount upon first written demand/demands from the Employer.
3. On payment of any amount less than aforementioned full amount, as per demand of the Employer, the guarantee shall remain valid for the balance amount i.e. the aforementioned full amount less the payment made to the Employer.
4. The Bank shall pay the amount so demanded without any reference to the contractor and without the Employer being required to show grounds or give reasons for its demand or the amount demanded.
5. The guarantee hereinbefore shall not be affected by any change in the constitution of the Bank, the Contractor or the Employer.
6. The Bank agrees that no change, addition, modification to the terms of the Contract Agreement or to any document, which have been or may be made between the Employer and the Contractor, will in any way release us from the liability under this guarantee; and the Bank, hereby, waives any requirement for notice of any such change, addition or modification to the Bank.
7. This guarantee is valid and effective from the date of it's issue, which is [...date of issue...]. The guarantee and our obligations under it will expire on dated[...Please refer note 4 & 5...]. All demands for payment under the guarantee must be received by us on or before that date.
8. The Bank agrees that the Employer's right to demand payment of aforementioned full amount in one instance or demand payments in parts totaling up to the aforementioned full amount in several instances will continue until either the aforementioned full amount is paid to the Employer or the guarantee validity period expires.
9. The Bank agrees that it's obligation to pay any amount demanded by the Employer before the expiry of this guarantee will continue until the amount demanded has been paid in full.
10. The expressions Bank and Employer herein before used shall include their respective successors and assigns.
11. The Bank hereby undertakes not to revoke the guarantee during its currency, except with the previous consent in writing of the employer. This guarantee is subject to the Uniform Rules for Demand Guarantees, ICC Publication No. 758.

Dated[.....]

Place[.....]

.....
(Signature of the Authorized Person of the Bank)

.....
(Name in Block Letters)

.....
(Designation)

.....
(Bank's Seal)

.....
(Authorization No.)

Witness:

1.
Signature, Name & Address

2.
Signature, Name & Address

Note:

1. *All italicized text in brackets [...text...] is for guidance on how to prepare this bank guarantee and shall be deleted from the final document.*
2. *In case the guarantee is issued by a foreign Bank, the said bank shall have operations in India and should be issued by Indian operations branch of the said bank.*
3. **Mobilization Advance**

(a) For Single Entity

For each Installment of Advance, two Bank Guarantees of equal amounts (each equal to half of the first installment of advance plus 10%) shall be furnished. Each Bank Guarantee shall be valid for the stipulated completion period of the contract.

OR

(b) For JV/Consortium

For each Installment of Advance, individual JV/Consortium partner shall furnish Bank Guarantee equal to his share in the installment of Advance plus 10%. Each Bank Guarantee shall be valid for the stipulated completion period of the contract.

4. Advance against Plant and Machinery

(a) For Single Entity

For each Installment of Advance, a Bank Guarantee equal to the installment of advance plus 10% shall be furnished. The Bank Guarantee shall be valid for the stipulated completion period of the contract.

OR

(b) For JV/Consortium

For each Installment of Advance, individual JV/Consortium partner shall furnish a Bank Guarantee equal to his share in the installment of advance plus 10%. Each Bank Guarantee shall be valid for the stipulated completion period of the contract.

K-RIDE

**INDEMNITY BOND FOR THE SAFE CUSTODY OF THE
MATERIALS SUPPLIED BY THE CONTRACTOR**

(To be executed on Non-Judicial Stamp Paper of Appropriate Value and notarized)

THIS INDEMNITY BOND made on this _____ day of _____ 20__ by _____ (*insert the name of the Contractor and its registered address*) (hereinafter called "the Contractor") which expression shall where the context do admits or implies be deemed to include its executors, administrators and assigns, in favour of the Rail Infrastructure Development Company (Karnataka) Limited, Samparka Soudha" ,
1st Floor, B.E.P Premises (Opp. Orion Mall), Dr. Rajkumar Road, Rajajinagar 1st Block, Bangalore - 560 010 (hereinafter called "K RIDE") on the other part.

WHEREAS by an Agreement/Letter of Acceptance No. _____ dated _____ (hereinafter called "the said agreement"), the Contractor has agreed to execute the _____ (*Name of Work*) (hereinafter called "the Works") .

AND WHEREAS the Contractor has submitted to K RIDE/ the Engineer for payment on materials procured by him and brought to the site of the Works or his workshop for use in the Works.

AND WHEREAS K RIDE/ the Engineer has agreed to make advance/stage payment to the Contractor the total sum of Rs. _____ (*in Figures*) [Rupees _____ (*in Words*)] in Interim Payment Certificate (IPC) No. _____, the quantities and other particulars of which are detailed in this IPC for the said works signed by the Contractor on _____ for the Materials brought by the Contractor to site of the works. Brief details are also mentioned in schedule 1 appended hereto.

NOW THIS INDEMNITY BOND WITNESS that in pursuance of the said agreement and in consideration of the sum of Rs. _____ (*in Figures*) _____ (*in Words*) on or before the execution of these presents to be paid to the Contractor by K RIDE so aforesaid, the Contractor doth hereby covenant and agree with K RIDE and declare as follows: -

1. That the said sum of Rs. _____ (*In Figures*) _____ (*in Words*) to be paid by K RIDE to the Contractor as aforesaid shall be utilized by the Contractor in or towards the execution of the said works and for no other purpose whatsoever.
2. That the Materials detailed in the said IPC which have been offered to and accepted by K RIDE/ the Engineer, are absolutely the Contractor's own property and free from encumbrances of any kind and the Contractor will not make any application for or receive any further payment on the Materials which are not absolutely his own property and free from encumbrances of any kind, the Contractor indemnifies the K RIDE against all claims on any Materials in respect of which payment is to be made to him as aforesaid.
3. That the Contractor undertakes that the Materials shall be used exclusively for the performance / execution of the Contract strictly in accordance with the terms and conditions of the Contract and no part of the Materials shall be utilized for any other work or purpose whatsoever.
4. That the Contractor is obliged and shall remain absolutely responsible for the safe transit / protection

and custody of the Materials against all risks whatsoever including acts of the God till the Materials are duly incorporated in the works, commissioned and are taken over by K RIDE/Railway (including surplus Materials, if required as instructed by K RIDE/ the Engineer) in accordance with the terms of the Contract. The Contractor undertakes to keep K RIDE harmless against any loss or damage that may be caused to the Materials.

5. That the said Materials shall not on any account be removed from the site of the works except with the written permission of K RIDE/ the Engineer. Further, K RIDE/ the Engineer shall always be free at all times to take possession of the materials in whatever form the materials may be in, if in its opinion, the Materials are likely to be endangered, mis-utilized or converted to uses other than those specified in the Contract, by any acts or omission or commission on the part of the Contractor or any other person or on account of any reason whatsoever and the Contractor binds himself and undertakes to comply with the directions of demand of K RIDE to return the Materials without any demur or reservation.
6. That the said materials shall, at all times, be open to inspection by K RIDE/ the Engineer or any authorized representative. In the event of the said material or any part thereof at any time being found to be in lesser quantity than for which payment has been released or the same has been stolen, destroyed or damaged or becoming deteriorated, the Contractor will forthwith replace the same or repair and make good the same as required by K RIDE/ the Engineer.
7. That making payment does not mean that Materials are of required specifications and quality or that whole of the quantity brought to site by Contractor will be used in the work. The Contractor is fully responsible for the materials to conform to required quality and specification and if at any time K RIDE/ the Engineer do not find the material satisfactory, the Contractor at his own cost would replace these. K RIDE/ the Engineer would be at liberty to recover cost of these from any dues of the Contractor. Also, any Materials which are in excess of what is finally required under the contract would be the Contractor's property without any liability on K RIDE/ the Engineer who would recover the cost of this from the Contractor.
8. That this INDEMNITY BOND is irrevocable. If at any time, any loss or damage occurs to the Materials or the same or any part thereof is mis-utilized in any manner whatsoever, then the Contractor hereby agrees that the decision of K RIDE/ the Engineer as to assessment of loss or damage to the Materials shall be final and binding on the Contractor. The Contractor binds itself and undertakes to replace the lost and/or damaged Materials at its own cost and/or shall pay the amount of loss to K RIDE without any demur, reservation or protest. This is without prejudice to any other right or remedy that may be available to K RIDE/ the Engineer against the Contractor under the Contract or under this Indemnity Bond
9. That if the Contractor shall at any time make any default in the performance or observance in any respect of any of the terms and provisions of the said agreement or of those presents, the total amount of the payment shall immediately on the happening of such default be recovered by K RIDE/ the Engineer from any dues of Contractor. It is also clearly understood by the Contractor that non-observance of the obligations under this Indemnity Bond by the Contractor shall inter-alia constitute

a criminal breach of trust on the part of the Contractor for all intents and purpose including legal / penal consequences.

10. IN WITNESS WHEREOF, the Contractor has hereunto set its hand through its authorized representative, the day, month and year first above mentioned.

11. SCHEDULE 1

Particulars of the Materials	Quantity	Value of the Materials

Signed, Sealed and Delivered by the said Contractor

(Contractor's Name)

Dated:

(AUTHORISED SIGNATORY)

Place:

SEAL OF COMPANY

IN THE PRESENCE OF:

WITNESS: SIGNATURE _____

NAME: _____

ADDRESS: _____

Note:

The contractor has the option to submit the INDEMNITY BOND to cover all the items and quantities of Materials of stage payment or to submit INDEMNITY BOND each time the stage payment is to be taken or Materials advance is to be taken.

No.

Office of the.....

Date:.....

--00--00--00--