

HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED



TENDER DOCUMENT

FOR

Tender No: HRIDC/GGN/ELECT/KET/2022/02/R

Name of Work: Design, Supply, Erection, Testing & Commissioning of 25 KV, 50 Hz, Single Phase, AC Electrification work including foundations, structures and all ancillary equipment etc. in connection with Elimination of five manned level crossings in KKDE-NRE section of Northern Railway by construction of Elevated Railway Track in Kurukshetra city area in the state of Haryana.

JANUARY -2023

Estimate Cost of work: **4.97 Cr.**

Date of Opening of Tender: **03.02.2023**

Completion Period: **06 Months**

HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED

Corporate Office: SCO 17-19, 3rd Floor, Sector 17, Chandigarh.

Website: www.hridc.co.in

<https://etendershry.nic.in>

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PART -1**HARYANA RAIL INFRASTRUCTURE DEVELOPMENT
CORPORATION LIMITED (HRIDC)****Tender Document****(TOP SHEET)****(A) Details to be filled in by HRIDC:**

Mode of Tender	E-tender (Single Packet System)
Tender Notice No.	HRIDC/GGN/ELECT/KET/2022/02/R
Full name of work	Name of Work: “Design, Supply, Erection, Testing & Commissioning of 25 KV, 50 Hz, Single Phase, AC Electrification work including foundations, structures and all ancillary equipment etc.” in connection with elimination of five manned level crossings in KKDE-NRE section of Northern Railway by construction of elevated railway track in Kurukshetra city area in the state of Haryana.
Approx. Cost	INR ₹ 4,97,89,334.00/- (Four Crore Ninety Seven Lakhs Eighty Nine Thousand Three Hundred Thirty Four rupees only)
Completion period	Six (06) Months
Bid Security/ Earnest money amount	INR 3,98,900/- (Three Lakhs Ninety Eight Thousand Nine Hundred Rupees only) Note: The Earnest Money of the requisite amount is required to be deposited ONLINE only. Due to Technical limitations of E-tender portal of Haryana Govt, acceptance of Bid Security/EMD through BG/ST has been marked as yes but only ONLINE SUBMISSION OF BID SECURITY/EMD is allowed.
Issue of Tender Notice	Issue of Tender Notice on HRIDC website (www.hridc.co.in)
Sale/availability of tender document on e-procurement portal of Haryana Govt.	Tender documents will be available on e-procurement portal Government of Haryana i.e.

	https://etenders.hry.nic.in and HRIDC website i.e. www.hridc.co.in on 11.01.2023 at 05:00 PM to 03.02.2023 up to 03:00 PM.
Site visit and other related details	The prospective tenderers may contact the following for further details: General Manager/IE&A/HRIDC (Email: horc.spv@gmail.com)
Start date for submission of offer on the e-procurement portal of Haryana Govt. i.e. https://etenders.hry.nic.in	26.01.2023 at 05:00 PM
Last date/Time of uploading of tenders	03.02.2023 up to 03:00 PM.
Date/Time of Opening of Tender	Bids will be opened after closing of uploading of tender i.e. 03.02.2023 at 03:30 PM.

(B) PRECAUTIONS TO BE TAKEN FOR PREPARING LEGAL DOCUMENTS (For guidance to Tenderer):

1. Non-Judicial Stamp Paper

- i) Should have been purchased in the name of the Company/firm/executants
- ii) Should be purchased from the Place/State where the document is being executed.
- iii) Values of the non-judicial stamp paper (NJSP) should be as mentioned in Tender conditions, where value of NJSP is not mentioned in the tender conditions, value of NJSP should as per the law of the state in which the document is being executed.
- iv) Date of purchase of Non-Judicial stamp paper should be prior from the date of execution of document.

2. Signature on the document

- i) The document should be signed on each page and also at the appropriate place meant for signature of executants/deponent.
- ii) Signatory/executants should ensure that on the date of signing the document he/she has valid authority/attorney in his/her favour for signing.
- iii) In affidavit declaration clause as well as verification clause both should be signed by deponent/executants.
- iv) Where the document requires witnessing, it should be duly signed by witnesses along with their names and addresses.
- v) On Power of Attorney, signatures of the Attorney holder should also be got done and attested by executants.

3. Format of the document

- i) Where the format has been prescribed by HRIDC, the document should be executed in that format.
- ii) Date and place of execution should always be mentioned on the document.

4. Notarization of document

- i) The document should be duly attested (signed and stamped) by notary public on each page.
- ii) The seal of the notary public should contain his name, area of practice and Registration number.
- iii) Notarial stamps of appropriate value wherever required should be affixed on the document.

**5. HARYANA RAIL INFRASTRUCTURE DEVELOPMENT
CORPORATION LIMITED**

TENDER NOTICE

1.0 The General Manager/IE&A, for and on behalf of Haryana Rail Infrastructure Development Corporation invites open e-tender under Single-Packet System for the following work:

S. No.	Name of work	Approx. Cost/ Earnest Money	Similar nature of work/ Period of completion	Cost of tender document/ E- service Fee
1	Name of Work: “Design, Supply, Erection, Testing & Commissioning of 25 KV, 50 Hz, Single Phase, AC Electrification work including foundations, structures and all ancillary equipment etc.” in connection with elimination of five manned level crossings in KKDE-NRE section of Northern Railway by construction of elevated railway track in Kurukshetra city area in the state of Haryana.	Approx. Cost: INR ₹ 4,97,89,334.00/- (Four Crore Ninety-Seven Lakhs Eighty-Nine Thousand Three Hundred Thirty-Four rupees only) Earnest Money/Bid Security: INR 3,98,900/- (Three Lakhs Ninety Eight Thousand Nine Hundred Rupees only)	(1) Following works will be treated as of similar nature: <u>Definition of OHE Works:</u> - Design, Supply, Erection, Testing & Commissioning of 25 kV, 50 Hz, AC, Single phase, Traction Overhead Equipment’s, Switching Stations, including foundations, structures and all Ancillary Equipment’s. (2) Completion Period: Six (06) Months	Cost of tender document: INR 20,000/- only (including GST @18%) E-service Fee: INR 1,000/- (Rupees One thousand + 18% GST)

NOTE:

1. TENDER/OFFER WITHOUT BID SECURITY/EARNEST MONEY WILL BE SUMMARILY REJECTED SUBJECT TO EXEMPTIONS PROVIDED UNDER PARA 5.1 (a) OF PART-1 (ITT) OF THIS DOCUMENT.

2. THE EARNEST MONEY OF THE REQUISITE AMOUNT IS REQUIRED TO BE DEPOSITED ONLINE ONLY. DUE TO TECHNICAL LIMITATIONS OF E-TENDER PORTAL OF HARYANA GOVT, ACCEPTANCE OF BID SECURITY/EMD THROUGH BG/ST HAS BEEN MARKED AS YES BUT ONLY ONLINE SUBMISSION OF BID SECURITY/EMD IS ALLOWED.

2.0 CRITICAL DATES: -

Code	Activity	Date
D	Issue of Tender Notice on HRIDC Website (i.e. www.hridc.co.in)	04.01.2023
D1= D + 7 days	Availability of tender documents on e-procurement portal of Government of Haryana (i.e. www.etenders.hry.nic.in) and HRIDC website (i.e. www.hridc.co.in)	11.01.2023
D2 = D +22 days	Start of submission of offer on e-procurement portal i.e. https://etenders.hry.nic.in	26.01.2022
D3 = D + 30 days	<ul style="list-style-type: none"> • End of availability of tender documents at https://etenders.hry.nic.in • Opening of tender/ offer <p>Note: <i>This is also the last date of uploading of completed offers by the bidders</i></p>	03.02.2023
The reference time for all the above activities is indicated in Table (A) of Top Sheet above.		
NOTE: <i>In case the intended date for opening of tenders is declared a holiday, the tenders will be opened on the next working day at the same time.</i>		

3.0 Validity of Offer: 90 days from the date of opening of Technical Bid (D3).

4.0 Tender Documents to be Submitted by Tenderer(s) and information regarding Tender:

- (i) The tenders are to be uploaded up to date D3 along with scanned copy of all the requisite documents mentioned in “**General Tender Conditions and instructions to tenderers**” and **Annexure-A of Tender Notice** by all Tenderer(s) failing which the offer will be considered incomplete and action shall be taken as given in **Annexure-A of Tender Notice**.
- (ii) Bids will be opened on Date D3 immediately after closing of uploading of tenders.
- (iii) Requisite Bid security/ Earnest Money Cost of tender document and E-service fee shall be deposited by all the tenderer(s) via **ONLINE MODE** failing which the offer will be **summarily rejected**.
- (iv) Tenderer(s) to please note that after opening of tender, any document/credential pertaining to technical, financial eligibility, constitution of firm etc. shall neither be asked nor be entertained/considered under any circumstances and no claim or representation whatsoever from the tenderer in this regard shall be entertained. **Scanned copy of the documents,**

uploaded by the Tenderer, shall be clear & readable. However, HRIDC reserves the right to ask for any clarification on the documents/credentials already submitted by the tenderer along with the offer.

- (v) Tenderer may have to submit the original documents in physical form at short notice whenever asked by HRIDC at any stage of tender evaluation process or even after finalization of tender.
- (vi)The tenderers are requested to carefully peruse the Tender Documents and upload all requisite documents/credentials along with the offer. **Documents submitted/uploaded previously or along with another tender currently under consideration shall not be considered while evaluating the present tender.**
- (vii)After opening of the tender, any document pertaining to the constitution of Sole Proprietorship Firm / Partnership Firm / Registered Company/ Registered Trust / Registered Society / HUF etc. shall neither be asked nor be considered, if submitted. Further, no suomoto cognizance of any document available in public domain (i.e., on internet etc.) or in HRIDC record/office files etc. will be taken for consideration of the tender, if no such mention is available in tender offer submitted.
- (viii) In E-tender, all submissions of documents are to be uploaded on the e-procurement portal as indicated in the tender document. There may be last minute hic-cups and delay in uploading the Earnest Money and documents etc. Tenderer(s)/Prospective bidders are advised to upload their offer well in time. HRIDC will not be responsible for any delay/non submission of offer due to any reason whatsoever.
- (ix) The tenderer (s) shall visit the site of work and acquaint himself/themselves with the conditions of work viz. approach roads and accessibility, nature of soil/rock, availability of materials, electric power, water for work and drinking purposes, site for labour camps, stores, godowns, extent of lead/lift in work, availability of skilled and unskilled labour etc. that may be encountered in the course of execution of work. In short, he/they should familiarize himself/themselves fully with the conditions of the site and furnish a certificate to this effect, in the Proforma appended as **Annexure-XXXII**.
- (x) Tenderer should keep the validity of their offer for **90 days**. Any deviation will not be accepted under any circumstances.
- (xi)**Tenderer(s) participating in this tender are deemed to have accepted all the conditions given in Tender document.**
- (xii) The tenderer(s) may note that the HRIDC reserves its right to either accept or reject any Bid/s without assigning any reasons whatsoever and tenderer(s) shall have no claim(s) on this account.

(xiii) Prospective tenderer(s) may contact **General Manager/IE&A, Haryana Rail Infrastructure Development Corporation 5th Floor, RailTel Tower, Plot No. 143, Sector 44, Gurugram, Haryana, 122003** for obtaining further clarifications, if required, **during the working hours.**

(xiv) Instructions regarding GST

- Works contracts shall be treated as supply of services as per Schedule–II GST Act.
- GST Act and Rules issued from time to time by the Government/ concerned authorities shall be applicable
- Contractor/ suppliers/ service providers/ parties shall register their firms State wise under GSTIN (GST Identification Number) and submit at the time of opening of tender or before the signing the agreement and shall mention place of business, registered office address and email id.

(xv)The cost of the Tender Documents is non-refundable and Tender Document is not transferable.

(xvi)The detailed e-tender notice is available on e-procurement portal of Government of Haryana i.e. **<https://etenders.hry.nic.in>**.

(xvii) As the work indicated in this tender document is to be executed in close vicinity to the running railway track, the Tenderers are expected to meet the required safety guidelines (also mentioned in this document) and keep a constant vigil on safety related aspects. Tenderers are also advised to visit the site before submission of their tenders to understand the need for adopting safety related precautions at the work site.

(xviii) Provisions of Make in India Policy 2017 issued by Govt. of India, as amended from time to time, shall be followed for consideration of tenders.

(xix) The tenderers who desire to participate against e-tenders, are advised to electronically register themselves on website **<https://etenders.hry.nic.in>** for which they would require to obtain Class III digital certificate (if already not obtained) issued by CCA under IT Act-2000. The detailed process for the same is explained in the **Annexure-XXXIII** (Instructions regarding electronic tendering system)

(xx) All other terms and conditions in respect of above tender are given in the tender document.

(xxi)Only e-tenders will be accepted, and tenders submitted in any other form will be summarily rejected.

(xxii) The tenderer(s) shall abide by the Indian Railways Standard General Conditions of Contract (April-2022) with all corrections slips issued time to time, wherever applicable, in addition to the conditions mentioned in this tender document.

**General Manager/ IE&A
Haryana Rail Infrastructure Development Corporation
5th Floor, RailTel Tower
Plot No. 143, Sector 44
Gurugram, Haryana, 122003**

Scanned copy of the Documents to be uploaded along with offer

S.No.	Document	Required in the form	If Not submitted along with the tender, then
1.	Cost of Tender Document (in terms of Clause 1.4 of Part-1, chapter-1 of ITT)	ONLINE MODE (No documentary proof required)	Summarily Rejected
2.	Bid security/ Earnest Money Deposit (in terms of Clause 5.4 of Part-1, chapter-1 of ITT)	ONLINE MODE (No documentary proof required)	Summarily Rejected
3.	E-Service Fee	ONLINE MODE (No documentary proof required)	Summarily Rejected
4.	Constitution of Firm documents		
(A)	In case of Sole Proprietorship Firm	(i) A copy of notarized Affidavit certifying the Sole Proprietorship of the firm. (Standard Affidavit as per Annexure-XVII) (ii) An undertaking that he/Sole Proprietorship Firm is not blacklisted or debarred by Railways or any other Ministry / Department of Govt. of India or any other Ministry / Department of Govt. of Haryana from participation in tender on the date of opening of bids, either in individual capacity or as a member of the partnership firm or JV in which he was / is a partner/member. Concealment / wrong information in regard to above shall make the contract liable for determination under	Summarily Rejected

		Clause 62 of the General Conditions of Contract (April-2022).
(B)	In case of HUF	<p>i) A copy of notarized affidavit on Stamp Paper declaring that he who is submitting the tender on behalf of HUF is in the position of ‘Karta’ of Hindu Undivided Family (HUF) and he has the authority, power and consent given by other members to act on behalf of HUF.</p> <p>ii) An undertaking that the HUF is not blacklisted or debarred by Railways or any other Ministry / Department of Govt. of India or any other Ministry / Department of Govt. of Haryana from participation in tender on the date of opening of bids, either in individual capacity or as a member of the partnership firm or JV in which HUF was / is a partner/member. Concealment /wrong information in regard to above shall make the contract liable for determination under Clause 62 of the General Conditions of Contract (April-2022)</p>
(C)	In case of a “Partnership Firm/Concern”	<p>(i) Notary certified copy of the Partnership Deed.</p> <p>(ii) Document(s) in support of Registration of firm with Registrar of firms viz. Registration certificate/ Form- A & Form-B/ Form C (as applicable) etc. issued by Registrar of firms.</p> <p>(iii) Power of Attorney (duly notarized/registered) in favors of the individual signing the tender documents, agreement and create liability against the Firm. (Standard Performa as per Annexure-XVIII)</p>

		<p>(iv) An undertaking by all the partners of the Partnership Firm that they are not blacklisted or debarred by Railways or any other Ministry / Department of Govt. of India or any other Ministry / Department of Govt. of Haryana from participation in tender on the date of opening of bids, either in individual capacity or as a member of the partnership firm or JV in which HUF was / is a partner/member. Concealment /wrong information in regard to above shall make the contract liable for determination under Clause 62 of the General Conditions of Contract (April-2022)</p>	
(D)	<p>In case of a “JV Firm” (Note:- JV is not applicable for this Tender.)</p>	<p>(i) A copy of MOU/JV Agreement duly notarized in accordance with the Annexure-XIX to “General Tender Conditions and Instructions to Tenderers” of Tender Document, duly signed by the Power of Attorney (POA) holders/authorized signatories of all the constituents/members of the JV.</p> <p>(ii) Power of Attorney/ authorization duly Notarized by all JV constituents, in favors of the individual signing the tender document on behalf of the JV. (Standard Performa as per Annexure -XX)</p> <p>(iii) An undertaking that the JV is not blacklisted or debarred by Railways or any other Ministry / Department of Govt. of India or any other Ministry / Department of Govt. of Haryana from participation in tender on the date of opening of bids, either in individual capacity or as a member of the partnership firm or JV in which HUF</p>	

		<p>was / is a partner/member. Concealment/wrong information in regard to above shall make the contract liable for determination under Clause 62 of the General Conditions of Contract (April-2022)</p>	
(D) (i)	<p>In case one or more of the members of the JV Firm is/ are Partnership Firm(s), following documents shall be submitted:</p>	<p>(i) Notary certified copy of the Partnership Deed and document(s) in support of registration of firm with registrar of firms viz. Registration certificate/ Form-A & Form-B/Form C (as applicable) etc. issued by registrar of firms;</p> <p>(ii) A copy of consent of all the partners or individual authorized by partnership firm to enter into the Joint Venture Agreement on a Stamp Paper of appropriate value (Standard Performa as per Annexure-XXI)</p> <p>(iii) Power of Attorney (duly notarized/registered as per prevailing law) in favour of the individual to sign the MOU/JV Agreement on behalf of the Partnership Firm and create liability against the Firm. (Standard Performa as per Annexure-XXII)</p> <p>iv) An undertaking by all the partners of the Partnership Firm that they are not blacklisted or debarred by Railways or any other Ministry / Department of Govt. of India or any other Ministry / Department of Govt. of Haryana from participation in tender on the date of opening of bids, either in individual capacity or as a member of the partnership firm or JV in which HUF was / is a partner/member. Concealment /wrong information in regard to above shall make the contract liable for determination under Clause 62 of the General Conditions</p>	

		of Contract (April-2022)	
(D) (ii)	In case one or more of the members of the JV Firm is/ are Proprietary Firm or HUF, following documents shall be submitted:	<p>(i) A copy of notarized affidavit on Stamp Paper confirming that his/her Concern is a Proprietary Concern and he/she is Sole Proprietor of the Concern OR he/she is in position of “Karta” of Hindu Undivided Family (HUF) and he/she has the authority, power and consent given by other partners to act on behalf of HUF. (Standard Affidavit as per Annexure-XXIV.</p> <p>(ii) An undertaking that he/Sole Proprietary firm/HUF is not blacklisted or debarred by Railways or any other Ministry / Department of Govt. of India or any other Ministry / Department of Govt. of Haryana from participation in tender on the date of opening of bids, either in individual capacity or as a member of the partnership firm or JV in which he was / is a partner/member. Concealment / wrong information in regard to above shall make the contract liable for determination under Clause 62 of the General Conditions of Contract (April-2022).</p>	
(D) (iii)	In case one or more members of JV is/ are Limited companies, the following documents shall be submitted:	<p>(i) A notary certified copy resolutions of the Directors of the Company, permitting the company to enter into a JV agreement, authorizing MD or one of the Directors or Managers of the Company to sign JV MOU/Agreement and such other documents required to be signed on behalf of the Company and enter into liability against the Company and/or do any other act on behalf of the Company. (Standard Performa as per Annexure-XXV)</p>	

		<p>(ii) Notarized Copy of Memorandum and Articles of Association of the Company duly registered as per prevailing law.</p> <p>(iii) A copy of Certificate of Incorporation</p> <p>(iv) A copy of Authorization/copy of Power of Attorney issued by the Company (backed by the resolution of Board of Directors) in favor of the individual to sign the tender, sign MOU/JV Agreement on behalf of the company and creates liability against the company. (Standard Performa as per Annexure-XXVI)</p> <p>(v) An undertaking that the Company is not blacklisted or debarred by Railways or any other Ministry / Department of Govt. of India or any other Ministry / Department of Govt. of Haryana from participation in tender on the date of opening of bids, either in individual capacity or as a member of the partnership firm or JV in which he was / is a partner/member. Concealment / wrong information in regard to above shall make the contract liable for determination under Clause 62 of the General Conditions of Contract (April-2022).</p>	
<p>(D) (iv)</p>	<p>In case one or more members of JV is/are LLP firm, the following documents shall be submitted/:</p>	<p>A notarized copy of certificate of incorporation and LLP agreement; A notarized copy of resolution of the partners of LLP, permitting the LLP to enter into a JV agreement, authorizing one of the partners of LLP to sign JV MOU/agreement and such other documents required to be signed on behalf of the LLP and to create liability against the LLP and/or</p>	

		<p>to do any other act on behalf of LLP. (Standard Performa as per Annexure -XXVII)</p> <p>A notarized/ registered copy of authorization/copy of power of attorney issued by the LLP (backed by resolution of partners) in favors of individual to sign the tender, sign MOU/JV agreement on behalf of the LLP and creates liability against the LLP. (Standard Performa as per Annexure-XXVIII)</p> <p>An undertaking that LLP firm is not blacklisted or debarred by Railways or any other Ministry / Department of Govt. of India or any other Ministry / Department of Govt. of Haryana from participation in tender on the date of opening of bids, either in individual capacity or as a member of the partnership firm or JV in which he was / is a partner/member. Concealment / wrong information in regard to above shall make the contract liable for determination under Clause 62 of the General Conditions of Contract (April-2022).</p>	
(E)	<p>In case of a “Company” registered under Companies Act-2013</p>	<p>(i)Copy of the MOA (Memorandum of Association)/AOA (Articles of Association) of the Company;</p> <p>(ii)A copy of Certificate of Incorporation</p> <p>(iii)A copy of notarized/registered Power of Attorney (Standard Performa as per Annexure-XXIX) by the Company (backed by the resolution of Board of Directors) (Standard Performa as per Annexure-XXX) in favors of the individual signing the tender on behalf of the Company and</p>	

		<p>create liability against the company.</p> <p>(iv)An undertaking that the Company is not blacklisted or debarred by Railways or any other Ministry / Department of Govt. of India or any other Ministry / Department of Govt. of Haryana from participation in tender on the date of opening of bids, either in individual capacity or as a member of the partnership firm or JV in which he was / is a partner/member. Concealment / wrong information in regard to above shall make the contract liable for determination under Clause 62 of the General Conditions of Contract (April-2022).</p>	
(F)	<p>In case of a “LLP (Limited Liability Partnership)”</p>	<p>(i) Notarized copy of the LLP Agreement;</p> <p>(ii)A Copy of Certificate of Incorporation; and</p> <p>(iii)A copy of notarized/registered Power of Attorney/authorization issued by the LLP in favors of the individual to sign the tender on behalf of the LLP and create liability against the LLP. (Standard Performa as per Annexure-XXXI)</p> <p>(iv)An undertaking that the LLP is not blacklisted or debarred by Railways or any other Ministry / Department of Govt. of India or any other Ministry / Department of Govt. of Haryana from participation in tender on the date of opening of bids, either in individual capacity or as a member of the partnership firm or JV in which he was / is a partner/member. Concealment / wrong information in regard to above shall make the contract liable for determination under Clause 62 of the General Conditions of Contract (April-2022).</p>	

(G)	In case of a Registered Society/ Registered Trust.	<p>(i)A notarized copy of the Certificate of Registration;</p> <p>(ii)Notarized copy of Deed of Formation; and</p> <p>(iii)A notarized/registered copy of Power of Attorney in favors of the individual to sign the tender documents and create liability against the Society/Trust.</p> <p>(iv)An undertaking that Registered Society/ Registered Trust is not blacklisted or debarred by Railways or any other Ministry / Department of Govt. of India or any other Ministry / Department of Govt. of Haryana from participation in tender on the date of opening of bids, either in individual capacity or as a member of the partnership firm or JV in which he was / is a partner/member. Concealment / wrong information in regard to above shall make the contract liable for determination under Clause 62 of the General Conditions of Contract (April-2022).</p>	
5.	Valid Electrical Contractor's Licence for HT/EHT Voltage equal to or more than 25 KV from the concerned statutory authority.	Copy	Summarily Rejected
6.	<p><u>Technical Eligibility Criteria</u> –</p> <p>As per Clause 10.1 of Tender Form.</p>	Copy	Summarily Rejected

7.	Financial Eligibility Criteria- As per Clause 10.2 of Tender Form. the tenderers shall submit requisite information as per Annexure-VIB along with copies of audited balance sheets duly certified by the chartered Accountant/Certificate from chartered accounted duly supported by Audited Balance sheet.	Copy	Summarily Rejected
8.	Tender Form (First Sheet) Annexure-I	Copy	Liabile to be rejected
9.	Annexure-XXXII Declaration form regarding site etc.	Copy	Liabile to be rejected
10.	Annexure-XXXIV Declaration regarding constitution of firm	Copy	Liabile to be rejected
11.	Annexure-XXXV (Plant and Machinery)	Copy	Liabile to be rejected
12.	Annexure-XXXVI (Engineers/ Personnel)	Copy	Liabile to be rejected
13.	Annexure-XXXVII (Works executed during last seven years ending last day of the month previous to the one in which tender is opened)	Copy	Liabile to be rejected
14.	Annexure-XXXVIII Work in Hand - in support of Credentials.	Copy	Liabile to be rejected
15.	Annexure-XXXIX (Detail of Contractual Payment	Copy	Liabile to be rejected

	received in previous three financial years and the current financial year)		
16.	Annexure-XL (Bank Detail/ RTGS)	Copy	Liabile to be rejected
17.	Completion Certificate*	Copy	Summarily Rejected
18.	Annexure-V Mandatory Affidavit to be submitted by tenderer along with the tender documents	Copy	Summarily Rejected
19.	Annexure-XLII Mandatory Undertaking Regarding Employment/ Partnership of Retired Government of India/ Haryana Employees.	Copy	Summarily Rejected

* Tenderer should make all efforts to submit the Completion certificate as per **Annexure-XLI**.

**HARYANA RAIL INFRASTRUCTURE DEVELOPMENT
CORPORATION LIMITED**

TENDER FORMS (FIRST SHEET)

Tender No: HRIDC/GGN/ELECT/KET/2022/02/R

Name of work “Design, Supply, Erection, Testing & Commissioning of 25 KV, 50 Hz, Single Phase, AC Electrification work including foundations, structures and all ancillary equipment etc.” in connection with elimination of five manned level crossings in KKDE-NRE section of Northern Railway by construction of elevated railway track in Kurukshetra city area in the state of Haryana.

To,

The Managing Director,

Haryana Rail Infrastructure Development Corporation Limited

SCO-. 17-19, 3rd Floor, Sector-17A, Chandigarh

E-mail: hridc2017@gmail.com

1. Dear Sir, I/We, _____ have read the various conditions to tender attached hereto and agree to abide by the said conditions. I/We also agree to keep this tender open for acceptance for a period of 90 (Ninety) days from the date fixed for opening the same and in default thereof, I/We will be liable for forfeiting of my/our “Bid Security”. I/We offer to do the work **“Design, Supply, Erection, Testing & Commissioning of 25 KV, 50 Hz, Single Phase, AC Electrification work including foundations, structures and all ancillary equipment etc.” in connection with elimination of five manned level crossings in KKDE-NRE section of Northern Railway by construction of elevated railway track in Kurukshetra city area in the state of Haryana** for Haryana Rail Infrastructure Development Corporation Limited, at the rates quoted in the attached schedule and hereby bind myself/ourselves to complete the work in all respects within 06 (Six) months from the date of issue of letter of acceptance of the tender.
2. I/We also hereby agree to abide by the Indian Railways Standard General Conditions of Contract (April ,2022), with all correction slips issued from time to time and to carry out the work according to the Special Conditions of Contract, Technical Specifications, specifications of materials and Schedule of Rates as laid down by HRIDC in the present contract.

3. **Bid Security INR 3,98,900/- (Three Lakhs Ninety-Eight Thousand Nine Hundred Rupees only)** has already been deposited online. Bid security may be forfeited without prejudice to any other right or remedies in case my/our Tender is accepted and if:
- a) I/We do not submit the Performance Guarantee within the time specified in the Tender document;
 - b) I/We do not execute the contract documents within seven (7) days after receipt of notice issued by HRIDC that such documents are ready; and
 - c) I/We do not commence the work within fifteen (15) days after receipt of orders to that effect. without prejudice to any other right or remedies in case my/our Tender is accepted and if:
 - i) I/We do not submit the Performance Guarantee within the time specified in the Tender document;
 - ii) I/We do not execute the contract documents within seven (7) days after receipt of notice issued by HRIDC that such documents are ready; and
 - iii) I/We do not commence the work within fifteen (15) days after receipt of orders to that effect.
- 4.(a) I/We am/are a Start-up firm registered by Department of Industrial Policy and Promotion (DIPP) and my registration number is valid up to (Copy enclosed) and hence exempted from submission of Bid security/Earnest Money.
5. We are a Labour Cooperative Society and our Registration No. is withand hence required to deposit only 50% of Bid security/Earnest Money.
6. Until a formal Contract Agreement is prepared and executed, acceptance of this tender shall constitute a binding contract between us subject to modifications, as may be mutually agreed to between us and indicated in the letter of acceptance of my/our offer for this work.

Signature of Witnesses:

- (1)
- (2)

.....

Signature of Tenderer(s)

Date.....

Address of the Tenderer(s)

(Complete postal address)

INSTRUCTIONS TO TENDERER(S)

Instructions to Tenderers (ITT)	
1.0	<p>Applicability: These instructions and conditions of contract shall be applicable for all the tenders and contracts of Railway/HRIDC for execution of ‘Works’ as defined in GFR 2017.</p>
1.01	<p>Order of Precedence of Documents: In a contract agreement, in case of any difference, contradiction, discrepancy, with regard to conditions of tender/contract, specifications, drawings, Bill(s) of Quantities etc., forming part of the tender/contract, the following shall be the order of precedence:</p> <ol style="list-style-type: none"> i. Letter of Award/Acceptance(LOA) ii. Bill(s) of Quantities iii. Special Conditions of Contract iv. Technical Specifications as given in tender documents v. Drawings vi. Indian Railways Standard General Conditions of Contract updated with correction slips issued up to date of inviting tender or as otherwise specified in the tender documents. vii. Indian Railways Unified Standard Specification (IRUSS-2019) updated with correction slips issued up to date of inviting tender or as otherwise specified in the tender documents, if applicable in the contract. viii. CPWD Specifications 2019 Vol I & II updated with correction slips issued up to date of inviting tender or as otherwise specified in the tender documents, if applicable in the contract. ix. Indian Railways Unified Standard Specifications (Works and Material) 2010 updated with correction slips issued up to date of inviting tender or as otherwise specified in the tender documents, if applicable in the contract. x. IR Specifications/Guidelines updated with correction slips issued up to date of inviting tender or as otherwise specified in the tender documents. xi. Relevant B.I.S. Codes updated with correction slips issued up to date of

	<p>inviting tender or as otherwise specified in the tender documents.</p>
<p>1.1</p>	<p>Interpretation: These Instructions to Tenderers shall be read in conjunction with the Standard General Conditions of Contract which are referred to herein and shall be subject to modifications additions or suppression by Special Conditions of Contract and/or Special Specifications, if any, annexed to the Tender Forms.</p>
<p>1.2</p>	<p>Definition: In these Instructions to Tenderers, the following terms shall have the meanings assigned hereunder except where the context otherwise requires:</p> <p>(a)“RAILWAY” shall mean the President of the Republic of India or the administrative officers of the Railway or Successor Railway authorized to deal with any matter, which these presents are concerned on his behalf.</p> <p>(b)"MANAGING DIRECTOR" shall mean the Officer in-charge of the General Superintendence and Control of the HRIDC and include their successors. His postal address shall be intimated to the successful Tenderers in due course.</p> <p>(c)“DIVISIONAL RAILWAY MANAGER” shall mean the Officer-in-Charge of a Division of Zonal Railway and shall mean and include Divisional Railway Manager of the Successor Railway.</p> <p>(d)“ENGINEER” shall mean the General Manager/IE&A in executive charge of the HRIDC Electrification works and shall include the superior officers of the HRIDC Electrification Project. He is responsible for ensuring that all field works covered by the contract are carried out in accordance with approved designs, drawings and specifications and conditions of contract as agreed to. He is also responsible for prices and terms of payment.</p> <p>(e) "PURCHASER" Means the President of India acting through his accredited officers or any one of them The MD, In-charge of this HRIDC Project (whose address will be intimated in due course) shall be deemed to be one of such accredited officers</p> <p>(f) “TENDERER” shall mean the person / firm / co-operative or company whether incorporated or not who tenders for the works with a view to execute the works on contract with the HRIDC and shall include their representatives, successors and permitted assigns.</p> <p>(g) “LIMITED TENDERS” shall mean tenders invited from all or some contractors on the approved or select list of contractors with the HRIDC.</p> <p>(h) “OPEN TENDERS” shall mean the tenders invited in open and public manner</p>

and with adequate notice.

(i) "WORKS" shall mean the works contemplated in the drawings and Bill(s) of Quantities set forth in the tender forms and required to be executed according to the specifications.

(j) "SPECIFICATIONS" shall mean the Specifications for Materials and Works of the Railway/HRIDC as specified under the authority of the Ministry of Railways/HRIDC as amplified, added to or superseded by special specifications if any, appended to the Tender Forms.

(k) Standard Schedule of Rates (SSOR) shall mean the schedule of Rates adopted by the Railway/HRIDC, which includes-

1. "Unified Standard Schedule of Rates of the Railway (USSOR)" i.e. the Standard Schedule of Rates of the Railway issued under the authority of the Chief Engineer from time to time, updated with correction slips issued up to date of inviting tender or as otherwise specified in the tender documents;
2. "Delhi Schedule Of Rates (DSR)" i.e. the Standard Schedule of Rates published by Director General/ Central Public Works Department, Government of India, New Delhi, as adopted and modified by the Railway under the authority of the Chief Engineer from time to time, updated with correction slips issued up to date of inviting tender or as otherwise specified in the tender documents.

(l) "DRAWINGS" shall mean the maps, drawings, plans and tracings, or prints thereof annexed to the Tender Forms.

(m) "CONTRACTOR'S AUTHORIZED ENGINEER" shall mean a graduate engineer or equivalent, having more than 3 years' experience in the relevant field of construction work involved in the contract, duly approved by the Engineer.

(n) Date of inviting tender shall be the date of publishing tender notice on website if tender is published on website or the date of publication in newspaper in case tender is not published on website.

(o) "Bill of Quantities" shall mean Schedule of Item(s) included in the tender document along with respective quantities.

(p) "PURCHASER'S ENGINEERS" means the Engineers appointed by the Purchaser, who will decide all matters relating to design, manufacture, installation and commissioning of the plant and equipment at site.

(q) "SITE" Means the areas to be taken up by the permanent works, together with any other area or areas as shall be determined by the Purchaser's Engineers, which may be placed at the disposal of the Contractor for the purpose of the contract and also such area or areas used for store yards, works yards or workshop in

	<p>proximity of the works as the Purchaser' Engineers may have authorized as an extension of the site, irrespective of the terms and conditions under which they are occupied by the Contractor.</p> <p>(r) "CONTRACTOR" shall mean the Person/Firm/LLP/Trust/Co-operative Society or Company whether incorporated or not who enters into the contract with the HRIDC and shall include their executors, administrators, successors and permitted assigns.</p> <p>(s) "CONTRACT" shall mean and include the Agreement, the Work Order, the accepted Bill(s) of Quantities or Chapter(s) of Standard Schedule of Rates (SSOR) of the Railway/HRIDC modified by the tender percentage for items of works quantified, or not quantified, the Standard General Conditions of Contract, the Special Conditions of Contracts, if any; the Drawing, the Specifications, the Special Specifications, if any and Tender Forms, if any.</p> <p>(t)"CONSTRUCTIONAL PLANT" shall mean all appliances or things of whatsoever nature required for the execution, completion or maintenance of the works or temporary works (as hereinafter defined) but does not include materials or other things intended to form or forming part of the permanent work.</p> <p>(u)"TEMPORARY WORKS" shall mean all temporary works of every kind required for the execution completion and/or maintenance of the works.</p> <p>(v)"PERIOD OF MAINTENANCE" shall mean the specified period of maintenance from the date of completion of the works, as certified by the Engineer.</p>
1.3	<p>Words importing the singular number shall also include the plural and vice versa where the context requires</p>
1.4	<p>COST OF TENDER DOCUMENT:</p> <p>Tender Documents will be available on the e-procurement portal https://etenders.hry.nic.in from 11.01.2023 at 05:00 PM to 03.02.2023 up to 03:00 PM (D3).The cost of Tender Document will have to be deposited ONLINE. The cost of tender document is Rs. 20,000/- (including GST @ 18%). This should be paid separately and not included in the Earnest Money of tender.</p>
1.5	<p>PERIOD OF COMPLETION: -</p> <p>The entire work including commissioning of OHE and other works shall be completed within 06 (Six) Months from the date of issue of the 'Letter of Acceptance' to the tenderer.</p>

1.6	<p>DESIGN CRITERIA: -</p> <p>The traction overhead equipment for main line is made suitable for maximum speed of 160 km/h. Regulated conventional all copper OHE with 65 sqmm Cadmium-Copper Catenary and 107 sqmm grooved HDBC Contact wire.</p>
	<p>CREDENTIALS OF CONTRACTORS</p>
2.0	<p>Application for Registration :</p>
2.1	<p>Works of construction and of supply of material shall be entrusted for execution to contractors whose capabilities and financial status have been investigated and approved to the satisfaction of the HRIDC. furnishing particulars regarding:</p> <p>(a) His position as an independent contractor specifying Engineering organization available with details of partners / staff / engineers employed with qualifications and experience;</p> <p>(b) His capacity to undertake and carry out works satisfactorily as vouched for by a responsible official or firm; details about the transport equipment, construction tools and plants etc. required for the work, maintained by him;</p> <p>(c) His previous experience of works similar to that to be contracted for, in proof of which original certificates or testimonials may be called for and their genuineness verified, if needs be, by reference to the signatories thereof;</p> <p>(d) His knowledge from actual personal investigation of the resources of the area/zone or zones in which he offers to work;</p> <p>(e) His ability to supervise the work personally or by competent and duly authorized agent;</p> <p>(f) His financial position;</p>
	<p>TENDERS FOR WORKS</p>
3.0	<p>Tender Form: Tender Forms shall embody the contents of the contract documents either directly or by reference and shall be as per specimen form, Annexure-I. e-Tender Forms shall be issued free of cost to all tenderers.</p>

4.0	<p>Omissions & Discrepancies: Should a tenderer find discrepancies in or omissions from the drawings or any of the Tender Forms or should he be in doubt as to their meaning, he should at once notify the authority inviting tenders. The tender inviting authority may, if deemed necessary, clarify the same to all tenderers. It shall be understood that every endeavor has been made to avoid any error which can materially affect the basis of tender and successful tenderer shall take upon himself and provide for the risk of any error which may subsequently be discovered and shall make no subsequent claim on account thereof.</p>				
5.0	<p>Bid Security/Earnest Money :-</p>				
5.1	<p>(a) The tenderer shall be required to submit the Bid Security with the tender for the due performance with the stipulation to keep the offer open till such date as specified in the tender, under the conditions of tender. The Bid Security shall be as under:</p> <table border="1" data-bbox="321 926 1323 1192"> <thead> <tr> <th data-bbox="321 926 699 1037">Value of the Work</th> <th data-bbox="699 926 1323 1037">Bid Security</th> </tr> </thead> <tbody> <tr> <td data-bbox="321 1037 699 1192">For works estimated to cost more than ₹ 1 crore</td> <td data-bbox="699 1037 1323 1192">₹ 2 lakh plus ½% (half percent) of the excess of the estimated cost of work beyond ₹ 1 crore subject to a maximum of ₹ 1 crore.</td> </tr> </tbody> </table> <p>Note: -</p> <ul style="list-style-type: none"> (i) The Bid Security shall be rounded off to the nearest ₹100. This Bid Security shall be applicable for all modes of tendering. (ii) Any firm recognized by Department of Industrial Policy and Promotion (DIPP) as ‘Startups’ shall be exempted from payment of Bid Security detailed above. (iii) Labour Cooperative Societies shall submit only 50% of above Bid Security detailed above. <p>(b) It shall be understood that the tender documents have been issued to the tenderer and the tenderer is permitted to tender in consideration of stipulation on his part, that after submitting his tender he will not resile from his offer or modify the terms and conditions thereof in a manner not acceptable to the Engineer. Should the tenderer fail to observe or comply with the said stipulation, the aforesaid amount shall be liable to be forfeited</p>	Value of the Work	Bid Security	For works estimated to cost more than ₹ 1 crore	₹ 2 lakh plus ½% (half percent) of the excess of the estimated cost of work beyond ₹ 1 crore subject to a maximum of ₹ 1 crore.
Value of the Work	Bid Security				
For works estimated to cost more than ₹ 1 crore	₹ 2 lakh plus ½% (half percent) of the excess of the estimated cost of work beyond ₹ 1 crore subject to a maximum of ₹ 1 crore.				

	<p>to the HRIDC.</p> <p>(c) If his tender is accepted, this Bid Security mentioned in sub para (a) above will be retained as part security for the due and faithful fulfillment of the contract in terms of Clause 16 of the Standard General Conditions of Contract. The Bid Security of other Tenderers shall, save as herein before provided, be returned to them, but the HRIDC shall not be responsible for any loss or depreciation that may happen thereto while in their possession, nor be liable to pay interest thereon.</p>
5.2	The Bid Security shall be deposited via online mode failing which the offer will be summarily rejected.
5.3	In case, submission of Bid Security in the form of Bank Guarantee, following shall be ensured: Not Applicable
5.4	The tender must be accompanied by a sum of ₹ 3,98,900/- (Three Lakhs Ninety-Eight Thousand Nine Hundred Rupees only) as Bid security/ Earnest Money deposited via online mode, failing which the tender shall not be considered.
6.0	Care in Submission of Tenders
a(i)	Before submitting a tender, the tenderer will be deemed to have satisfied himself by actual inspection of the site and locality of the works, that all conditions liable to be encountered during the execution of the works are taken into account and that the rates he enters in the tender forms are adequate and all-inclusive to accord with the provisions in Clause-37 of the Standard General Conditions of Contract for the completion of works to the entire satisfaction of the Engineer.

a(ii)	Tenderers will examine the various provisions of The Central Goods and Services Tax Act, 2017(CGST)/ Integrated Goods and Services Tax Act, 2017(IGST)/ Union Territory Goods and Services Tax Act, 2017(UTGST)/ respective state’s State Goods and Services Tax Act (SGST) also, as notified by Central/State Govt.& as amended from time to time and applicable taxes before bidding. Tenderers will ensure that full benefit of Input Tax Credit (ITC) likely to be availed by them is duly considered while quoting rates.
(a)(iii)	The successful tenderer who is liable to be registered under CGST/IGST/UTGST/SGST Act shall submit GSTIN along with other details required under CGST/IGST/UTGST/SGST Act to HRIDC immediately after the award of contract, without which no payment shall be released to the Contractor. The Contractor shall be responsible for deposition of applicable GST to the concerned authority.
(a)(iv)	In case the successful tenderer is not liable to be registered under CGST/IGST/UTGST/ SGST Act, the HRIDC shall deduct the applicable GST from his/their bills under reverse charge mechanism (RCM) and deposit the same to the concerned authority
(b)	When work is tendered for by a firm or company, the tender shall be signed by the individual legally authorized to enter into commitments on their behalf.
(c)	The HRIDC will not be bound by any power of attorney granted by the tenderer or by changes in the composition of the firm made subsequent to the execution of the contract. It may, however, recognize such power of attorney and changes after obtaining proper legal advice, the cost of which will be chargeable to the Contractor.
6.1	The tenderers shall submit a copy of certificate stating that all their statements/documents submitted along with bid are true and factual. Standard format of certificate to be submitted by the bidder is enclosed as Annexure-V . In addition to Annexure- V, in case of other than Company/Proprietary firm, Annexure –V(A) shall also be submitted by each member of a partnership firm/Joint Venture (JV)/ Hindu Un- Divided Family (HUF)/Limited Liability Partnership (LLP)etc. as the case may be. Non submission of above certificate(s) by the bidder shall result in summarily rejection of his/their bid. It shall be mandatorily incumbent upon the tenderer to

	<p>identify state and submit the supporting documents duly self-attested/digitally signed by which they/he is qualifying the Qualifying Criteria mentioned in the Tender Document.</p>
	<p>CONSIDERATION OF TENDERS</p>
7.	<p>Right of HRIDC to Deal with Tenders: The HRIDC reserves the right of not to invite tenders for any of HRIDC work or works or to invite open or limited tenders and when tenders are called to accept a tender in whole or in part or reject any tender or all tenders without assigning reasons for any such action. In case if tender is accepted in part by HRIDC administration, Letter of Acceptance shall be issued as counter offer to the Tenderer, which shall be subject to acceptance by the Tenderer.</p>
7A.	<p>Double Packets System of Tendering: Not Applicable (Single Packet System applicable for this tender).</p>
7B.	<p>Pre Bid Conference: Not applicable</p>
7C.	<p>Make in India Policy: Provisions of Make in India Policy 2017 issued by Govt. of India, as amended from time to time, shall be followed for consideration of tenders.</p>
7D.	<p>Permission to Bid for a bidder from a country which shares Land boundary with India: Any bidder from the countries sharing a land border with India will be eligible to bid in any procurement of works (including turnkey projects) only if the bidder is registered with the Competent Authority. The Competent Authority for registration will be the Registration Committee constituted by the Department for Promotion of Industry and Internal Trade (DPIIT), Government of India. For interpretation of this para, Department of Expenditure, Ministry of Finance, Government of India letter F.No.6/18/2019-PPD dated 23/07/2020 shall be referred.</p>
7E.	<p>Clarification of Bids: To assist in the examination, evaluation & comparison and pre-qualification of the Tender, the HRIDC may, at its discretion, ask any Bidder for a clarification of its Bid. Any clarification submitted by a Bidder that is not in response to a request by the HRIDC shall not be entertained or considered. The HRIDC request for clarification and the response of the bidder in this regard shall be</p>

	<p>in writing. However, if a Bidder does not provide clarification of its bid by the date and time communicated in the HRIDC request for clarification, the bid shall be evaluated as per the documents submitted along with the bid.</p>
8.	<p>Execution of Contract Document: The Tenderer whose tender is accepted shall be required to appear in person at the office of General Manager/IE&A, as the case may be, or if tenderer is a firm or corporation, a duly authorized representative shall appear (there would be no need for appear in person if agreement is signed digitally) and execute the contract agreement within seven days of notice from HRIDC that the Contract Agreement is ready. Failure to do so shall constitute a breach of the agreement affected by the acceptance of the tender. The Contract Agreement shall be entered into by HRIDC only after submission of valid Performance Guarantee by the Contractor. In such cases the HRIDC may determine that such tenderer has abandoned the contract and there upon his tender and acceptance thereof shall be treated as cancelled and the HRIDC shall be entitled to forfeit the full amount of the Bid Security and other dues payable to the Contractor under this contract. The failed Contractor shall be debarred from participating in the re-tender for that work.</p>
9.	<p>Form of Contract Document: Every contract shall be complete in respect of the document it shall so constitute. Not less than 2 copies of the contract document shall be signed by the competent authority and the Contractor and one copy given to the Contractor (there would be no need of signing two copies if agreement is signed digitally).</p>
(a)	<p>For Zone Contracts, awarded on the basis of the percentage above or below the applicable chapter(s) of Standard Schedule of Rates (SSOR) for the whole or part of financial year, the contract agreement required to be executed by the tenderer whose tender is accepted shall be as per specimen form, Annexure-II. During the currency of the Zone Contract, work orders as per specimen form Annexures-III, for works not exceeding ₹ 5,00,000 each, shall be issued by the Engineer under the agreement for Zone Contract.</p>
(b)	<p>For contracts for specific works, the contract document required to be executed by the tenderer whose tender is accepted shall be an agreement as per specimen form Annexure- IV.</p>

	<p>TENDER FORM (Second sheet)</p>
<p>1.</p>	<p>Instructions to Tenderers and Conditions of Tender: The following documents form part of Tender / Contract:</p> <ul style="list-style-type: none"> (a) Tender Forms – First Sheet and Second Sheet (b) Special Conditions/Specifications (enclosed) (c) Bill(s) of quantities (enclosed) (d) Standard General Conditions of Contract and Standard Specifications (Works and Materials) of Indian Railways as amended/corrected up to latest correction slips, copies of which can be seen in the General Manager/IE& A office, Gurugram on payment of prescribed charges. (e) Standard Schedule of Rates (SSOR) as amended / corrected up to latest correction slips, copies of which can be seen in the General Manager/IE& A office, Gurugram on payment of prescribed charges. (f) All general and detailed drawings pertaining to this work which will be issued by the Engineer or his representatives (from time to time) with all changes and modifications.
<p>2.</p>	<p>Drawings for the Work: The Drawing for the work can be seen in the office of the General Manager/IE& A office, Gurugram (Furnished by Contractor) at any time during the office hours. The drawings are only for the guidance of Tenderer(s). Detailed working drawings (if required) based generally on the drawing mentioned above, will be given by the Engineer or his representative from time to time.</p>
<p>3.</p>	<p>The Tenderer(s) shall quote his / their rates as a percentage above or below the Standard Schedule of Rates (SSOR) of HRIDC as applicable, except where he/they are required to quote item rates and must tender for all the items shown in the Bill(s) of Quantities attached. The quantities shown in the attached Bill(s) of Quantities are given as a guide and are approximate only and are subject to variation according to the needs of the HRIDC. The HRIDC does not guarantee work under each item of the Bill(s) of Quantities. The tenderer(s) shall quote rates / rebates only at specified place in Tender Form supplied by HRIDC. Any revision of rates / rebates submitted (quoted) through a separate letter whether enclosed with the bid (Tender Form) or submitted separately or mentioned elsewhere in the document other than specified place shall be summarily ignored and will not be considered.</p>

<p>4.</p>	<p>Tenders containing erasures and / or alterations of tender documents are liable to be rejected. Any correction made by tender(s) in his/their entries must be attested by him / them.</p>
<p>5.</p>	<p>The works are required to be completed within a period of 06 months from the date of issue of acceptance letter.</p>
<p>6.</p>	<p>Bid Security :-</p>
	<p>(a) Subject to exemptions provided under para 5(1) (a) of Part-1 (ITT) of this document, the tender must be accompanied by a Bid Security as mentioned in tender documents, failing which the tender shall be summarily rejected.</p> <p>(b) The Tenderer(s) shall keep the offer open for a minimum period of 90 days from the date of closing of the Tender. It is understood that the tender documents have been issued to the Tenderer(s) and the Tenderer(s), is / are permitted to tender in consideration of the stipulation on his / their part that after submitting his / their tender subject to the period being extended further, if required by mutual agreement from time to time, he will not resile from his offer or modify the terms and conditions thereof in a manner not acceptable to HRIDC. Should the tenderer fail to observe or comply with the foregoing stipulation, the amount deposited or Bank guarantee bond submitted as Bid Security for the due performance of the above stipulation, shall be forfeited to the HRIDC.</p> <p>(c) If his tender is accepted,</p> <p>(i) the Bid Security mentioned in sub para(a) above deposited in cash through e-payment gateway will be retained as part security for the due and faithful fulfilment of the contract in terms of Clause 16 of the Standard General Conditions of Contract;</p> <p>(ii) the Bid Security mentioned in sub para(a) above submitted as Bank guarantee bond, will be encashed as part security for the due and faithful fulfilment of the contract in terms of Clause 16 of the Standard General Conditions of Contract. The Bid Security of other Tenderers shall, save as herein before provided, be returned to them, but the HRIDC shall not be responsible for any loss or depreciation to the Bid Security that may happen thereto while in their possession, nor be liable to pay interest thereon.</p> <p>(d) In case Contractor submits the Term Deposit Receipt/Bank Guarantee Bond</p>

	<p>towards either the Full Security Depositor the Part Security Deposit equal to or more than Bid Security, the HRIDC shall return the Bid Security so retained as per sub para(c) above, to the Contractor.</p>
7.	<p>Rights of the HRIDC to deal with Tender: The authority for the acceptance of the tender will rest with the HRIDC. It shall not be obligatory on the said authority to accept the lowest tender or any other tender, and tenderer(s) shall neither demand any explanation for the cause of rejection of his/ their tender nor the HRIDC to assign reasons for declining to consider or reject any particular tender or tenders.</p>
8.	<p>If the tenderer(s) deliberately gives / give wrong information in his / their tender or creates / create circumstances for the acceptance of his / their tender, the HRIDC reserves the right to reject such tender at any stage.</p>
9.	<p>If any partner(s) of a partnership firm expires after the submission of its tender or after the acceptance of its tender, the HRIDC shall deem such tender as cancelled/contract as terminated under clause 61 of the Standard General Conditions of Contract, unless the firm retains its character as per partnership agreement. If a sole proprietor expires after the submission of tender or after the acceptance of tender, the HRIDC shall deem such tender as cancelled / contract as terminated under clause 61 of the Standard General Conditions of Contract.</p>
10.0	<p>Eligibility Criteria:</p>
10.1	<p>Technical Eligibility Criteria:</p> <ul style="list-style-type: none"> (a) The tenderer must have successfully completed or substantially completed any one of the following categories of work(s) during last 07 (seven) years, ending last day of month previous to the one in which tender is invited: <ul style="list-style-type: none"> (i) Three similar works each costing not less than the amount equal to 30% of advertised value of the tender, or (ii) Two similar works each costing not less than the amount equal to 40% of advertised value of the tender, or

(iii) One similar work costing not less than the amount equal to 60% of advertised value of the tender.

(b) (1) In case of tenders for composite works (e.g. works involving more than one distinct component, such as Civil Engineering works, S&T works, Electrical works, OHE works etc. and in the case of major bridges – substructure, superstructure etc.), tenderer must have successfully completed or substantially completed any one of the following categories of work(s) during last 07 (seven) years, ending last day of month previous to the one in which tender is invited:

- (i) Three similar works each costing not less than the amount equal to 30% of advertised value of each component of tender, or
- (ii) Two similar works each costing not less than the amount equal to 40% of advertised value of each component of tender, or
- (iii) One similar work each costing not less than the amount equal to 60% of advertised value of each component of tender.

Note for b (1): Separate completed works of minimum required values shall also be considered for fulfillment of technical eligibility criteria for different components.

(b) (2) In such cases, what constitutes a component in a composite work shall be clearly pre-defined with estimated tender cost of it, as part of the tender documents without any ambiguity.

(b) (3) To evaluate the technical eligibility of tenderer, only components of work as stipulated in tender documents for evaluation of technical eligibility, shall be considered. The scope of work covered in other remaining components shall be either executed by tenderer himself if he has work experience as mentioned in clause 7 of the Standard General Conditions of Contractor through subcontractor fulfilling the requirements as per clause 7 of the Standard General Conditions of Contract or jointly i.e., partly himself and remaining through subcontractor, with prior approval of Engineer in writing.

However, if required in tender documents by way of Special Conditions, a formal agreement duly notarized, legally enforceable in the court of law, shall be executed by the main contractor with the subcontractor for the component(s) of work proposed to be executed by the subcontractor(s), and shall be submitted along with the offer for considering subletting of that scope of work towards fulfilment of technical eligibility. Such subcontractor must fulfill technical eligibility criteria as follows:

The subcontractor shall have successfully completed at least one work similar

to work proposed for subcontract, costing not less than 35% value of work to be subletted, in last 5 years, ending last day of month previous to the one in which tender is invited through a works contract.

Note: for subletting of work costing up to Rs 50 lakh, no previous work experience of subcontractor shall be asked for by the HRIDC.

In case after award of contract or during execution of work it becomes necessary for contractor to change subcontractor, the same shall be done with subcontractor(s) fulfilling the requirements as per clause 7 of the Standard General Conditions of Contract, with prior approval of General Manager in writing.

Note for Item 10.1:

Work experience certificate from private individual shall not be considered. However, in addition to work experience certificates issued by any Govt. Organisation, work experience certificate issued by Public listed company having average annual turnover of Rs 500 crore and above in last 3 financial years excluding the current financial year, listed on National Stock Exchange or Bombay Stock Exchange, incorporated/registered at least 5 years prior to the date of closing of tender, shall also be considered provided the work experience certificate has been issued by a person authorized by the Public listed company to issue such certificates.

In case tenderer submits work experience certificate issued by public listed company, the tenderer shall also submit along with work experience certificate, the relevant copy of work order, bill of quantities, bill wise details of payment received duly certified by Chartered Accountant, TDS certificates for all payments received and copy of final/last bill paid by company in support of above work experience certificate.

(c) Definition of SIMILAR Work: -

“Design, Supply, Erection, Testing & Commissioning of 25 kV, 50 Hz, AC, Single phase, Traction Overhead Equipment, Switching Stations including foundations, structures and all Ancillary Equipment.”

The following will be applicable in evaluating the eligibility:

Similar nature of work physically completed within the qualifying period i.e., the last Seven years ending last day of month previous to the one in which tender is invited (even though the work might have commenced before the qualifying period) should only be considered in evaluating the eligibility criteria.

<p>10.2.</p>	<p>Financial Eligibility Criteria: The tenderer must have minimum average annual contractual turnover of ‘V/N’ or ‘V’ whichever is less; where: -</p> <p>V= Advertised value of the tender in crores of Rupees.</p> <p>N= Number of years prescribed for completion of work for which bids have been invited.</p> <p>The average annual contractual turnover shall be calculated as an average of “total contractual payments” in the previous three financial years, as per the audited balance sheet. However, in case balance sheet of the previous year is yet to be prepared/ audited, the audited balance sheet of the fourth previous year shall be considered for calculating average annual contractual turnover.</p> <p>The tenderers shall submit requisite information as per Annexure-VIB along with copies of Audited Balance Sheets duly certified by the Chartered Accountant/ Certificate from Chartered Accountant duly supported by Audited Balance Sheet.</p>
<p>10.3</p>	<p>Bid Capacity: These criteria shall not be applicable for this tender.</p>
<p>10.4</p>	<p>No Technical and Financial credentials are required for tenders having advertised value up to Rs 50 lakh.</p>
<p>10.5</p>	<p>Credentials if submitted in foreign currency shall be converted into Indian currency i.e., Indian Rupee as under:</p> <p>The conversion rate of US Dollars into Rupees shall be the daily representative exchange rates published by the Reserve Bank of India or entity authorized by RBI to do so for the relevant date or immediately previous date for which rates have been published. Where, relevant date shall be as on the last day of month previous to the one in which tender is invited. In case of any other currency, the same shall first be converted to US Dollars as on the last day of month previous to the one in which tender is invited, and the amount so derived in US Dollars shall be converted into Rupees at the aforesaid rate. The conversion rate of such currencies shall be the daily representative exchange rates published by the International Monetary Fund for the relevant date or immediately previous date for which rates have been published.</p> <p>[Explanation for Para 10 of the Tender Form (Second Sheet) including Para 10.1 to 10.5 - Eligibility Criteria:</p> <p>1. Substantially Completed Work means an ongoing work in which payment equal</p>

to or more than 90% of the present contract value (excluding the payment made for adjustment of Price variation (PVC), if any) has been made to the contractor in that ongoing contract and no proceedings of termination of contract on Contractor's default has been initiated. The credential certificate in this regard should have been issued not prior to 60 days of date of invitation of present tender.

2. In case a work is started prior to 07 (seven) years, ending last day of month previous to the one in which tender is invited, but completed in last 07 (seven) years, ending last day of month previous to the one in which tender is invited, the completed work shall be considered for fulfillment of credentials.
3. If a work is physically completed and completion certificate to this extent is issued by the concerned organization but final bill is pending, such work shall be considered for fulfillment of credentials
4. In case of completed work, the value of final bill (gross amount) including the PVC amount (if paid) shall be considered as the completion cost of work. In case final bill is pending, only the total gross amount already paid including the PVC amount (if paid) shall be considered as the completion cost of work.

In case of substantially completed work, the total gross amount already paid including the PVC amount (if paid), as mentioned in the certificate, shall be considered as the cost of substantially completed work.

5. If a bidder has successfully completed a work as subcontractor and the work experience certificate has been issued for such work to the subcontractor by a Govt. Organization or public listed company as defined in Note for Item 10.1 Para 10 of the Tender Form (Second Sheet), the same shall be considered for the purpose of fulfillment of credentials.
6. In case a work is considered similar in nature for fulfillment of technical credentials, the overall cost including the PVC amount (if paid) of that completed work or substantially completed work, shall be considered and no separate evaluation for each component of that work shall be made to decide eligibility.
7. In case of newly formed partnership firm, the credentials of individual partners from previous propriety firm(s) or dissolved previous partnership firm(s) or split previous partnership firm(s), shall be considered only to the extent of their share in previous entity on the date of dissolution / split and their share in newly formed partnership firm. For example, a partner A had 30% share in previous entity and his share in present partnership firm is 20%. In the present tender under consideration, the credentials of partner A will be considered to the extent of $0.3 \times 0.2 \times$ value of the work done in the previous entity. For this purpose, the

tenderer shall submit along with his bid all the relevant documents which include copy of previous partnership deed(s), dissolution deed(s) and proof of surrender of PAN No.(s) in case of dissolution of partnership firm(s) etc.

8. In case of existing partnership firm, if any one or more partners quit the partnership firm, the credentials of remaining partnership firm shall be re-worked out i.e., the quitting partner(s) shall take away his credentials to the extent of his share on the date of quitting the partnership firm(e.g. in a partnership firm of partners A, B & C having share 30%, 30% & 40% respectively and credentials of Rs 10 crore; in case partner C quits the firm, the credentials of this partnership firm shall remain as Rs 6 crore). For this purpose, the tenderer shall submit along with his bid all the relevant documents which include copy of previous partnership deed(s), dissolution deed(s) and proof of surrender of PAN No.(s) in case of dissolution of partnership firm(s) etc.
9. In case of existing partnership firm if any new partner(s) joins the firm without any modification in the name and PAN/TAN no. of the firm, the credentials of partnership firm shall get enhanced to the extent of credentials of newly added partner(s) on the same principles as mentioned in item 6 above. For this purpose, the tenderer shall submit along with his bid all the relevant documents which include copy of previous partnership deeds, dissolution/splitting deeds and proof of surrender of PAN No.(s) in case of dissolution of partnership firm etc.
10. Any partner in a partnership firm cannot use or claim his credentials in any other firm without leaving the partnership firm i.e., In a partnership firm of A&B partners, A or B partner cannot use credentials of partnership firm of A&B partners in any other partnership firm or propriety firm without leaving partnership firm of A&B partners.
11. In case a partner in a partnership firm is replaced due to succession as per succession law, the proportion of credentials of the previous partner will be passed on to the successor.
12. If the percentage share among partners of a partnership firm is changed, but the partners remain the same, the credentials of the firm before such modification in the share will continue to be considered for the firm as it is without any change in their value. Further, in case a partner of partnership firm retires without taking away any credentials from the firm, the credentials of partnership firm shall remain the same as it is without any change in their value.
13. In a partnership firm “AB” of A&B partners, in case A also works as propriety firm “P” or partner in some other partnership firm “AX”, credentials of A in propriety firm “P” or in other partnership firm “AX” earned after the date of

	<p>becoming a partner of the firm AB shall not be added in partnership firm AB.</p> <p>14. In case a tenderer is LLP, the credentials of tenderer shall be worked out on above lines similar to a partnership firm.</p> <p>15. In case company A is merged with company B, then company B would get the credentials of company A also.</p>
<p>11.</p>	<p>Tenderer Credentials :-</p>
	<p>Documents testifying tenderer previous experience and financial status should be produced along with the tender.</p> <p>Tenderer(s) shall submit along with his / their tender:</p> <ul style="list-style-type: none"> (i) Certificates and testimonials regarding contracting experience for the type of job for which tender is invited with list of works carried out in the past. (ii) Audited Balance Sheet duly certified by the Chartered Accountant regarding contractual payments received in the past. (iii) The list of personnel / organization on hand and proposed to be engaged for the tendered work. Similarly list of Plant & Machinery available on hand and proposed to be inducted and hired for the tendered work. (iv) A copy of certificate stating that they are not liable to be disqualified and all their statements/documents submitted along with bid are true and factual. Standard format of the certificate to be submitted by the bidder is enclosed as Annexure-V. In addition to Annexure-V, in case of other than Company/Proprietary firm Annexure- V(A) shall be submitted by each member of a partnership firm/Joint venture(JV)/Hindu Undivided Family(HUF)/Limited Liability Partnership(LLP) etc. as the case may be. Non submission of a copy of certificate by the bidder shall result in summarily rejection of his/their bid. It shall be mandatorily incumbent upon the tenderer to identify state and submit the supporting documents duly self-attested / digitally signed by which they/he are/is qualifying the Qualifying Criteria mentioned in the Tender Document. (v) The HRIDC reserves the right to verify all statements, information and documents submitted by the bidder in his tender offer, and the bidder shall, when so required by the HRIDC, make available all such information, evidence and documents as may be necessary for such verification. Any such verification or lack of such verification, by the HRIDC shall not relieve the

	<p>bidder of its obligations or liabilities hereunder nor will it affect any rights of the HRIDC there under.</p> <p>(vi) (a) In case of any information submitted by tenderer is found to be false, forged or incorrect at any time during process for evaluation of tenders, it shall lead to forfeiture of the tender Bid Security besides banning of business for a period of upto five years.</p> <p>(b) In case of any information submitted by tenderer is found to be false, forged or incorrect after the award of contract, the contract shall be terminated. Bid Security, Performance Guarantee and Security Deposit available with the HRIDC shall be forfeited. In addition, other dues of the contractor, if any, under this contract shall be forfeited and agency shall be banned for doing business for a period of up to five years.</p>
<p>12.</p>	<p>Non-compliance with any of the conditions set forth therein above is liable to result in the tender being rejected.</p>
<p>13.</p>	<p>Execution of Contract Documents: The successful Tenderer(s) shall be required to execute an agreement with the President of India acting through the General Manager/IE&A, HRIDC,Gurugram for carrying out the work according to the Standard General Conditions of Contract, Special Conditions / Specifications annexed to the tender and Standard Specifications (Works and Materials) of Railway/HRIDC as amended/corrected up to latest correction slips, mentioned in tender form (First Sheet).</p>
<p>14.</p>	<p>Documents to be submitted Along with Tender :-</p>
	<p>(i)The tenderer shall clearly specify whether the tender is submitted on his own (Proprietary Firm) or on behalf of a Partnership Firm / Company / Joint Venture (JV) / Registered Society / Registered Trust / Hindu Undivided Family (HUF) / Limited Liability Partnership (LLP) etc. The tenderer(s) shall enclose the attested copies of the constitution of their concern, and copy of PAN Card along with their tender. Tender Documents in such cases are to be signed by such persons as may be legally competent to sign them on behalf of the firm, company, association, trust or society, as the case may be.</p> <p>(ii) Following documents shall be submitted by the tenderer:</p>

(a) Sole Proprietorship Firm:

- (i) All documents in terms of Para 10 of the Tender Form (Second Sheet) above.

(b) HUF:

- (i) A copy of notarized affidavit on Stamp Paper declaring that he who is submitting the tender on behalf of HUF is in the position of 'Karta' of Hindu Undivided Family (HUF) and he has the authority, power and consent given by other members to act on behalf of HUF.
- (ii) All other documents in terms of Para 10 of the Tender Form (Second Sheet) above.

(c) Partnership Firm:

- (i) All documents as mentioned in para18 of the Tender Form (Second Sheet).

(d) Joint Venture (JV): Not Applicable

(e) Company registered under Companies Act 2013:

- (i) The copies of **MOA (Memorandum of Association) / AOA (Articles of Association)** of the company
- (ii) A copy of Certificate of Incorporation
- (iii) A copy of Authorization/Power of Attorney issued by the Company (backed by the resolution of Board of Directors) in favour of the individual to sign the tender on behalf of the company and create liability against the company.
- (iv) All other documents in terms Para 10 of the Tender Form (Second Sheet) above.

(f) LLP (Limited Liability Partnership):

- (i) A copy of LLP Agreement
- (ii) A copy of Certificate of Incorporation
- (iii) A copy of Power of Attorney/Authorization issued by the LLP in favour of the individual to sign the tender on behalf of the LLP and create liability against the LLP.
- (iv) An undertaking by all partners of the LLP that they are not blacklisted or debarred by HRIDC or any other Ministry / Department of the Govt. of India from participation in tenders / contracts as on the date of submission of bids, either in their individual capacity or in any firm/LLP or JV in which they were / are partners/members. Concealment / wrong information in regard to above shall make the contract liable for

	<p>determination under Clause 62 of the Standard General Conditions of Contract.</p> <p>(v) All other documents in terms of Para 10 of the Tender Form (Second Sheet).</p> <p>(g) Registered Society & Registered Trust:</p> <p>(i) A copy of Certificate of Registration</p> <p>(ii) A copy of Memorandum of Association of Society/Trust Deed</p> <p>(iii) A copy of Power of Attorney in favour of the individual to sign the tender documents and create liability against the Society/Trust.</p> <p>(iv) A copy of Rules & Regulations of the Society</p> <p>(v) All other documents in terms of Para 10 of the Tender Form (Second Sheet) above.</p> <p>(iii) If it is NOT mentioned in the submitted tender that tender is being submitted on behalf of a Sole Proprietorship firm / Partnership firm / Joint Venture / Registered Company etc., then the tender shall be treated as having been submitted by the individual who has signed the tender.</p> <p>(iv) After opening of the tender, any document pertaining to the constitution of Sole Proprietorship Firm / Partnership Firm / Registered Company/ Registered Trust / Registered Society / HUF/LLP etc. shall be neither asked nor considered, if submitted. Further, no suo moto cognizance of any document available in public domain (i.e., on internet etc.) or in HRIDC record/office files etc. will be taken for consideration of the tender, if no such mention is available in tender offer submitted.</p> <p>(v) A tender from JV shall be considered only where permissible as per the tender conditions.</p> <p>(vi) The HRIDC will not be bound by any change of power of attorney or in the composition of the firm made subsequent to the submission of tender. HRIDC may, however, recognize such power of attorney and changes after obtaining proper legal advice, the cost of which will be chargeable to the Contractor.</p>
<p>15.</p>	<p>The tenderer whether sole proprietor / a company or a partnership firm / joint venture (JV) / registered society / registered trust / HUF / LLP etc if they want to act through agent or individual partner(s), should submit along with the tender, a copy of power of attorney duly stamped and authenticated by a Notary Public or by Magistrate in favour of the specific person whether he/they be partner(s) of the firm or any other person, specifically authorizing him/them to sign the tender, submit the tender and further to deal with the Tender/ Contract up to the stage of signing the agreement</p>

	<p>except in case where such specific person is authorized for above purposes through a provision made in the partnership deed / Memorandum of Understanding / Article of Association /Board resolution, failing which tender shall be summarily rejected.</p> <p>A separate power of attorney duly stamped and authenticated by a Notary Public or by Magistrate in favour of the specific person whether he/they be partner(s) of the firm or any other person, shall be submitted after award of work, specifically authorizing him/them to deal with all other contractual activities subsequent to signing of agreement, if required.</p> <p>Note: A Power of Attorney executed and issued overseas, the document will also have to be legalized by the Indian Embassy and notarized in the jurisdiction where the Power of Attorney is being issued. However, the Power of Attorney provided by Bidders from countries that have signed The Hague Legislation Convention 1961 are not required to be legalized by the Indian Embassy if it carries a conforming Apostille certificate.</p>
<p>16.</p>	<p>Employment/Partnership etc. of Retired Railway Employees :-</p>
	<p>(a) Should a tenderer</p> <p>i) be a retired Engineer of the gazetted rank or any other gazetted officer working before his retirement, whether in the executive or administrative capacity or whether holding a pensionable post or not, in the Engineering or any other department of any of the railways owned and administered by the President of India for the time being, OR</p> <p>ii) being partnership firm / joint venture (JV) / registered society / registered trust etc have as one of its partners/members a retired Engineer of the gazetted rank or any other gazetted officer working before his retirement, OR</p> <p>iii) being an incorporated company have any such retired Engineer of the gazetted rank or any other gazetted officer working before his retirement as one of its directors</p> <p style="text-align: center;">AND</p> <p>in case where such Engineer or officer had not retired from government service at least 1 year prior to the date of submission of the tender</p> <p style="text-align: center;">THEN</p> <p>the tenderer will give full information as to the date of retirement of such</p>

	<p>Engineer or gazetted officer from the said service and as to whether permission for taking such contract, or if the Contractor be a partnership firm or an incorporated company, to become a partner or director as the case may be, has been obtained by the tenderer or the Engineer or officer, as the case may be from the President of India or any officer, duly authorized by him in this behalf, shall be clearly stated in writing at the time of submitting the tender.</p> <p>b) In case, upon successful award of contract, should a tenderer depute for execution of the works under or to deal matters related with this contract, any retired Engineer of gazette rank or retired gazetted officer working before his retirement in the Engineering or any other department of any of the railways owned and administered by the President of India for the time being, and now in his employment, then the tenderer will ensure that retired Engineer or retired gazetted officer had retired from government service at least 1 year prior to the date of his employment with tenderer and in case he had retired from service within a year then he possesses the requisite permission from the President of India or any officer, duly authorized by him in this behalf, to get associated with the tenderer.</p> <p>c) Should a tenderer or Contractor being an individual, have member(s) of his family or in the case of partnership firm/ company / joint venture (JV) / registered society / registered trust etc. one or more of his partner(s)/shareholder(s) or member(s) of the family of partner(s)/shareholder(s) having share of more than 1% in the tendering entity employed in gazetted capacity in the Engineering or any other department of the railway, then the tenderer at the time of submission of tender, will inform the authority inviting tenders the details of such persons.</p> <p>Note: -If information as required as per 16.a), b), c) above has not been furnished, contract is liable to be dealt in accordance with provision of clause 62 of the Standard General Condition of contract.</p>
	<p>JOINT VENTURE (JV) IN WORKS TENDERS :-</p>
<p>17.</p>	<p>Participation of Joint Venture (JV) in Works Tender: Joint Venture is not applicable for this tender.</p>

<p>17.1</p>	<p>Separate identity/name shall be given to the Joint Venture.</p>
<p>17.2</p>	<p>Number of members in a JV shall not be more than three, if the work involves only one department (say Civil or S&T or Electrical or Mechanical) and shall not be more than five, if the work involves more than one Department. One of the members of the JV shall be its Lead Member who shall have a majority (at least 51%) share of interest in the JV. The other members shall have a share of not less than 20% each in case of JV with upto three members and not less than 10% each in case of JV with more than three members. In case of JV with foreign member(s), the Lead Member has to be an Indian firm/company with a minimum share of 51%.</p>
<p>17.3</p>	<p>A member of JV shall not be permitted to participate either in individual capacity or as a member of another JV in the same tender.</p>
<p>17.4</p>	<p>The tender form shall be purchased and submitted only in the name of the JV and not in the name of any constituent member. The tender form can however be submitted by JV or any of its constituent member or any person authorized by JV through Power of Attorney to submit tender.</p>
<p>17.5</p>	<p>Bid Security shall be submitted by JV or authorized person of JV either as:</p> <ul style="list-style-type: none"> (i) Cash through e-payment gateway or as mentioned in tender document, or (ii) Bank Guarantee bond either in the name of JV, or in the name of all members of JV as per MOU irrespective of their share in the JV if the JV has not been constituted legally till the date of submission of tender.
<p>17.6</p>	<p>A copy of Memorandum of Understanding (MoU) duly executed by the JV members on a stamp paper, shall be submitted by the JV along with the tender. The complete details of the members of the JV, their share and responsibility in the JV etc. particularly with reference to financial, technical and other obligations shall be furnished in the MoU.</p>
<p>17.7</p>	<p>Once the tender is submitted, the MoU shall not normally be modified / altered / terminated during the validity of the tender. In case the tenderer fails to</p>

	<p>observe/comply with this stipulation, the full Bid Security shall be liable to be forfeited.</p>
17.8	<p>Approval for change of constitution of JV shall be at the sole discretion of the HRIDC. The constitution of the JV shall not normally be allowed to be modified after submission of the bid by the JV, except when modification becomes inevitable due to succession laws etc., provided further that there is no change in qualification of minimum eligibility criteria by JV after change of composition. However, the Lead Member shall continue to be the Lead Member of the JV. Failure to observe this requirement would render the offer invalid.</p>
17.9	<p>Similarly, after the contract is awarded, the constitution of JV shall not be normally allowed to be altered during the currency of contract except when modification become inevitable due to succession laws etc. and minimum eligibility criteria should not get vitiated. Failure to observe this stipulation shall be deemed to be breach of contract with all consequential penal action as per contract conditions.</p>
17.10	<p>On award of contract to a JV, a single Performance Guarantee shall be submitted by the JV as per tender conditions. All the Guarantees like Performance Guarantee, Bank Guarantee for Mobilization Advance, Machinery Advance etc. shall be accepted only in the name of the JV and no splitting of guarantees amongst the members of the JV shall be permitted.</p>
17.11	<p>On issue of LOA (Letter of Acceptance), the JV entity to whom the work has been awarded, with the same shareholding pattern as was declared in the MOU/JV Agreement submitted alongwith the tender, shall be got registered before the Registrar of the Companies under 'The Companies Act -2013' (<u>in case JV entity is to be registered as Company</u>) or before the Registrar/Sub-Registrar under the 'The Indian Partnership Act, 1932' (<u>in case JV entity is to be registered as Partnership Firm</u>) or under 'The LLP Act 2008' (<u>in case JV entity is to be registered as LLP</u>). A separate PAN shall be obtained for this entity. The documents pertaining to this entity including its PAN shall be furnished to the HRIDC before signing the contract agreement for the work. In case the tenderer fails to observe/comply with this stipulation within 60 days of issue of LOA, contract is liable to be terminated. In case contract is terminated HRIDC shall be entitled to forfeit the full amount of the Bid</p>

	Security and other dues payable to the Contractor under this contract. The entity so registered, in the registered documents, shall have, inter-alia, following Clauses:
17.11.1	Joint and Several Liability - Members of the entity to which the contract is awarded, shall be jointly and severally liable to the HRIDC for execution of the project in accordance with General and Special Conditions of Contract. The members of the entity shall also be liable jointly and severally for the loss, damages caused to the HRIDC during the course of execution of the contract or due to non-execution of the contract or part thereof.
17.11.2	Duration of the Registered Entity - It shall be valid during the entire currency of the contract including the period of extension, if any and the maintenance period after the work is completed
17.11.3	Governing Laws - The Registered Entity shall in all respect be governed by and interpreted in accordance with Indian Laws.
17.12	Authorized Member - Joint Venture members in the JV MoU shall authorize Lead member on behalf of the Joint Venture to deal with the tender, sign the agreement or enter into contract in respect of the said tender, to receive payment, to witness joint measurement of work done, to sign measurement books and similar such action in respect of the said tender/contract. All notices/correspondences with respect to the contract would be sent only to this authorized member of the JV.
17.13	No member of the Joint Venture shall have the right to assign or transfer the interest right or liability in the contract without the written consent of the other members and that of the HRIDC in respect of the said tender/contract.
17.14	Documents to be enclosed by the JV along with the tender:

<p>17.14.1</p>	<p>In case one or more of the members of the JV is/are partnership firm(s), following documents shall be submitted:</p> <ul style="list-style-type: none"> (i) A notarized copy of the Partnership Deed or a copy of the Partnership deed registered with the Registrar. (ii) A copy of consent of all the partners or individual authorized by partnership firm, to enter into the Joint Venture Agreement on a stamp paper, (iii) A notarized or registered copy of Power of Attorney in favour of the individual to sign the MOU/JV Agreement on behalf of the partnership firm and create liability against the firm. (iv) An undertaking by all partners of the partnership firm that they are not blacklisted or debarred by Railways or any other Ministry / Department of the Govt. of India from participation in tenders / contracts as on the date of submission of bids, either in their individual capacity or in any firm/LLP in which they were / are partners/members. Any Concealment / wrong information in regard to above shall make the bid ineligible or the contract shall be determined under Clause 62 of the Standard General Conditions of Contract.
<p>17.14.2</p>	<p>In case one or more members is/are Proprietary Firm or HUF, the following documents shall be enclosed:</p> <p>i. A copy of notarized affidavit on Stamp Paper declaring that his Concern is a proprietary Concern and he is sole proprietor of the Concern OR he who is signing the affidavit on behalf of HUF is in the position of ‘Karta’ of Hindu Undivided Family (HUF) and he has the authority, power and consent given by other members to act on behalf of HUF.</p>
<p>17.14.3</p>	<p>In case one or more members of the JV is/are companies, the following documents shall be submitted:</p> <ul style="list-style-type: none"> (i) A copy of resolutions of the Directors of the Company, permitting the company to enter into a JV agreement, (ii) The copies of MOA (Memorandum of Association) / AOA (Articles of Association) of the company (iii) A copy of Certificate of Incorporation (iv) A copy of Authorization/copy of Power of Attorney issued by the Company (backed by the resolution of Board of Directors) in favour of

	<p>the individual, to sign the tender, sign MOU/JV Agreement on behalf of the company and create liability against the company.</p>
17.14.4	<p>In case one or more members of the JV is/are LLP firm/s, the following documents shall be submitted:</p> <ul style="list-style-type: none"> (i) A copy of LLP Agreement (ii) A copy of Certificate of Incorporation of LLP (iii) A copy of resolution passed by partners of LLP firm, permitting the Firm to enter into a JV agreement (iv) A copy of Authorization /copy of Power of Attorney issued by the LLP firm (backed by resolution passed by the Partners) in favour of the individual, to sign the tender and/or sign the MOU/ JV agreement on behalf of the LLP and create liability against the LLP. (v) An undertaking by all partners of the LLP that they are not blacklisted or debarred by Railways or any other Ministry / Department of the Govt. of India from participation in tenders / contracts as on the date of submission of bids, either in their individual capacity or in any firm/LLP or JV in which they were / are partners/members. Any Concealment / wrong information in regard to above shall make the contract liable for determination under Clause 62 of the Standard General Conditions of Contract.
17.14.5	<p>In case one or more members of the JV is/are Society/s or Trust/s, the following documents shall be submitted:</p> <ul style="list-style-type: none"> (i) A copy of Certificate of Registration (ii) A copy of Memorandum of Association of Society/Trust Deed (iii) A copy of Rules & Regulations of the Society (iv) A copy of Power of Attorney, in favour of the individual to sign the tender documents and create liability against the Society/Trust.
17.14.6	<p>All other documents in terms of Para 10 of the Tender Form (Second Sheet).</p>
17.15	<p>Credentials & Qualifying Criteria: Technical, financial eligibility and Bid capacity of the JV shall be adjudged based on satisfactory fulfillment of the following criteria:</p>
17.15.1	<p>Technical Eligibility Criteria (‘a’ or ‘b’ mentioned hereunder):</p>

	<p>(a) For Works without composite components</p> <p>The technical eligibility for the work as per para 10.1 above, shall be satisfied by either the ‘JV in its own name & style’ or ‘Lead member of the JV’.</p> <p>Each other (non-lead) member(s) of JV, who is/ are not satisfying the technical eligibility for the work as per para 10.1 above, shall have technical capacity of minimum 10% of the cost of work i.e., each non-lead member of JV member must have satisfactorily completed or substantially completed during the last 07 (seven) years, ending last day of month previous to the one in which tender is invited, one similar single work for a minimum of 10% of advertised value of the tender.</p> <p>(b) For works with composite components</p> <p>The technical eligibility for <u>major component</u> of work as per para 10.1 above, shall be satisfied by either the ‘JV in its own name & style’ or ‘Lead member of the JV’ and technical eligibility for <u>other component(s)</u> of work as per para 10.1 above, shall be satisfied by either the ‘JV in its own name & style’ or ‘any member of the JV’.</p> <p>Each other (non-lead) member(s) of JV, who is/ are not satisfying the technical eligibility for any component of the work as per para 10.1 above, shall have technical capacity of minimum 10% of the cost of any component of work mentioned in technical eligibility criteria. i.e., each other (non-lead) member of must have satisfactorily completed or substantially completed during the last 07 (seven) years, ending last day of month previous to the one in which tender is invited, one similar single work for a minimum of 10% of cost of any component of work mentioned in technical eligibility criteria.</p> <p style="text-align: center;"><i>Note for Para 17.15.1:</i></p> <p>a) <i>The Major component of the work for this purpose shall be the component of work having highest value. In cases where value of two or more component of work is same, any one work can be classified as Major component of work.</i></p> <p>b) <i>Value of a completed work done by a Member in an earlier JV shall be reckoned only to the extent of the concerned member's share in that JV for the purpose of satisfying his/her compliance to the above mentioned technical eligibility criteria in the tender under consideration.</i></p>
<p>17.15.2</p>	<p>Financial Eligibility Criteria</p> <p>The JV shall satisfy the requirement of “Financial Eligibility” mentioned at para 10.2</p>

	<p>above. The “financial capacity” of the lead member of JV shall not be less than 51% of the financial eligibility criteria mentioned at para 10.2 above.</p> <p>The arithmetic sum of individual “financial capacity” of all the members shall be taken as JV’s “financial capacity” to satisfy this requirement.</p> <p>Note: Contractual payment received by a Member in an earlier JV shall be reckoned only to the extent of the concerned member’s share in that JV for the purpose of satisfying compliance of the above mentioned financial eligibility criteria in the tender under consideration.</p>
17.15.3	Bid Capacity :- Not Applicable
18.	Participation of Partnership Firms in works tenders:-
18.1	The Partnership Firms participating in the tender should be legally valid under the provisions of the Indian Partnership Act.
18.2	The partnership firm should have been in existence or should have been formed prior to submission of tender. Partnership firm should have either been registered with the Registrar or the partnership deed should have been notarized as per the Indian Partnership Act, prior to submission of tender.
18.3	Separate identity / name should be given to the partnership firm. The partnership firm should have PAN / TAN number in its own name and PAN / TAN number in the name of any of the constituent partners shall not be considered. The valid constituents of the firm shall be called partners.
18.4	Once the tender has been submitted, the constitution of the firm shall not normally be allowed to be modified / altered / terminated during the validity of the tender as well as the currency of the contract except when modification becomes inevitable due to succession laws etc., in which case prior permission should be taken from HRIDC and in any case the minimum eligibility criteria should not get vitiated. The re-constitution of firm in such cases should be followed by a notary certified Supplementary Deed. The approval for change of constitution of the firm, in any case, shall be at the sole discretion of the HRIDC and the tenderer shall have no claims what-so-ever. Any change in the constitution of Partnership firm after

	<p>submission of tender shall be with the consent of all partners and with the signatures of all partners as that in the Partnership Deed. Failure to observe this requirement shall render the offer invalid and full Bid Security shall be forfeited.</p> <p>i) If any Partner/s withdraws from the firm after submission of the tender and before the award of the contract, the offer shall be rejected and Bid Security of the tenderer will be forfeited. If any new partner joins the firm after submission of tender but prior to award of contract, his / her credentials shall not qualify for consideration towards eligibility criteria either individually or in proportion to his share in the previous firm. In case the tenderer fails to inform HRIDC beforehand about any such changes / modification in the constitution which is inevitable due to succession laws etc. and the contract is awarded to such firm, then it will be considered a breach of the contract conditions liable for determination of the contract under Clause 62 of the Standard General Conditions of Contract.</p>
18.5	A partner of the firm shall not be permitted to participate either in his individual capacity or as a partner of any other firm in the same tender.
18.6	The tender form shall be submitted only in the name of partnership firm. The Bid Security shall be submitted by partnership firm. The Bid Security submitted in the name of any individual partner or in the name of authorized partner (s) shall not be considered.
18.7	On issue of Letter of Acceptance (LOA) to the partnership firm, all the guarantees like Performance Guarantee, Guarantee for various Advances to the Contractor shall be submitted only in the name of the partnership firm and no splitting of guarantees among the partners shall be acceptable.
18.8	On issue of Letter of Acceptance (LOA), contract agreement with partnership firm shall be executed in the name of the firm only and not in the name of any individual partner.
18.9	In case the Letter of Acceptance (LOA) is issued to a partnership firm, the following undertakings shall be furnished by all the partners through a notarized affidavit, before signing of contract agreement.

	<p>a) Joint and several liabilities:</p> <p>The partners of the firm to which the Letter of Acceptance (LOA) is issued, shall be jointly and severally liable to the HRIDC for execution of the contract in accordance with General and Special Conditions of the Contract. The partners shall also be liable jointly and severally for the loss, damages caused to the HRIDC during the course of execution of the contract or due to non-execution of the contract or part thereof.</p>
	<p>(b) Duration of the partnership deed and partnership firm agreement: The partnership deed/partnership firm agreement shall normally not be modified/alterd/terminated during the currency of contract and the maintenance period after the work is completed as contemplated in the conditions of the contract. Any change carried out by partners in the constitution of the firm without permission of HRIDC, shall constitute a breach of the contract, liable for determination of the contract under Clause 62 of the Standard General Conditions of Contract.</p> <p>(c) Governing laws: The partnership firm agreement shall in all respect be governed by and interpreted in accordance with the Indian laws.</p> <p>(d) No partner of the firm shall have the right to assign or transfer the interest right or liability in the contract without the written consent of the other partner/s and that of the HRIDC.</p>

18.10	<p>The tenderer shall clearly specify that the tender is submitted on behalf of a partnership firm. The following documents shall be submitted by the partnership firm, with the tender:</p> <ul style="list-style-type: none">(i) A notarized copy of the Partnership Deed or a copy of the Partnership deed registered with the Registrar.(ii) A notarized or registered copy of Power of Attorney in favour of the individual to tender for the work, sign the agreement etc. and create liability against the firm.(iii) An undertaking by all partners of the partnership firm that they are not blacklisted or debarred by Railways or any other Ministry / Department of the Govt. of India from participation in tenders / contracts as on the date of submission of bids, either in their individual capacity or in any firm/LLP in which they were / are partners/members. Any Concealment / wrong information in regard to above shall make the bid ineligible or the contract shall be determined under Clause 62 of the Standard General Conditions of Contract.(iv) All other documents in terms of Para 10 of the Tender Form (Second Sheet) above.
18.11	<p>Evaluation of eligibility of a partnership firm:</p> <p>Technical and financial eligibility of the firm shall be adjudged based on satisfactory fulfillment of the eligibility criteria laid down in Para 10 of the Tender Form (Second Sheet) above.</p>
19.0	<p>Advances to Contractor – Not Applicable</p>

	<p>PART -II</p> <p>STANDARD GENERAL CONDITIONS OF TENDER</p>
1.1	Same as Para 1.2 of ITT.
1.2	Singular and Plural: Words importing the singular number shall also include the plural and vice versa where the context requires.
1.3	Headings and Marginal Headings: The headings and marginal headings in these Standard General Conditions are solely for the purpose of facilitating reference and shall not be deemed to be part thereof or be taken into consideration in the interpretation or construction thereof the contract.
	GENERAL OBLIGATIONS :-
2.1	Execution Co-Relation and Intent of Contract Documents: The contract documents shall be signed in triplicate by the HRIDC and the Contractor. The contract documents are complementary and what is called for by anyone shall be as binding as if called for by all, the intention of the documents is to include all labour and materials, equipments and transportation necessary for proper execution of work. Materials or works not covered by or properly inferable from any heading or class of the specifications shall not be supplied by the HRIDC to the Contractors unless distinctly specified in the contract documents. Materials or works described in words which so applied have a well-known technical or trade meaning, shall be held to refer to such recognized standards.
2.2	If a work is transferred from the jurisdiction of one Railway to another Railway or to a Project authority or vice versa while contract is in subsistence, the contract shall be binding on the Contractor and the Successor Railway/Project in the same manner & take effect in all respects as if the Contractor and the Successor Railway/Project were parties thereto from the inception and the corresponding officer or the Competent Authority in the Successor Railway/Project will exercise the same powers and enjoy the same authority as conferred to the Predecessor Railway/Project under the original contract/agreement entered into.
2.3	If for administrative or other reasons the contract is transferred to the Successor Railway, the contract shall, notwithstanding any things contained herein contrary there to, be binding on the Contractor and the Successor Railway in the same manner and take effect in all respects as if the Contractor and the Successor Railway had been parties thereto from the date of this contract.

3.1	Law Governing the Contract: The contract shall be governed by the law for the time being in force in the Republic of India.
3.2	Compliance to Regulations and Bye-Laws: The Contractor shall conform to the provision of any statute relating to the works and regulations and bye-laws of any local authority and of any water and lighting companies or undertakings, with whose system the work is proposed to be connected and shall before making any variation from the drawings or the specifications that may be necessitated by so confirming give to the Engineer notice specifying the variation proposed to be made and the reason for making the variation and shall not carry out such variation until he has received instructions from the Engineer in respect thereof. The Contractor shall be bound to give all notices required by statute, regulations or bye-laws as aforesaid and to pay all fees and taxes payable to any authority in respect thereof.
3.3	Environmental and Forest clearances: The HRIDC represents and warrants that the environmental and forest clearances pertaining to the work commensurate with the progress of work/agreed programme, will be obtained by Engineer. In the event of any delay in securing respective clearances leading to delay in execution of work, the Contractor shall be entitled to Extension of Time for the period of such delay in accordance with the provisions of Clause-17A(ii).
4.	Communications to be in Writing: All notices, communications, reference and complaints made by the HRIDC or the Engineer or the Engineer's Representative or the Contractor inter-se concerning the works shall be in writing or e-mail on registered e-mail IDs i.e. the e mail id provided for correspondence in the contract agreement, and no notice, communication, reference or complaint not in writing or through e-mail, shall be recognized.
5.	Service of Notices on Contractors: The Contractor shall furnish to the Engineer the name, designation and address of his authorized agent and all complaints, notices, communications and references shall be deemed to have been duly given to the Contractor, if delivered to the Contractor or his authorized agent or left at or posted to the address so given and shall be deemed to have been so given in the case of posting on day on which they would have reached such address in the ordinary course of post/ e-mail or on the day on which they were so delivered or left. In the case of contract by partners, any change in the constitution of the firm shall be forthwith notified by the Contractor to the Engineer.
6.	Occupation and Use of Land: No land belonging to or in the possession of the HRIDC shall be occupied by the Contractor without the permission of the HRIDC. The Contractor shall not use, or allow to be used the site for any purposes other than that of executing the works. Whenever non-HRIDC bodies/persons are permitted to use HRIDC premises with competent authority's approval, conservancy charges as

	<p>applicable from time to time may be levied.</p>
<p>7.</p>	<p>Assignment or Subletting of Contract: The Contractor shall not assign or sublet the contract or any part thereof or allow any person to become interested therein in any manner whatsoever without the special permission in writing of the Engineer, save as provided below. Any breach of this condition shall entitle the HRIDC to rescind the contract under Clause 62 of these Conditions and also render the Contractor liable for payment to the HRIDC in respect of any loss or damage arising or ensuing from such cancellation; provided always that execution of the details of the work by petty Contractor under the direct and personal supervision of the Contractor or his agent shall not be deemed to be sub-letting under this clause.</p> <p>In case Contractor intends to subcontract part of work, he shall submit a proposal in writing seeking permission of Engineer for the same. While submitting the proposal to HRIDC, Contractor shall ensure the following:</p> <p>(a) (i) Total value of work to be assigned to sub-contractor(s) shall not be more than 50% of total contract value.</p> <p>(i) The subcontractor shall have successfully completed at least one work similar to work proposed for subcontract in last 5 years, ending date of submission of proposal by Contractor to HRIDC, costing not less than 35% value of work to be subletted, through a works contract. For fulfilment of above, Work Experience Certificate issued by a Govt. Department/Organisation shall be considered. Further, Work Experience Certificate issued by a Public listed company shall be considered provided the company is having average annual turnover of Rs 500 crore and above in last 3 financial years excluding the current financial year, listed on National Stock Exchange or Bombay Stock Exchange, registered at least 5 years back from the date of submission of proposal by Contractor to HRIDC and work experience certificate issued by a person authorised by the Public Listed Company to issue such certificates.</p> <p><i>Note: for subletting of work costing up to Rs 50 lakh no previous work experience shall be asked for by the HRIDC.</i></p> <p>In case contractor submits subcontractor’s work experience certificate issued by public listed company, the contractor shall also submit along with work experience certificate, the relevant copy of work order, bill of quantities, bill wise details of payment received duly certified by Chartered Accountant, TDS certificates for all payments received and copy of final/last bill paid by company in support of above work experience certificate.</p> <p>i. There is no banning of business with the sub-contractor in force over IR.</p> <p>(b) The Contractor shall provide to the Engineer a copy of the agreement to be entered into by Contractor with subcontractor. No subcontractor shall be</p>

	<p>permitted without a formal agreement between Contractor and subcontractor. This agreement shall clearly define the scope of work to be carried out by subcontractor and the terms of payment in clear & unambiguous manner.</p> <p>(c) On receipt of approval from Engineer, Contractor shall enter into a formal agreement legally enforceable in Court of Law with subcontractor and submit a copy of the same to the Engineer.</p> <p>(d) The Contractor shall intimate to the Engineer not less than 7 days in advance, the intended date of commencement of subcontractor's work.</p> <p>(e) Once having entered into above arrangement, Contractor shall discontinue such arrangement, if he intends to do so at his own or on the instructions of HRIDC, with prior intimation to Engineer.</p> <p>(f) The Contractor shall indemnify HRIDC against any claim of subcontractor.</p> <p>(g) The Contractor shall release payment to the Sub-contractor(s) promptly and shall endeavour to resolve all issues amicably and speedily with the Sub-contractor(s), so that the execution of work is not affected in any manner whatsoever.</p> <p>(h) In addition to issuance of work experience certificate to Contractor, the Engineer, when, based on documents, is satisfied that subcontracted work has been carried out by subcontractor, shall issue work experience certificate to the subcontractor also for the portion of work subcontracted and successfully completed by the sub-contractor.</p> <p>(i) <i>Note: Work Experience Certificate to the subcontractor shall be issued only when the contractor's work is complete and contractor is entitled for the issuance of Work Experience Certificate. However, in the same contract, when the Engineer, based on documents, is satisfied that the subcontractor has successfully carried out subletted work; without issuance of work experience certificate to subcontractor at this stage, the Engineer can, only once, consider the successfully completed subletted work for the fulfilment of eligibility for further subletting of work to the subcontractor in the same contract. When the contractor's work is complete and contractor is entitled for the issuance of work experience certificate, the subcontractor shall be issued one Work Experience Certificate for the total scope of work executed by the subcontractor in the contract.</i></p> <p>(j) The responsibility of successful completion of work by subcontractor shall lie with Contractor. Subcontracting will in no way relieve the Contractor to execute the work as per terms of the Contract.</p>
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	<p>(k) Further, in case Engineer is of the view that subcontractor's performance is not satisfactory, he may instruct the Contractor to remove the subcontractor from the work and Contractor has to comply with the above instructions with due promptness. Contractor shall intimate the actual date of discontinuation of subcontract to Engineer. No claim of Contractor whatsoever on this account shall be entertained by the HRIDC and this shall be deemed as 'excepted matter' (matter not arbitrable).</p> <p>(l) The permitted subcontracting of work by the Contractor shall not establish any contractual relationship between the sub-contractor and the HRIDC and shall not relieve the Contractor of any responsibility under the Contract.</p>
<p>8.</p>	<p>Assistance by HRIDC for the Stores to be obtained by the Contractor: Owing to difficulty in obtaining certain materials (including Tools & Plant) in the market, the HRIDC may have agreed without any liability therefore to endeavour to obtain or assist the Contractor in obtaining the required quantities of such materials as may be specified in the Tender. In the event of delay or failure in obtaining the required quantities of the aforesaid material, the Contractor shall not be deemed absolved of his own responsibility and shall keep in touch with the day to day position regarding their availability and accordingly adjust progress of works including employment of labour and the HRIDC shall not in any way be liable for the supply of materials or for the non-supply thereof for any reasons whatsoever nor for any loss or damage arising in consequence of such delay or non-supply.</p>
<p>9.</p>	<p>Railway Passes: No free railway passes shall be issued by the HRIDC to the Contractor or any of his employee/worker.</p>
<p>10.</p>	<p>Carriage of Materials: No forwarding orders shall be issued by the HRIDC for the conveyance of Contractor's materials, tools and plant by train which may be required for use in the works and the Contractor shall pay full freight charges at public tariff rates therefor.</p>
<p>11.</p>	<p>Use of Material Trains/Tower Wagon : The HRIDC may agree to allow the Contractor use of the Tower Wagon car or material trains (if available) under such conditions as shall be specially prescribed, provided that the Contractor shall pay for the use thereof charges calculated at public tariff rates on the marked carrying capacity of each vehicle subject to specified minimum charge per day or part of day and provided further that the Contractor shall indemnify the HRIDC against any claims or damages arising out of the use or misuse thereof and against any liabilities under the Workmen's Compensation Act, 1923 or any statutory amendments thereto.</p>

<p>12.</p>	<p>Representation on Works: The Contractor shall, when he is not personally present on the site of the works place, keep a responsible agent at the works during working hours who shall on receiving reasonable notice, present himself to the Engineer and orders given by the Engineer or the Engineer's representative to the agent shall be deemed to have the same force as if they had been given to the Contractor. Before absenting himself, the Contractor shall furnish the name and address of his agent for the purpose of this clause and failure on the part of the Contractor to comply with this provision at any time will entitle the HRIDC to rescind the contract under Clause 62 of these Conditions.</p>
<p>13.</p>	<p>Relics and Treasures: All gold, silver, oil, other minerals of any description, all precious stones, coins, treasures relics antiquities and other similar things which shall be found in or upon the site shall be the property of the HRIDC and the Contractor shall duly preserve the same to the satisfaction of the HRIDC and shall from time to time deliver the same to such person or persons as the HRIDC may appoint to receive the same.</p>
<p>14.</p>	<p>Excavated Material: The Contractor shall not sell or otherwise dispose of or remove except for the purpose of this contract, the sand, stone, clay ballast, earth, trees, rock or other substances or materials which may be obtained from any excavation made for the purpose of the works or any building or produced upon the site at the time of delivery of the possession thereof but all the substances, materials, buildings and produce shall be the property of the HRIDC/Railway provided that the Contractor may, with the permission of the Engineer, use the same for the purpose of the works either free of cost or pay the cost of the same at such rates as may be determined by the Engineer.</p>
<p>15.</p>	<p>Indemnity by Contractors: The Contractor shall indemnify and save harmless the HRIDC from and against all actions, suit, proceedings, losses, costs, damages, charges, claims and demands of every nature and description brought or recovered against the HRIDC by reason of any act or omission of the Contractor, his agents or employees, in the execution of the works or in his guarding of the same. All sums payable by way of compensation under any of these conditions shall be considered as reasonable compensation to be applied to the actual loss or damage sustained, and whether or not any damage shall have been sustained.</p>
<p>16.1</p>	<p>Security Deposit: The Security Deposit shall be 5% of the contract value. The Bid Security submitted by the Contractor with his tender will be retained/encashed by the HRIDCs as part of security for the due and faithful fulfilment of the contract by the Contractor. Provided further that, if Contractor submits the Cash or Term Deposit Receipt issued</p>

	<p>from a Scheduled commercial bank of India or irrevocable Bank Guarantee Bond from a Scheduled commercial bank of India, either towards the Full Security Depositor the Part Security Deposit equal to or more than Bid Security, the HRIDC shall return the Bid Security, to the Contractor.</p> <p>Balance of Security Deposit may be deposited by the Contractor in cash or Term Deposit Receipt issued from Scheduled commercial bank of India or irrevocable Bank Guarantee bond issued from Scheduled commercial bank of India, or may be recovered at the rate of 6% of the bill amount till the full Security Deposit is recovered. Provided also that in case of defaulting Contractor, the HRIDC 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 Guarantee) may not exceed 10% of the total value of the contract.</p> <p>The Irrevocable Bank Guarantee submitted towards Security deposit shall be initially valid up to the stipulated date of Maintenance period plus 60 days and shall be extended from time to time, depending upon extension of contract granted in terms of Clause 17A and 17B of the Standard General Conditions of Contract.</p> <p>Note: Security Deposit deposited in cash by the Contractor or recovered from the running bills of a Contractor or submitted by contractor as Term Deposit Receipt(s) can be refunded/returned to the contractor, in lieu of irrevocable Bank Guarantee bond issued from scheduled commercial bank of India, to be submitted by him, for an amount equal to or more than the already available Security Deposit, provided however that, in a contract of value less than Rs. 50 Crore, such refund/ return of the already available Security Deposit is permitted up to two times and in a contract of value equal to or more than Rs. 50 Crore, such refund / return of the already available Security Deposit is permitted up to three times.</p>
<p>16.2(i)</p>	<p>Refund of Security Deposit: Security Deposit mentioned in sub clause (1) 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 as per clause 51. (1) and (b) Execution of Final Supplementary Agreement or Certification by Engineer that HRIDC has No Claim on Contractor and (c) Maintenance Certificate issued, on expiry of the maintenance period/Guarantee Period as per clause 50(1), in case applicable.
<p>16.2 (ii)</p>	<p>Forfeiture of Security Deposit: Whenever the contract is rescinded as a whole under clause 62 (1) of these conditions, the Security Deposit already with HRIDCs under the contract shall be forfeited. However, in case the contract is rescinded in part or parts under clause 62 (1) of these conditions, the Security Deposit shall not be</p>

	forfeited.
16.3	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 Sub-Clause 16.(4)(b) of this clause will be payable with interest accrued thereon.
16.4	<p>Performance Guarantee</p> <p>The procedure for obtaining Performance Guarantee is outlined below:</p> <p>(a) The successful bidder shall have to submit a Performance Guarantee (PG) within 21 (Twenty-one) days from the date of issue of Letter of Acceptance (LOA). Extension of time for submission of PG beyond 21 (Twenty-one) days and 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% per annum shall be charged for the delay beyond 21(Twenty-one) days, i.e. from 22nd 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 HRIDC, 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 HRIDC shall be entitled to forfeit Bid Security and other dues payable to the contractor against that particular contract, subject to maximum of PG amount. In case a tenderer has not submitted Bid Security on the strength of their registration as a Startup recognized by Department of Industrial Policy and Promotion (DIPP) under Ministry of Commerce and Industry, DIPP shall be informed to this effect.</p> <p>The failed Contractor shall be debarred from participating in re-tender for that work.</p> <p>(b) The successful bidder shall submit the Performance Guarantee (PG) in any of the following forms, amounting to 5% of the original contract value: -</p> <p>(i) A deposit of Cash;</p> <p>(ii) Irrevocable Bank Guarantee;</p> <p>(iii) Government Securities including State Loan Bonds at 5% below the market value;</p> <p>(iv) Pay Orders and Demand Drafts tendered by any Scheduled Commercial Bank of India;</p> <p>(v) Guarantee Bonds executed or Deposits Receipts tendered by any Scheduled Commercial Bank of India;</p>

	<p>(vi) Deposit in the Post Office Saving Bank;</p> <p>(vii) Deposit in the National Savings Certificates;</p> <p>(viii) Twelve years National Defence Certificates;</p> <p>(ix) Ten years Defence Deposits;</p> <p>(x) National Defence Bonds and</p> <p>(xi) Unit Trust Certificates at 5% below market value or at the face value whichever is less. Also, FDR in favour of FA&CAO (free from any encumbrance) may be accepted.</p> <p>(c) The Performance Guarantee shall be submitted by the successful bidder after the Letter of Acceptance (LOA) has been issued, but before signing of the contract agreement. This P.G. shall be initially valid upto the stipulated date of completion plus 60 days beyond that. In case, the time for completion of work gets extended, the Contractor shall get the validity of P.G. extended to cover such extended time for completion of work plus 60 days.</p> <p>(d) The value of PG to be submitted by the Contractor is based on original contract value and shall not change due to subsequent variation(s) in the original contract value.</p> <p>(e) The Performance Guarantee (PG) shall be released after physical completion of the work based on 'Completion Certificate' issued by the competent authority stating that the Contractor has completed the work in all respects satisfactorily.</p> <p>(f) Whenever the contract is rescinded, the Performance Guarantee already submitted for the contract shall be encashed.</p> <p>(g) The Engineer shall not make a claim under the Performance Guarantee except for amounts to which the President of India is entitled under the contract (not withstanding and/or without prejudice to any other provisions in the contract agreement) in the event of:</p> <p>(i) Failure by the Contractor to extend the validity of the Performance Guarantee as described herein above, in which event the Engineer may claim the full amount of the Performance Guarantee.</p> <p>(ii) Failure by the Contractor to pay President of India any amount due, either as agreed by the Contractor or determined under any of the Clauses/Conditions of the Agreement, within 30 days of the service of notice to this effect by Engineer.</p> <p>(iii) The Contract being determined or rescinded under clause 62 of these conditions.</p>
<p>17.</p>	<p>Force Majeure Clause: 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,</p>

	<p>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 30 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 or 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 the 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 period exceeding 120 days, either party may at its option terminate the contract by giving notice to the other party.</p>
<p>17A</p>	<p>Extension of Time in Contracts: Subject to any requirement in the contract as to completion of any portion or portions of the works before completion of the whole, the Contractor shall fully and finally complete the whole of the works comprised in the contract (with such modifications as may be directed under conditions of this contract) by the date entered in the contract or extended date in terms of the following clauses:</p> <p>(i) Extension due to Modification: If any modifications have been ordered which in the opinion of the Engineer have materially increased the magnitude of the work, then such extension of the contracted date of completion may be granted as shall appear to the Engineer to be reasonable in the circumstances, provided moreover that the Contractor shall be responsible for requesting such extension of the date as may be considered necessary as soon as the cause thereof shall arise.</p> <p>(ii) Extension for Delay not due to HRIDC or Contractor: If in the opinion of the Engineer, the progress of work has any time been delayed by any act or neglect of HRIDC employees or by other Contractor employed by the HRIDC under Sub-Clause (4) of Clause 20 of these Conditions or in executing the work not forming part of the contract but on which Contractor's performance necessarily depends or by reason of proceeding taken or threatened by or dispute with adjoining or to neighbouring owners or public authority arising otherwise through the Contractor's own default etc. or by the delay authorized by the Engineer pending arbitration or in consequences of the Contractor not having received in due time necessary instructions from the HRIDC for which he shall have specially applied in writing to the Engineer or his authorized representative then upon happening of any such event causing delay, the Contractor shall immediately give notice thereof in writing to the Engineer within 15 days of such happening, but shall nevertheless make constantly his best endeavours to bring down or make good the delay and shall do all that may be reasonably required of him to the satisfaction of the Engineer to proceed with the works. The Contractor may also indicate the period for which the work is likely to be delayed and shall be bound to ask for necessary extension of</p>

	<p>time.</p> <p>(iii) Extension for Delay due to HRIDC: In the event of any failure or delay by the HRIDC to hand over the Contractor possession of the lands necessary for the execution of the works or to give the necessary notice to commence the works or to provide the necessary drawings or instructions or any other delay caused by the HRIDC due to any other cause whatsoever, then such failure or delay shall in no way affect or vitiate the contract or alter the character thereof or entitle the Contractor to damages or compensation therefor, but in any such case, the HRIDC may grant such extension or extensions of the completion date as may be considered reasonable.</p> <p>The Contractor shall indicate the period for which the work is likely to be delayed and shall seek extension of time as may be considered necessary under clause 17A(i) or/and 17A(ii) or/ and 17A(iii) above, as soon as the cause thereof shall arise and, in any case, not less than 15 days before the expiry of the date fixed for completion of the works. The Engineer shall consider the same and shall grant and communicate such extension of time as in his opinion is reasonable having regard to the nature and period of delay and the type and quantum of work affected thereby. No other compensation shall be payable for works so carried forward to the extended period of time; the same rates, terms and conditions of contract being applicable, as if such extended period of time was originally provided in the original contract itself.</p> <p>The non-submission of request for extension or submission of request within less than 15 days before the expiry of the date fixed for completion of the works, shall make him ineligible for extension under these sub clauses, subject to final decision of Engineer.</p>
<p>17B</p>	<p>Extension of Time with Liquidated Damages (LD) for delay due to Contractor: The time for the execution of the work or part of the works specified in the contract documents shall be deemed to be the essence of the contract and the works must be completed not later than the date(s) as specified in the contract. If the Contractor fails to complete the works within the time as specified in the contract for the reasons other than the reasons specified in Clause 17 and 17A, the HRIDC may, if satisfied that the works can be completed by the Contractor within reasonable short time thereafter, allow the Contractor for further extension of time (Proforma at Annexure-VII) as the Engineer may decide. On such extension the HRIDC will be entitled without prejudice to any other right and remedy available on that behalf, to recover from the Contractor as agreed damages and not by way of penalty for each week or part of the week, a sum calculated at the rate of Liquidated Damages as decided by Engineer, between 0.05% to 0.30% of contract value of the work for each week or part of the week.</p> <p>For the purpose of this Clause, the contract value of the works shall be taken as value</p>

	<p>of work as per contract agreement including any supplementary work order/contract agreement issued. Provided also, that the total amount of liquidated damages under this condition shall not exceed 5% of the contract value or of the total value of the item or groups of items of work for which a separate distinct completion period is specified in the contract.</p> <p>Provided further, that if the HRIDC is not satisfied that the works can be completed by the Contractor and in the event of failure on the part of the contractor to complete the work within further extension of time allowed as aforesaid, the HRIDC shall be entitled without prejudice to any other right or remedy available in that behalf, to appropriate the contractor's Security Deposit and rescind the contract under Clause 62 of these Conditions, whether or not actual damage is caused by such default.</p> <p>NOTE:</p> <p>In a contract, where extension(s) of time have been allowed once under clause 17B, further request(s) for extension of time under clause 17A can also be considered under exceptional circumstances. Such extension(s) of time under clause 17A shall be without any Liquidated damages, but the Liquidated damages already recovered during extension(s) of time granted previously under clause 17B shall not be waived. However, Price variation during such extension(s) shall be dealt as applicable for extension(s) of time under clause 17B.</p>
<p>17C</p>	<p>Bonus for Early Completion of Work: Not Applicable</p>
<p>18.1</p>	<p>Illegal Gratification: Any bribe, commission, gift or advantage given, promised or offered by or on behalf of the Contractor or his partner or agent or servant or anyone on his behalf, to any officer or employee of the HRIDC or to any person on his behalf in relation to obtaining or execution of this or any other contract with the HRIDC shall, in addition to any criminal liability which he may incur, subject Contractor to the rescission of the contract and all other contracts with the HRIDC and to the payment of any loss or damage resulting from such decision and the HRIDC shall be entitled to deduct the amounts so payable from the Contractor's bills/Security Deposit or any other dues of Contractor with the Government of India.</p>
<p>18.2</p>	<p>The Contractor shall not lend or borrow from or have or enter into any monetary dealings or transactions either directly or indirectly with any employee of the HRIDC and if he shall do so, the HRIDC shall be entitled forthwith to rescind the contract and all other contracts with the HRIDC. Any question or dispute as to the commission of any such offence or compensation payable to the HRIDC under this Clause shall be settled by the HRIDC Administration, in such a manner as he shall consider fit & sufficient and his decision shall be final & conclusive. In the event of rescission of the contract under this Clause, the Contractor will not be paid any compensation whatsoever except payments for the work done up to the date of rescission.</p>

	EXECUTION OF WORKS :-
19.1	Contractor's understanding: It is understood and agreed that the Contractor has, by careful examination, satisfied himself as to the nature and location of the work, the conformation of the ground, the character, quality and quantity of the materials to be encountered, the character of equipment and facilities needed preliminary to and during the progress of the works, the general and local conditions, the labour conditions prevailing therein and all other matters which can in any way affect the works under the contract.
19.2	Commencement of Works: The Contractor shall commence the works within 15 days after the receipt by him of an order in writing to this effect from the Engineer and shall proceed with the same with due expedition and without delay
19.3	<p>Accepted Programme of Work: The Contractor who has been awarded the work shall as soon as possible but not later than 30 days after the date of receipt of the acceptance letter in respect of contracts with initial completion period of two years or less or not later than 90 days for other contracts have to submit the detailed programme of work indicating the time schedule of various items of works in the form of Bar Chart/PERT/CPM. He shall also submit the details of organisation (in terms of labour and supervisors), plant and machinery that he intends to utilize (from time to time) for execution of the work within stipulated date of completion. The programme of work amended as necessary by discussions with the Engineer, shall be treated as the agreed programme of the work for the purpose of this contract and the Contractor shall endeavor to fulfill this programme of work. The progress of work will be watched accordingly and the liquidated damages will be with reference to the overall completion date. Nothing stated herein shall preclude the Contractor in achieving earlier completion of item or whole of the works than indicated in the programme.</p> <p>In Contracts for works of New Line/Gauge Conversion/Doubling/Railway Electrification, finalized through Tenders having advertised value more than Rs.100 crores, the Contractor shall submit a detailed time programme to the Engineer within 30 days after issue of LOA. The program shall include the physical and Financial Progress vis-à-vis program and forecast cash flow adopting Project Management Software such as Primavera/Sure Track/MS Project etc. The program must identify the milestones, interface requirements and program reporting elements. The Contractor shall supply, free of cost one set of authorized software to the Engineer and the soft copy of structured program for the project. This shall be updated every month. The Contractor shall also submit a revised programme whenever the previous programme is inconsistent with actual progress. Each programme shall include: The order in which the Contractor intends to carry out the Works, including the anticipated timing of each stage, Contractor's Documents, procurement, manufacture of Plant, delivery to Site, construction, erection and testing, each of these stages for</p>

	<p>work by each Subcontractor, if any, the sequence and timing of inspections and tests specified in the Contract, and a supporting report which includes: a general description of the methods which the Contractor intends to adopt, and of the major stages, in the execution of the Works, and details showing the Contractor's reasonable estimate for the number of each class of Contractor's Personnel & Equipment, required on the Site for each major stage. 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 Engineer shall be entitled to rely upon the programme when planning their activities. 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>19.4</p>	<p>Setting out of Works: The Contractor shall be responsible for the correct setting out of all works in relation to original points, lines and levels of reference at his cost. The Contractor shall execute the work true to alignment, grade, levels and dimensions as shown in the drawing and as directed by the Engineer's representative and check these at frequent intervals. The Contractor shall provide all facilities like labour and instruments and shall co-operate with the Engineer's representative for checking of all alignment, grades, levels and dimensions. If, at any time, during the progress of the works any error appear or arise in any part of the work, the Contractor, on being required so to do by the Engineer's representative shall, at his own cost rectify such errors, to the satisfaction of the Engineer's representative.</p> <p>Such checking shall not absolve the Contractor of his own responsibility of maintaining accuracy in the work. The Contractor shall carefully protect and preserve all bench marks, sight rails, pegs and other things used in setting out the work.</p>
<p>20.1</p>	<p>Compliance to Engineer's Instructions: The Engineer shall direct the sequence in which the several parts of the works shall be executed and the Contractor shall execute without delay all orders given by the Engineer from time to time; but the Contractor shall not be relieved thereby from responsibility for the due performance of the works in all respects.</p>
<p>20.2</p>	<p>Alterations to be Authorized: No alterations in or additions to or omissions or abandonment of any part of the works shall be deemed authorised, except under written instructions from the Engineer.</p>

<p>20.3</p>	<p>Extra Works: Should works over and above those included in the contract require to be executed at the site, the Contractor shall have no right to be entrusted with the execution of such works which may be carried out by another Contractor or Contractors or by other means at the option of the HRIDC.</p>
<p>20.4</p>	<p>Separate Contracts in Connection with Works: The HRIDC shall have the right to let other contracts in connection with the works. The Contractor shall afford other Contractors reasonable opportunity for the storage of their materials and the execution of their works and shall properly connect and coordinate his work with theirs. If any part of the Contractor’s work depends upon proper execution or result upon the work of another Contractor(s), the Contractor shall inspect and promptly report to the Engineer any defects in such works that render it unsuitable for such proper execution and results. The Contractor's failure so-to inspect and report shall constitute an acceptance of the other Contractor's work as fit and proper for the reception of his work, except as to defects which may develop in the other Contractor's work after the execution of his work.</p>
<p>21.</p>	<p>Instruction of Engineer's Representative: Any instructions or approval given by the Engineer's representative to Contractor in connection with the works shall bind the Contractor as though it had been given by the Engineer provided always as follows:</p> <ul style="list-style-type: none"> (a) Failure of the Engineer's representative to disapprove any work or materials shall not prejudice the power of the Engineer thereafter to disapprove such work or material and to order the removal or breaking up thereof. (b) If the Contractor shall be dissatisfied by reason of any decision of the Engineer's representative, he shall be entitled to refer the matter to the Engineer who shall there upon confirm or vary such decision.
<p>22.(1)</p>	<p>Adherence to Specifications and Drawings: The site and the detailed drawings shall be made available to the contractor commensurate with the accepted programme of work submitted under clause 19(3). The whole of the works shall be executed in perfect conformity with the specifications and drawings of the contract. If Contractor performs any works in a manner contrary to the specifications or drawings or any of them and without such reference to the Engineer, he shall bear all the costs arising or ensuing therefrom and shall be responsible for all loss to the HRIDC.</p>

22.(2)	<p>Drawings and Specifications of the Works: The Contractor shall keep one copy of Drawings and Specifications at the site, in good order, and such contract documents as may be necessary, available to the Engineer or the Engineer's Representative</p>
22.(3)	<p>Ownership of Drawings and Specifications: All Drawings and Specifications and copies thereof furnished by the HRIDC to the Contractor are deemed to be the property of the HRIDC. They shall not be used on other works and with the exception of the signed contract set, shall be returned by the Contractor to the HRIDC on completion of the work or termination of the Contract.</p>
22.(4)	<p>Compliance with Contractor's Request for Details: The Engineer shall furnish with reasonable promptness, after receipt by him of the Contractor's request, additional instructions by means of drawings or otherwise, necessary for the proper execution of the works or any part thereof. All such drawings and instructions shall be consistent with the Contract Documents and reasonably inferable there from.</p>
22.(5)	<p>Meaning and Intent of Specification and Drawings: If any ambiguity arises as to the meaning and intent of any portion of the Specifications and Drawings or as to execution or quality of any work or material, or as to the measurements of the works the decision of the Engineer thereon shall be final subject to the appeal (within 7 days of such decision being intimated to the Contractor) to the Engineer who shall have the power to correct any errors, omissions, or discrepancies in aforementioned items and whose decision in the matter in dispute or doubt shall be final and conclusive.</p>
23.	<p>Working during Night: The Contractor shall not carry out any work between sunset and sun-rise without the previous permission of the Engineer. However, if the Engineer is satisfied that the work is not likely to be completed in time except by resorting to night work, he may order the same without confirming any right on the Contractor for claiming any extra payment for the same.</p>
24.	<p>Damage to Railway/HRIDC Property or Private Life and Property: The Contractor shall be responsible for all risk to the work and for trespass and shall make good at his own expense all loss or damage whether to the works themselves or to any other property of the HRIDC or the lives, persons or property of others from whatsoever cause in connection with the works until they are taken over by the HRIDC, although all reasonable and proper precautions may have been taken by the</p>

	<p>Contractor. In case the HRIDC shall be called upon to make good any costs, loss or damages, or to pay any compensation, including that payable under the provisions of the Workmen's Compensation Act or any statutory amendments thereof to any person or persons sustaining damages as aforesaid by reason of any act, or any negligence or omissions on the part of the Contractor; the amount of any costs or charges including costs and charges in connection with legal proceedings, which the HRIDC may incur in reference thereto, shall be charged to the Contractor. The HRIDC shall have the power and right to pay or to defend or compromise any claim of threatened legal proceedings or in anticipation of legal proceedings being instituted consequent on the action or default of the Contractor, to take such steps as may be considered necessary or desirable to ward off or mitigate the effect of such proceedings, charging to Contractor, as aforesaid; any sum or sums of money which may be paid and any expenses whether for reinstatement or otherwise which may be incurred and the propriety of any such payment, defence or compromise, and the incurring of any such expenses shall not be called in question by the Contractor.</p>
<p>25.</p>	<p>Sheds, Storehouses and Yards: The Contractor shall at his own expense provide himself with sheds, storehouses and yards in such situations and in such numbers as in the opinion of the Engineer is requisite for carrying on the works and the Contractor shall keep at each such sheds, storehouses and yards a sufficient quantity of materials and plant in stock as not to delay the carrying out of the works with due expedition and the Engineer and the Engineer's representative shall have free access to the said sheds, store houses and yards at any time for the purpose of inspecting the stock of materials or plant so kept in hand, and any materials or plant which the Engineer may object to shall not be brought upon or used in the works, but shall be forthwith removed from the sheds, storehouses or yards by the Contractor. The Contractor shall at his own expenses provide and maintain suitable mortar mills, soaking vats or any other equipments necessary for the execution of the works.</p>
<p>26.</p>	<p>Provision of Efficient and Competent Staff at Work Sites by the Contractor:-</p>
<p>26.1</p>	<p>The Contractor shall place and keep on the works at all times efficient and competent staff to give the necessary directions to his workmen and to see that they execute their work in sound & proper manner and shall employ only such supervisors, workmen & labourers in or about the execution of any of these works as are careful and skilled in the various trades.</p>
<p>26.2</p>	<p>The Contractor shall at once remove from the works any agents, permitted sub-</p>

	contractor, supervisor, workman or labourer who shall be objected to by the Engineer and if and whenever required by the Engineer, he shall submit a correct return showing the names of all staff and workmen employed by him.
26.3	In the event of the Engineer being of the opinion that the Contractor is not employing on the works a sufficient number of staff and workmen as is necessary for proper completion of the works within the time prescribed, the Contractor shall forthwith on receiving intimation to this effect deploy the additional number of staff and labour as specified by the Engineer within seven days of being so required and failure on the part of the Contractor to comply with such instructions will entitle the HRIDC to rescind the contract under Clause 62 of these conditions.
26A.	Deployment of Qualified Engineers at Work Sites by the Contractor :-
26A.1	The Contractor shall also employ qualified Graduate Engineer(s) or equivalent, or qualified Diploma Engineer(s), as prescribed in Special condition of contract in the tender documents.
26A.2	In case the Contractor fails to employ the Engineer, as aforesaid in Para 26A.1, he shall be liable to pay liquidated damages at the rates, as prescribed in the Special condition of contract in the tender documents.
26A.3	No. of qualified Engineers required to be deployed by the Contractor for various activities contained in the works contract shall be specified in the tender documents as 'Special Condition of Contract'.
27.1	Workmanship and Testing: The whole of the works and/or supply of materials specified and provided in the contract or that may be necessary to be done in order to form and complete any part thereof shall be executed in the best and most substantial workman like manner with materials of the best and most approved quality of their respective kinds, agreeable to the particulars contained in or implied by the specifications and as referred to in and represented by the drawings or in such other additional particulars, instructions and drawings given during the carrying on of the works and to the entire satisfaction of the Engineer according to the instructions and directions which the Contractors may from time to time receive from the Engineer. The materials may be subjected to tests by means of such machines, instruments and

	<p>appliances as the Engineer may direct and wholly at the expense of the Contractor.</p>
27.2	<p>Removal of Improper Work and Materials: The Engineer or the Engineer's Representative shall be entitled to order from time to time:</p> <p>(a) The removal from the site, within the time specified in the order, of any materials which in his opinion are not in accordance with the specifications or drawings.</p> <p>(b) The substitution of proper and suitable materials, and</p> <p>(c) The removal and proper re-execution, notwithstanding any previous tests thereof or on account payments therefor, of any work which in respect of materials or workmanship is not in his opinion in accordance with the specifications and in case of default on the part of the Contractor in carrying out such order, the HRIDC shall be entitled to rescind the contract under Clause 62 of these conditions.</p> <p>(d) The provision of Construction and Demolition Waste Management Rule 2016 issued by Ministry of Environment Forest and Climate Change dated 29.03.2016 and published in the Gazette of India, Part – II, Section -3, Sub-section (ii) are binding upon the Contractor. Contractor shall implement these provisions at worksites, for which no extra payment will be payable.</p>
28.	<p>Facilities for Inspection: The Contractor shall afford the Engineer and the Engineer's Representative every facility for entering in and upon every portion of the work at all hours for the purpose of inspection or otherwise and shall provide all labour, materials, planks, ladders, pumps, appliances and things of every kind required for the purpose and the Engineer and the Engineer's Representative shall at all times have free access to every part of the works and to all places at which materials for the works are stored or being prepared.</p>
29.	<p>Examination of Work before Covering Up: The Contractor shall give 7 days' notice to the Engineer or the Engineer's Representative whenever any work or materials are intended to be covered up in the earth, in bodies or walls or otherwise to be placed beyond the reach of measurements in order that the work may be inspected or that correct dimensions may be taken before being so covered, placed beyond the reach of measurement in default whereof, the same shall at the option of the Engineer or the Engineer's Representative be uncovered and measured at the Contractor's expense or no allowance shall be made for such work or materials.</p>
30.	<p>Temporary Works: All temporary works necessary for the proper execution of the works shall be provided and maintained by the Contractor and subject to the consent</p>

	<p>of the Engineer shall be removed by him at his expenses when they are no longer required and in such manner as the Engineer shall direct. In the event of failure on the part of the Contractor to remove the temporary works, the Engineer will cause them to be removed and cost as increased by supervision and other incidental charges shall be recovered from the Contractor. If temporary huts are provided by the Contractor on the HRIDC land for labour engaged by him for the execution of works, the Contractor shall arrange for handing over vacant possession of the said land after the work is completed; if the Contractor's labour refuse to vacate, and have to be evicted by the HRIDC, necessary expenses incurred by the HRIDC in connection therewith shall be borne by the Contractor.</p>
31.1	<p>Contractor to Supply Water for Works: The Contractor shall be responsible for the arrangements to obtain supply of water necessary for the works.</p>
31.2	<p>Water Supply from Railway/HRIDC System: The Railway/HRIDC may supply to the Contractor part or whole of the quantity of the water required for the execution of works from the Railway's existing water supply system at or near the site of works on specified terms and conditions and at such charges as shall be determined by the HRIDC and payable by the Contractor, provided that the Contractor shall arrange, at his own expense, to effect the connections and lay additional pipelines and accessories on the site and that the Contractor shall not be entitled to any compensation for interruption of failure of the water supply.</p>
31.3	<p>Water Supply by Railway Transport: In the event of the Railway arranging supply of water to the Contractor at or near the site of works by travelling water tanks or other means, the freight and other charges incurred thereby, including demurrage charges that may be levied, shall be paid by the Contractor in addition to the charges referred to in Sub-Clause (2) of the Clause provided that the Contractor shall not be entitled to any compensation for interruption or failure of the water supply.</p>
31.4(a)	<p>Contractor to Arrange Supply of Electric Power for Works: The Contractor shall be responsible for arrangements to obtain supply of Electric Power for the works.</p>
31.4(b)	<p>Electric Supply from the Railway/HRIDC System: The Railway/HRIDC may supply to the Contractor part or whole of the electric power wherever available and possible, required for execution of works from the Railway's existing electric supply systems at or near the site of works on specified terms and conditions and such charges as shall be determined by the Railway/HRIDC and payable by the Contractor provided the cost of arranging necessary connections to the Railway's Electric Supply systems and laying of underground/overhead conductor, circuit protection, electric power meters, transmission structure, shall be borne by the Contractor and that the Contractor shall not be entitled to any compensation for interruption or failure of the Electric supply system.</p>

<p>32.</p>	<p>Property in Materials and Plant: The materials and plant brought by the Contractor upon the site or on the land occupied by the Contractor in connection with the works and intended to be used for the execution thereof shall immediately be deemed to be the property of the HRIDC. Such of them as during the progress of the works are rejected by the Engineer under Clause 25 of these conditions or are declared by him not to be needed for the execution of the works or such as on the grant of the certificate of completion remain unused shall immediately on such rejection, declaration or grant cease to be deemed the property of the HRIDC and the Contractor may then (but not before) remove them from the site or the said land. This clause shall not in any way diminish the liability of the Contractor nor shall the HRIDC be in any way answerable for any loss or damage which may happen to or in respect of any such materials or plant either by the same being lost, stolen, injured or destroyed by fire, tempest or otherwise.</p>
<p>33.1</p>	<p>Tools, Plant and Materials Supplied by HRIDC: The Contractor shall take all reasonable care of all tools, plant and materials or other property whether of a like description or not belonging to the HRIDC and committed to his charge for the purpose of the works and shall be responsible for all damage or loss caused by him, his agents, permitted sub-contractor, or his workmen or others while they are in his charge. The Contractors shall sign accountable receipts for tools, plants and materials made over to him by the Engineer and on completion of the works shall hand over the unused balance of the same to the Engineer in good order and repair, fair wear and tear excepted, and shall be responsible for any failure to account for the same or any damage done thereto.</p>
<p>33.2</p>	<p>Hire of HRIDC Plant: The HRIDC may hire to the Contractor such plant as concrete mixers, compressors and portable engines for use during execution of the works on such terms as may be specified in the special conditions or in a separate agreement for Hire of Plant.</p>
<p>34.1</p>	<p>Precaution During Progress of Works: During the execution of works, unless otherwise specified, the Contractor shall at his own cost provide the materials for and execute all shoring, timbering and strutting works as is necessary for the stability and safety of all structures, excavations and works and shall ensure that no damage, injury or loss is caused or likely to be caused to any person or property.</p>
<p>34.2</p>	<p>Roads and Water Courses: Existing roads or water courses shall not be blocked cut through, altered, diverted or obstructed in any way by the Contractor, except with the permission of the Engineer. All compensations claimed for any unauthorized closure, cutting through, alteration, diversion or obstruction to such roads or water courses by the Contractor or his agent or his staff shall be recoverable from the Contractor's bills/Security Deposit or any other dues of Contractor with the Government of India.</p>

<p>34.3</p>	<p>Provision of Access to Premises: During progress of work in any street or thoroughfare, the Contractor shall make adequate provision for the passage of traffic, for securing safe access to all premises approached from such street or thoroughfare and for any drainage, water supply or means of lighting which may be interrupted by reasons of the execution of the works and shall react and maintain at his own cost barriers, lights and other safeguards as prescribed by the Engineer, for the regulation of the traffic, and provide watchmen necessary to prevent accidents. The works shall in such cases be executed night and day, if so ordered by the Engineer and with such vigour so that the traffic way be impeded for as short a time as possible.</p>
<p>34.4</p>	<p>Safety of Public: The Contractor shall be responsible to take all precautions to ensure the safety of the public whether on public or HRIDC property and shall post such look out men as may, in the opinion of the Engineer, be required to comply with regulations appertaining to the work. Contractor shall ensure placement of barricading / partitions at the place of work to ensure safety of habitants of adjacent area, failing which Engineer may advise stoppage of work as per his discretion.</p>
<p>34.5</p>	<p>Display Board: The Contractor shall be responsible for displaying the details of works i.e. name of work, approximate cost, expected date of completion, name and address of the Contractor and address of Engineer on a proper steel Board of size not less than 1m x 1m.</p>
<p>35</p>	<p>Use of Explosives: Explosives shall not be used on the works or on the site by the Contractor without the permission of the Engineer and then also only in the manner and to the extent to which such permission is given. Where explosives are required for the works, they shall be stored in a special magazine to be provided by and at the cost of the Contractor in accordance with the Explosive Rules. The Contractor shall obtain the necessary license for the storage and the use of explosives. All operations in which or for which explosives are employed shall be at the sole risk and responsibility of the Contractor and the Contractor shall indemnify the HRIDC in respect thereof.</p>
<p>36.(1)</p>	<p>Suspension of Works: The Contractor shall on the order of the Engineer, suspend the progress of the works or any part thereof for such time or times and in such manner as the Engineer may consider necessary and shall during such suspension properly protect and secure the work so far as is necessary in the opinion of the Engineer. If such suspension is:</p> <ul style="list-style-type: none"> (a) Provided for in the contract, or (b) Necessary for the proper execution of the works or by the reason of weather conditions or by some default on the part of the Contractor, and or (c) Necessary for the safety of the works or any part thereof, or (d) Necessary for the safety of adjoining public or other property or safety of

	<p>the public or workmen or those who have to be at the site, or</p> <p>(e) Necessary to avoid disruption of traffic and utilities, as also to permit fast repair and restoration of any damaged utilities, or</p> <p>(f) Due to instruction of The National Green Tribunal or any other statutory authority due to high level of pollution in the city of worksite.</p>
<p>36.(2)</p>	<p>The Contractor shall not be entitled to the extra costs, if any, incurred by him during the period of suspension of the works, but in the event of any suspension ordered by the Engineer for reasons other than aforementioned and when each such period of suspension exceeds 14 days, the Contractor shall be entitled to such extension of time for completion of the works as the Engineer may consider proper having regard to the period or periods of such suspensions and to such compensations as the Engineer may consider reasonable in respect of salaries or wages paid by the Contractor to his employees during the periods of such suspension.</p>
<p>36.3</p>	<p>Suspension Lasting More than 3 Months: If the progress of the works or any part thereof is suspended on the order of the Engineer for more than three months at a time, the Contractor may serve a written notice on the Engineer requiring permission within 15 days from the receipt thereof to proceed with the works or that part thereof in regard to which progress is suspended and if such permission is not granted within that time the Contractor by further written notice so served may, but is not bound to, elect to treat the suspension where it affects part only of the works as an omission of such part or where it affects the whole of the works, as an abandonment of the contract by the HRIDC.</p>
<p>37.</p>	<p>Rates for Items of Works: (i) The rates, entered in the accepted Bill(s) of Quantities of the Contract are intended to provide for works duly and properly completed in accordance with the General and Special (if any) Conditions of the Contract and the Specifications and drawings together with such enlargements, extensions, diminutions, reductions, alterations or additions as may be ordered in terms of Clause 42 of these conditions and without prejudice to the generality thereof and shall be deemed to include and cover superintendence and labour, supply, including full freight of materials, stores, patterns, profiles, moulds, fittings, centerings, scaffolding, shoring props, timber, machinery, barracks, tackle, roads, pegs, posts, tools and all apparatus and plant required on the works, except such tools, plant or materials as may be specified in the contract to be supplied to the Contractor by the HRIDC, the erection, maintenance and removal of all temporary works and buildings, all watching, lighting, bailing, pumping and draining, all prevention of or compensation for trespass, all barriers and arrangements for the safety of the public or of employees during the execution of works, all sanitary and medical arrangements for labour camps as may be prescribed by the HRIDC, the setting of all work and of the construction, repair and upkeep of all center lines, bench marks and level pegs thereon, site clearance, all fees duties, royalties, rent and compensation to owners for</p>

	<p>surface damage or taxes and impositions payable to local authorities in respect of land, structures and all material supplied for the work or other duties or expenses for which the Contractor may become liable or may be put to under any provision of law for the purpose of or in connection with the execution of the contract and all such other incidental charges or contingencies as may have been specially provided for in the Specifications.</p> <p>However, if rates of existing GST or cess on GST for Works Contract is increased or any new tax /cess on Works Contract is imposed by Statute after the date of opening of tender but within the original date of completion/date of completion extended under clause 17 & 17A and the Contractor thereupon properly pays such taxes/cess, the Contractor shall be reimbursed the amount so paid.</p> <p>Further, if rates of existing GST or cess on GST for Works Contract is decreased or any tax/cess on Works Contract is decreased / removed by Statute after the date of opening of tender, the reduction in tax amount shall be recovered from Contractor's bills/Security Deposit or any other dues of Contractor with the Government of India.</p>
<p>38.</p>	<p>Demurrage and Wharfage Dues: Demurrage charges calculated in accordance with the scale in force for the time being on the HRIDC and incurred by the Contractor failing to load or unload any goods or materials within the time allowed by the HRIDC for loading as also wharfage charges, of materials not removed in time, as also charges due on consignments booked by or to him shall be paid by the Contractor, failing which such charges shall be debited to the Contractor's account in the hands of the HRIDC and shall be deducted from any sums which may become due to him in terms of the contracts.</p>
<p>39.1</p>	<p>Rates for Extra Item(s) of Works:</p> <p>(a) Standard Schedule of Rates (SSOR) Items: Any item of work carried out by the Contractor on the instructions of the Engineer which is not included in the accepted Bill(s) of Quantities but figures in the Standard Schedule of Rates (SSOR), shall be executed at the rates set forth in the "Standard Schedule of Rates (SSOR)" modified by the tender percentage as accepted in the contract for that chapter of Standard Schedule of Rates (SSOR).</p> <p>For item(s) not covered in this sub clause, the rate shall be decided as agreed upon between the Engineer and the Contractor before the execution of such items of work as per sub clause (b).</p> <p>(b) Other Items: For any item of work to be carried out by the Contractor but not included in the accepted Bill(s) of Quantities and also not covered under sub clause (a) above, the Contractor shall be bound to notify the Engineer at least seven days before the necessity arises for the execution of such items of works that the accepted Bill(s) of Quantities does not include rate or rates for such extra work involved. The rates payable for such items shall be decided at the meeting to be held between the Engineer and Contractor, in as short a period as possible after the need for the special</p>

	<p>item has come to the notice. In case the Contractor fails to attend the meeting after being notified to do so or in the event of no settlement being arrived at, the HRIDC shall be entitled to execute the extra works by other means and the Contractor shall have no claim for loss or damage that may result from such procedure.</p> <p>The assessment of rates for extra item(s) shall be arrived at based on the prevailing market rates of labour, machinery & materials and by taking guidance from the following documents in order of priority:</p> <ul style="list-style-type: none"> i. Analysis of Rates for “Unified Standard Schedule of Rates of Indian Railways (USSOR)” ii. Analysis of Rates for “Delhi Schedule of Rates issued by CPWD (DSR)” <p>Market Analysis</p>
<p>39.2</p>	<p>Provided that if the Contractor commences work or incurs any expenditure in regard thereto before the rates as determined and agreed upon as lastly hereunto fore-mentioned, then and in such a case the Contractor shall only be entitled to be paid in respect of the work carried out or expenditure incurred by him prior to the date of determination of the rates as aforesaid according to the rates as shall be fixed by the Engineer. However, if the Contractor is not satisfied with the decision of the Engineer in this respect, he may appeal to the MD/HRIDC within 30 days of getting the decision of the Engineer, supported by analysis of the rates claimed. The MD/HRIDC decision after hearing both the parties in the matter would be final and binding on the Contractor and the HRIDC.</p>
<p>40.1</p>	<p>Handing over of Works: The Contractor shall be bound to hand over the works executed under the contract to the HRIDC complete in all respects to the satisfaction of the Engineer. The Engineer shall determine the date on which the work is considered to have been completed, in support of which his certificate shall be regarded as sufficient evidence for all purposes. The Engineer shall determine from time to time, the date on which any particular section of the work shall have been completed, and the Contractor shall be bound to observe any such determination of the Engineer.</p>
<p>40.2</p>	<p>Clearance of Site on Completion: On completion of the works, the Contractor shall clear away and remove from the site all constructional plant, surplus materials, rubbish and temporary works of every kind and leave the whole of the site and works clean and in a workman like condition to the satisfaction of the Engineer. No final payment in settlement of the accounts for the works shall be paid, held to be due or shall be made to the, Contractor till, in addition to any other condition necessary for final payment, site clearance shall have been affected by him, and such clearance may be made by the Engineer at the expense of the Contractor in the event of his failure to comply with this provision within 7 days after receiving notice to that effect. Should it become necessary for the Engineer to have the site cleared at the expenses of the Contractor, the HRIDC shall not be held liable for any loss or damage to such of the</p>

	<p>Contractor's property as may be on the site and due to such removal there from which removal may be affected by means of public sales of such materials and property or in such a way as deemed fit and convenient to the Engineer.</p>
<p>40A</p>	<p>Offloading of Part(s) of Work: At the final stage of completion/ commissioning of work, in case the contractor fails to complete the final part(s) of the work and the value of such part(s) of the work is limited to 5% of the original contract value, the Engineer may allow/decide for offloading of such part(s) of works, either after the Contractor's request in writing to do so or after serving a 14 (Fourteen) days suo-moto notice (as per annexure- VIIA), if the Engineer is of the opinion that :-</p> <ul style="list-style-type: none"> (i) Such Offloading of works (up to 5% of original contract value) would enable successful completion of contract/work, (ii) Termination/ Part termination of the contract at this stage is not be in the interest of the HRIDC/work; and (iii) The anticipated additional cost for execution of such works through other mode would not be substantial and can be recovered from the pending dues of the contractor; <p>The Contractor shall be informed, in due course, by the Engineer of the mode and cost of execution of such offloaded work through other agency(ies) (as per Annexure- VIIB). The extra expenditure so incurred in execution of the offloaded work, shall be recovered from subsequent Bill(s) or any other dues of the Contractor, but not exceeding the value of Performance Guarantee available in the contract. There shall be no other repercussion of such offloading on execution of the balance contract. The Contractor shall have no claim on account of above mentioned offloading of works.</p>
	<p>VARIATIONS IN EXTENT OF CONTRACT</p>
<p>41.</p>	<p>Modification to Contract to be in Writing: In the event of any of the provisions of the contract required to be modified after the contract documents have been signed, the modifications shall be made in writing and signed by the HRIDC and the Contractor and no work shall proceed under such modifications until this has been done. Any verbal or written arrangement abandoning, modifying, extending, reducing or supplementing the contract or any of the terms thereof shall be deemed conditional and shall not be binding on the HRIDC unless and until the same is incorporated in a formal instrument and signed by the HRIDC and the Contractor, and till then the HRIDC shall have the right to repudiate such arrangements.</p>

<p>42.1</p>	<p>Powers of Modification to Contract: The Engineer on behalf of the HRIDC shall be entitled by order in writing to enlarge or extend, diminish or reduce the works or make any alterations in their design, character position, site, quantities, dimensions or in the method of their execution or in the combination and use of materials for the execution thereof or to order any additional work to be done or any works not to be done and the Contractor will not be entitled, to any compensation for any increase/reduction in the quantities of work but will be paid only for the actual amount of work done and for approved materials supplied against a specific order.</p>
<p>42.2</p>	<p>(i) Unless otherwise specified in the special conditions of the contract, the accepted variation in quantity of each individual item of the contract would be upto 25% of the quantity originally contracted, except in case of foundation work (in which no variation limit shall apply). However, the rates for the increased quantities shall be as per sub- para (iii) below.</p> <p>(ii) The Contractor shall be bound to carry out the work at the agreed rates and shall not be entitled to any claim or any compensation whatsoever upto the limit of 25% variation in quantity of individual item of works.</p> <p>(iii) In case an increase in quantity of an individual item by more than 25% of the agreement quantity is considered unavoidable, then same shall be executed at following rates</p> <ol style="list-style-type: none"> a. Quantities operated in excess of 125% but upto 140% of the agreement quantity of the concerned item, shall be paid at 98% of the rate awarded for that item in that particular tender; b. Quantities operated in excess of 140% but upto 150% of the agreement quantity of the concerned item shall be paid at 96% of the rate awarded for that item in that particular tender; c. Variation in quantities of individual items beyond 150% will be avoided and would be permitted only in exceptional unavoidable circumstances and shall be paid at 96% of the rate awarded for that item in that particular tender. d. Variation to quantities of Minor Value Item: The limit for varying quantities for minor value items shall be 100% (as against 25% prescribed for other items). A minor value item for this purpose is defined as an item whose original agreement value is less than 1 % of the total original contract value. <ol style="list-style-type: none"> d.(i) Quantities operated upto and including 100% of the agreement quantity of the concerned minor value item, shall be paid at the rate awarded for that item in that particular tender;

	<p>d.(ii) Quantities operated in excess of 100% but up to 200% of the agreement quantity of the concerned minor value item, shall be paid at 98% of the rate awarded for that item in that particular tender;</p> <p>d.(iii) Variation in quantities of individual minor value item beyond 200% will be avoided and would be permitted only in exceptional unavoidable circumstances and shall be paid at 96% of the rate awarded for that item in that particular tender.</p> <p>(iv) In case of earthwork items, the variation limit of 25% shall apply to the gross quantity of earthwork items and variation in the quantities of individual classifications of soil shall not be subject to this limit.</p> <p>(v) As far as Standard Schedule of Rates (SSOR) items are concerned, the variation limit of 25% would apply to the value of SSOR schedule(s) as a whole and not on individual SSOR items. However, in case of Non Standard Schedule of Rates (SSOR) items, the limit of 25% would apply on the individual items irrespective of the manner of quoting the rate (single percentage rate or individual item rate).</p>
<p>42.3</p>	<p>Valuation of Variations: The enlargements, extensions, diminution, reduction, alterations or additions referred to in Sub-Clause (2) of this Clause shall in no degree affect the validity of the contract; but shall be performed by the Contractor as provided therein and be subject to the same conditions, stipulations and obligations as if they had been originally and expressively included and provided for in the Specifications and Drawings and the amounts to be paid therefor shall be calculated in accordance with the accepted Bill(s) of Quantities. Any extra item(s)/quantities of work falling outside the purview of the provisions of Sub-Clause (2) above shall be paid for at the rates determined under Clause-39 of these Conditions.</p>
	<p>CLAIMS :-</p>
<p>43.1</p>	<p>Quarterly Statement of Claims: The Contractor shall prepare and furnish to the Engineer once in every quarter commencing from the month following the month of issue of Letter of Acceptance, an account giving full and detailed particulars of all claims for any additional expenses to which the Contractor may consider himself entitled to and of all extra or additional works ordered by the Engineer which he has executed during the preceding quarter and no claim for payment for such work will be considered which has not been included in such particulars.</p>
<p>43.2</p>	<p>Signing of "No Claim" Certificate: The Contractor shall not be entitled to make any claim whatsoever against the HRIDC under or by virtue of or arising out of this contract, nor shall the HRIDC entertain or consider any such claim, if made by the</p>

	<p>Contractor, after he shall have signed a "No Claim" Certificate in favour of the HRIDC in such form as shall be required by the HRIDC after the works are finally measured up. The Contractor shall be debarred from disputing the correctness of the items covered by "No Claim" Certificate or demanding a clearance to arbitration in respect thereof.</p>
	<p>MEASUREMENTS, CERTIFICATES AND PAYMENTS :-</p>
<p>44.</p>	<p>Quantities in Bill(s) of Quantities Annexed to Contract: The quantities set out in the accepted Bill(s) of Quantities with items of works quantified are the estimated quantities of the works and they shall not be taken as the actual and correct quantities of the work to be executed by the Contractor in fulfillment of his obligations under the contract.</p>
<p>45(i).</p>	<p>Measurement of Works by HRIDC: The Contractor shall be paid for the works at the rates in the accepted Bill(s) of Quantities and for extra works at rates determined under Clause 39 of these Conditions on the measurements taken by the Engineer or the Engineer's representative in accordance with the rules prescribed for the purpose by the HRIDC. The quantities for items the unit of which in the accepted Bill(s) of Quantities is 100 or 1000 shall be calculated to the nearest whole number, any fraction below half being dropped and half and above being taken as one; for items the unit of which in the accepted Bill(s) of Quantities is single, the quantities shall be calculated to two places of decimals. Such measurements will be taken of the work in progress from time to time and at such intervals as in the opinion of the Engineer shall be proper having regard to the progress of works. The date and time on which 'on account' or 'final' measurements are to be made shall be communicated to the Contractor who shall be present at the site and shall sign the results of the measurements (which shall also be signed by the Engineer or the Engineer's representative) recorded in the official measurements book as an acknowledgement of his acceptance of the accuracy of the measurements. Failing the Contractor's attendance, the work may be measured up in his absence and such measurements shall, notwithstanding such absence, be binding upon the Contractor whether or not he shall have signed the measurement books provided always that any objection made by him to measurement shall be duly investigated and considered in the manner set out below:</p> <p>(a) It shall be open to the Contractor to take specific objection to any recorded measurements or Classification on any ground within seven days of the date of such measurements. Any re-measurement taken by the Engineer or the Engineer's representative in the presence of the Contractor or in his absence after due notice has been given to him in consequence of objection made by the Contractor shall be final and binding on the Contractor and no claim whatsoever shall thereafter be entertained</p>

	<p>regarding the accuracy and Classification of the measurements. (b) If an objection raised by the Contractor is found by the Engineer to be incorrect the Contractor shall be liable to pay the actual expenses incurred in measurements.</p>
<p>45(ii).</p>	<p>Measurement of Works by Contractor’s Authorized Representative (in case the contract provides for the same):</p> <p>(a) The Contractor shall be paid for the works at the rates in the accepted Bill(s) of Quantities and for extra works at rates determined under Clause 39 of these Conditions on the measurements taken by the Contractor’s authorized Engineer in accordance with the rules prescribed for the purpose by the HRIDC. The quantities for items the unit of which in the accepted Bill(s) of Quantities is 100 or 1000 shall be calculated to the nearest whole number, any fraction below half being dropped and half and above being taken as one; for items the unit of which in the accepted Bill(s) of Quantities is single, the quantities shall be calculated to two places of decimals. Such measurements will be taken of the work in progress from time to time. The date and time on which ‘on account’ or ‘final’ measurements are to be made shall be communicated to the Engineer.</p> <p>The date and time of test checks shall be communicated to the Contractor who shall be present at the site and shall witness the test checks, failing the Contractor’s attendance the test checks may be conducted in his absence and such test checks shall not be withstanding such absence be binding upon Contractor provided always that any objection made by Contractor to test check shall be duly investigated and considered in the manner set out below:</p> <p>(i) It shall be open to the Contractor to take specific objection to test checks of any recorded measurement within 7 days of date of such test checks. Any re-test check done by the concerned HRIDC’s authority in the presence of the Contractor or in his absence after due notice given to him in consequent of objection made by the Contractor shall be final and binding on the Contractor and no claim whatsoever shall thereafter be entertained regarding the accuracy and classification of the measurements.</p> <p>(ii) If an objection raised by the Contractor is found by the Engineer to be incorrect the Contractor shall be liable to pay the actual expenses incurred in measurements.</p> <p>(b) Incorrect measurement, actions to be taken: If in case during test check or otherwise, it is detected by the Engineer that agency has claimed any exaggerated measurement or has claimed any false measurement for the works which have not been executed; amounting to variation of 5% or more of claimed gross bill amount, action shall be taken as following:</p> <p>(i) On first occasion of noticing exaggerated/ false measurement, Engineer shall recover liquidated damages equal to 10% of claimed gross bill value.</p> <p>(ii) On any next occasion of noticing any exaggerated/false measurement, HRIDC</p>

	<p>shall recover liquidated damages equal to 15% of claimed gross bill value. In addition, the facility of recording of measurements by Contractor as well as release of provisional payment shall be withdrawn. Once withdrawn, measurements shall be done by HRIDC as per clause 45(i) above.</p>
46.1	<p>"On-Account " Payments: The Contractor shall be entitled to be paid from time to time by way of "On-Account" payment only for such works as in the opinion of the Engineer he has executed in terms of the contract. All payments due on the Engineer's/Engineer's Representative's certificates of measurements or Engineer's certified "Contractor's authorized Engineer's measurements" shall be subject to any deductions which may be made under these presents and shall further be subject to, unless otherwise required by Clause 16 of these Conditions, a retention of six percent by way of Security Deposits, until the amount of Security Deposit by way of such retentions shall amount to 5% of the total value of the contract provided always that the Engineer may by any certificate make any correction or modification in any previous certificate which shall have been issued by him and that the Engineer may withhold any certificate, if the works or any part thereof are not being carried out to his satisfaction.</p>
46.2	<p>Rounding off Amounts: The total amount due on each certificate shall be rounded off to the nearest rupee, i.e. sum less than 50 paise shall be omitted and sums of 50 paise and more upto ₹1 will be reckoned as ₹ 1.</p>
46.3	<p>On Account Payments not Prejudicial to Final Settlement: "On-Account" payments made to the Contractor shall be without prejudice to the final making up of the accounts (except where measurements are specifically noted in the Measurement Book as "Final Measurements" and as such have been signed by the Contractor and Engineer/Engineer's Representative) and shall in no respect be considered or used as evidence of any facts stated in or to be inferred from such accounts nor of any particular quantity of work having been executed nor of the manner of its execution being satisfactory.</p>
46.4	<p>If payment(s) of Advances are applicable in the contract, as mentioned in the Tender Documents, HRIDC shall make payment(s) of Interest bearing advances, on the request of contractor. The payment and recovery of such Advances shall be made as under:</p> <ul style="list-style-type: none"> (a) Mobilisation Advance – Not Applicable (b) Advance Against Machinery and Equipment – Not Applicable
46.5	<p>Manner of Payment: The Contractor will be transferred electronically to his bank</p>

	account.
46A.	Price Variation Clause (PVC):
46A.1	<p>Applicability: Price Variation Clause (PVC) shall be applicable only in tender having advertised value above Rs. 2 Crores. Provided further that, in a contract where PVC is applicable, following shall be outside the purview of price adjustments (i.e. shall be excluded from the gross value of the work for the purpose of price variation):</p> <ul style="list-style-type: none"> a) Materials supplied by HRIDC to the Contractors, either free or at fixed rate; b) Any extra item(s) included in subsequent variation falling outside the purview of the Bill(s) of Quantities of tender, under clause 39. (1)(b) of these Standard General Conditions, unless applicability of PVC and ‘Base Month’ has been specially agreed, while fixing the rates of such extra item(s).
46A.2	<p>Base Month: The Base Month for ‘Price Variation Clause’ shall be taken as the one month prior to closing of tender, unless otherwise stated elsewhere. The quarter for applicability of PVC shall commence from the month following the Base month. The Price Variation shall be based on the average Price Index of the quarter under consideration.</p>
46A.3	<p>Validity: Rates accepted by HRIDC 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.
46A.4	<p>Components of various items in a contract on which variation in prices be admissible, shall be steel, cement, ferrous material, non-ferrous material, insulators, zinc and other materials, labour, plant & machinery, fuel, explosives, detonators etc. Adjustment for variation in prices of these items shall be determined in the manner prescribed.</p>
46A.5	No price variation shall be admissible for fixed components.
46A.6	The percentages of various components in various type of works shall be as specified for all item (s)/ Bill(s) of Quantities in tender document and the same shall be fixed as per table & classifications given below:

(I). For Civil Engineering Works

S N	Classification		1A, 2 & 3A	4A	5A	6A	7	8A	9A	1B, 3B, 4B, 5B, 6B 8B & 9B	1C, 3C, 4C, 5C, 6C, 8C & 9C	3D, 4D, 5D, 6D, 8D & 9D	3E, 4E, 5E, 6E, 8E & 9E
		Components											
1	Fixed	*	15	15	15	15	15	15	15	15	15	15	15
2	Labour	L _c	20	25	30	20	50	20	20	0	0	10	25
3	Steel	S _c	0	0	0	0	0	0	0	85	0	50	0
4	Cement	C _c	0	0	15	0	0	0	0	0	85	0	0
5	Plant Machinery & Spares	PM _c	30	15	5	20	15	20	30	0	0	10	30
6	Fuel & Lubricants	F _c	25	15	05	15	15	20	15	0	0	10	20
7	Other materials	M _c	10	15	30	30	05	25	20	0	0	5	10
8	Detonators & Explosive	E _c	0	15	0	0	0	0	0	0	0	0	0
Total			100	100	100	100	100	100	100	100	100	100	100

* It shall not be considered for any price variation.

The classification mentioned in the table above represents following type of item(s) in the work(s) –

1 Earthwork in Formation

1A All Item(s) excluding 1B or/and 1C

1B Item(s) for supply of Steel

1C Item(s) for supply of Cement

2 Ballast Supply Works

3 Tunnelling Works (Without Explosives)

	<p>3A All Item(s) excluding 3B or/and 3C or/and 3D or/and 3E</p> <p>3B Item(s) for supply of Steel</p> <p>3C Item(s) for supply of Cement or/and Grout</p> <p>3D Item(s) for Fabrication & Erection of Structures including supply of Steel</p> <p>3E Item(s) for Fabrication & Erection of Structures excluding supply of Steel.</p> <p>4 Tunnelling Works (With explosives)</p> <p>4A All Item(s) excluding 4B or/and 4C or/and 4D or/and 4E</p> <p>4B Item(s) for supply of Steel</p> <p>4C Item(s) for supply of Cement or/and Grout</p> <p>4D Item(s) for Fabrication & Erection of Structures including supply of Steel</p> <p>4E Item(s) for Fabrication & Erection of Structures excluding supply of Steel.</p> <p>5 Building Works</p> <p>5A All Item(s) excluding 5B or/and 5C or/and 5D or/and 5E</p> <p>5B Item(s) for supply of Steel</p> <p>5C Item(s) for supply of Cement</p> <p>5D Item(s) for Fabrication & Erection of Structures including supply of Steel</p> <p>5E Item(s) for Fabrication & Erection of Structures excluding supply of Steel.</p> <p>6 Bridges & Protection work</p> <p>6A All Item(s) excluding 6B or/and 6C or/and 6D or/and 6E</p> <p>6B Item(s) for supply of Steel</p> <p>6C Item(s) for supply of Cement</p> <p>6D Item(s) for Fabrication, Assembly, Erection& Launching of Girders including supply of Steel</p> <p>6E Item(s) for Fabrication, Assembly, Erection & Launching of Girders excluding supply of Steel</p> <p>7 Permanent Way linking</p> <p>8 Platform, Passenger Amenities</p> <p>8A All Item(s) excluding 8B or/and 8C or/and 8D or/and 8E</p> <p>8B Item(s) for supply of Steel item/fittings</p> <p>8C Item(s) for supply of Cement Item</p> <p>8D Item(s) for Fabrication & Erection of Structures including supply of Steel</p> <p>8E Item(s) for Fabrication & Erection of Structures excluding supply of Steel</p> <p>9 Any Other Works not covered in Classification 1 to 8</p> <p>9A All Item(s) excluding 9B or/and 9C or/and 9D or/and 9E</p> <p>9B Item(s) for supply of Steel</p> <p>9C Item(s) for supply of Cement or/and Grout</p> <p>9D Item(s) for Fabrication & Erection of Structures including supply of Steel</p> <p>9E Item(s) for Fabrication & Erection of Structures excluding supply of Steel</p>
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46A.7	<p>Formulae: The Amount of variation in prices in various components (labour, material etc.) shall be worked out by the following formulae:</p> <p>(i) $L = \frac{(W \text{ or } W_{SF} \text{ or } W_F \text{ or } W_{SFL} \text{ or } W_{FL}) \times (L_Q - L_B) \times L_C}{L_B \times 100}$</p> <p>(ii) $M = \frac{(W \text{ or } W_{SF} \text{ or } W_F \text{ or } W_{SFL} \text{ or } W_{FL}) \times (M_Q - M_B) \times M_C}{M_B \times 100}$</p> <p>(iii) $F = \frac{(W \text{ or } W_S \text{ or } W_C \text{ or } W_{SF} \text{ or } W_F \text{ or } W_{SFL} \text{ or } W_{FL}) \times (F_Q - F_B) \times F_C}{F_B \times 100}$</p> <p>(iv) $E = \frac{(W \text{ or } W_S \text{ or } W_C \text{ or } W_{SF} \text{ or } W_F \text{ or } W_{SFL} \text{ or } W_{FL}) \times (E_Q - E_B) \times E_C}{E_B \times 100}$</p> <p>(v) $PM = \frac{(W \text{ or } W_S \text{ or } W_C \text{ or } W_{SF} \text{ or } W_F \text{ or } W_{SFL} \text{ or } W_{FL}) \times (PM_Q - PM_B) \times PM_C}{PM_B \times 100}$</p> <p>(vi) $S = \frac{(W \text{ or } W_S \text{ or } W_{SF}) \times (S_Q - S_B) \times S_C}{S_B \times 100}$</p> <p>(vii) $C = \frac{(W \text{ or } W_C) \times (C_Q - C_B) \times C_C}{C_B \times 100}$</p> <p>(II) For Railway Electrification Works:</p> <p>(viii) $T = [0.4136 \times (C_Q - C_B) / C_B] \times 85$</p> <p>(ix) $R = [0.94 \times (R_T - R_O) / R_O + 0.06 \times (Z_T - Z_O) / Z_O] \times 85$</p> <p>(x) $N = [(P_T - P_O) / P_O] \times 85$</p> <p>(xi) $I = [(I_T - I_O) / I_O] \times 85$</p> <p>(xii) $G = [(M_Q - M_B) / M_B] \times 85$</p> <p>(xiii) $E_r = [(L_Q - L_B) / L_B] \times 85$</p> <p><i>Where,</i></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</p> <p>E Amount of price variation in Explosives</p> <p>PM Amount of price variation in Plant, Machinery and Spares</p> <p>S Amount of price variation in Steel Supply Item</p> <p>C Amount of price variation in Cement Supply Item</p> <p>T Percentage variation payable on the gross value of bill of Concreting (Bill(s) of Quantities for concrete items)</p> <p>R Percentage variation payable on the gross value of bill of Ferrous Items (Bill(s) of Quantities for ferrous items)</p>
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N	Percentage variation payable on the gross value of bill of Non-Ferrous Items (Bill(s) of Quantities for non-ferrous items)
I	Percentage variation payable on the gross value of bill of Insulator (Bill(s) of Quantities for Insulator items)
G	Percentage variation payable on the gross value of bill of General Works (Bill(s) of Quantities for General items)
Er	Percentage variation payable on the gross value of erection (Bill(s) of Quantities for Erection Item)
LC	% of Labour Component in the item(s)
MC	% of Material Component in the item(s)
FC	% of Fuel Component in the item(s)
EC	% of Explosive Component in the item(s)
PMC	% of Plant, Machinery and Spares Component in the item(s)
SC	% of Steel Supply item Component in the item(s)
CC	% of Cement Supply item Component in the item(s)
W	Gross value of work done by Contractor as per on-account bill(s) excluding the Gross value of work under W _S or/and W _C or/and W _{SF} or/and W _F or/and W _{SFL} or/and W _{FL} and cost of materials supplied by HRIDC either free or at fixed rate,
W _S	Gross value of work done by Contractor for item(s) of supply of steel.
W _C	Gross value of work done by Contractor for item(s) of supply of cement and /or supply of grout material.
W _{SF}	Gross value of work done by Contractor for item(s) of Fabrication & Erection of Structures including supply of Steel.
W _F	Gross value of work done by Contractor for Fabrication & Erection of Structures excluding supply of Steel.
W _{SFL}	Gross value of work done by Contractor for item(s) of Fabrication, Assembly, Erection / Launching of Girders including supply of Steel.
W _{FL}	Gross value of work done by Contractor for item(s) of Fabrication, Assembly, Erection / Launching of Girders excluding supply of Steel.
L _B	Consumer Price Index for Industrial Workers - All India: Published in R.B.I. Bulletin for the base period
L _Q	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

	<p>quarter under consideration</p> <p>M_B Wholesale Price Index: All commodities – as published in the R.B.I. Bulletin for the base period</p> <p>M_Q 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</p> <p>F_B The average of official prices of Diesel available on the official website of ‘Petroleum Planning and Analysis cell’ under Ministry of Petroleum and Natural Gas for Delhi, Kolkata, Mumbai & Chennai, for the base period</p> <p>F_Q The average of official prices of Diesel available on the official website of ‘Petroleum Planning and Analysis cell’ under Ministry of Petroleum and Natural Gas for Delhi, Kolkata, Mumbai & Chennai, for the 3 months of the quarter under consideration</p> <p>E_B 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.</p> <p>E_Q 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.</p> <p>PM_B Index Number of Wholesale Prices in India by Groups and Sub Groups (Averages) for ‘Manufacture of machinery for mining, quarrying and construction’– published in RBI (Reserve Bank of India) Bulletin, for the base period.</p> <p>PM_Q Index Number of Wholesale Prices in India by Groups and Sub Groups (Averages) for ‘Manufacture of machinery for mining, quarrying and construction’– published in RBI (Reserve Bank of India) Bulletin, for the average price index of 3 months of the quarter under consideration.</p> <p>S_B The average rate provided by the Joint Plant Committee for the relevant category of steel item as mentioned in Clause 46A.9; for the base period.</p> <p>S_Q The average rate provided by the Joint Plant Committee for the relevant category of steel item as mentioned in Clause 46A.9; for</p>
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	<p>the 3 months of the quarter under consideration.</p> <p>C_B Index No. of Wholesale Price Index of sub-group Cement, Lime & Plaster as published in RBI Bulletin for the base period</p> <p>C_Q 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</p> <p>R_T IEEMA price index for Steel Blooms (size 150mmx150mm) for the month which is two months prior to date of inspection of material.</p> <p>R_O IEEMA price index for Steel Blooms (size 150mmx150mm)for the month which is one month prior to date of opening of tender.</p> <p>P_T IEEMA price index for Copper wire rods for the month which is two months prior to date of inspection of material.</p> <p>P_O IEEMA price index for Copper wire rods for the month which is one month prior to date of opening of tender.</p> <p>Z_T IEEMA price index for Zinc for the month which is two months prior to date of inspection of material</p> <p>Z_O IEEMA price index for Zinc for the month which is one month prior to date of opening of tender</p> <p>I_T RBI wholesale price index for the sub-group “Insulators” for the month which is two months prior to date of inspection of material</p> <p>I_O RBI wholesale price index for the sub-group “Insulators” for the month which is one month prior to date of opening of tender.</p>												
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	<p>(1) Relevant categories of steel for the purpose of operating Price Variation formula as mentioned in this Clause shall be as under:</p> <table border="1"> <thead> <tr> <th>SL</th> <th>Classification</th> <th>Rates to be used for calculating S_Q or S_B</th> </tr> </thead> <tbody> <tr> <td>1.</td> <td>Reinforcement bars and other rounds</td> <td>Average of per tonne rates of 10mm dia TMT & 25mm dia TMT; confirming IS1786; Fe 500</td> </tr> <tr> <td>2.</td> <td>All types and sizes of angles, channels and joists</td> <td>Average of per tonne rates of ‘Angle 75x75x6mm, Mild Steel Plate 10mm thickness and Channel 150x75mm; confirming IS2062, E250 Gr “A”</td> </tr> <tr> <td>3.</td> <td>All types and sizes of plates</td> <td>Average of per tonne rates of ‘MS Plates 10mm thickness and 25mm thickness; confirming IS2062, E250 Gr “A”</td> </tr> </tbody> </table>	SL	Classification	Rates to be used for calculating S _Q or S _B	1.	Reinforcement bars and other rounds	Average of per tonne rates of 10mm dia TMT & 25mm dia TMT; confirming IS1786; Fe 500	2.	All types and sizes of angles, channels and joists	Average of per tonne rates of ‘Angle 75x75x6mm, Mild Steel Plate 10mm thickness and Channel 150x75mm; confirming IS2062, E250 Gr “A”	3.	All types and sizes of plates	Average of per tonne rates of ‘MS Plates 10mm thickness and 25mm thickness; confirming IS2062, E250 Gr “A”
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<p data-bbox="151 898 250 930">46A.10</p>	<p data-bbox="321 898 1032 930">Price Variation during Extended Period of Contract</p> <p data-bbox="321 936 1421 1152">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 17A of the Standard General Conditions of Contract. However, where extension of time has been granted due to Contractor’s failure under Clause 17B of the Standard General Conditions of Contract, price adjustment shall be done as follows:</p> <ul style="list-style-type: none"> <li data-bbox="370 1192 1421 1409">a. In case the indices increase above the indices applicable to the last month of original completion period or the extended period under Clause 17A, the price adjustment for the period of extension granted under Clause 17B 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 17A of the Standard General Conditions of Contract; as the case may be. <li data-bbox="370 1415 1421 1591">b. In case the indices fall below the indices applicable to the last month of original/ extended period of completion under Clause 17A, as the case may be; then the lower indices shall be adopted for the price adjustment for the period of extension under Clause 17B of the Standard General Conditions of Contract. 																		
<p data-bbox="167 1642 201 1673">47</p>	<p data-bbox="321 1642 1421 1892">Maintenance of Works: The Contractor shall at all times during the progress and continuance of the works and also for the period of maintenance/Guarantee Period specified in the Special condition of contract, after the date of issue of the certificate of completion by the Engineer or any other earlier date subsequent to the completion of the works that may be fixed by the Engineer, be responsible for and effectively maintain and uphold in good substantial, sound and perfect condition all and every part of the works and shall make good from time to time and at all times as often as</p>																		

	<p>the Engineer shall require, any damage or defect that may during the above period arise in or be discovered or be in any way connected with the works, provided that such damage or defect is not directly caused by errors in the contract documents, act of providence or insurrection or civil riot, and the Contractor shall be liable for and shall pay and make good to the HRIDC or other persons legally entitled thereto whenever required by the Engineer so to do, all losses, damages, costs and expenses they or any of them may incur or be put or be liable to by reasons or in consequence of the operations of the Contractor or of his failure in any respect.</p>
<p>48.(1)</p>	<p>Certificate of Completion of Works: As soon as in the opinion of the Engineer, the work has been completed and has satisfactorily passed any final test or tests that may be prescribed, the Engineer shall issue a certificate of completion duly indicating the date of completion in respect of the work and the period of maintenance of the work shall commence from the date of completion mentioned in such certificate. The certificate, inter alia, should mention that the work has been completed in all respects and that all the contractual obligations have been fulfilled by the Contractor and that there is no due from the Contractor to HRIDCs against the contract concerned.</p> <p>The Engineer may also issue such a certificate indicating date of completion with respect to any part of the work (before the completion of the whole of work), which has been both completed to the satisfaction of the Engineer and occupied or used by the HRIDC. When any such certificate is given in respect of part of a work, such part shall be considered as completed and the period of maintenance of such part shall commence from the date of completion mentioned in the completion certificate issued for that part of the work.</p>
<p>48.(2)</p>	<p>Contractor not Absolved by Completion Certificate: The Certificate of Completion in respect of the works referred to in Sub-Clause (1) of this Clause shall not absolve the Contractor from his liability to make good any defects imperfections, shrinkages or faults which may appear during the period of maintenance specified in the tender arising in the opinion of the Engineer from materials or workmanship not in accordance with the drawings or specifications or instruction of the Engineer, which defects, imperfections, shrinkages or faults shall upon the direction in writing of the Engineer be amended and made good by the Contractor at his own cost; and in case of default on the part of Contractor, the Engineer may employ labour and materials or appoint another Contractor to amend and make good such defects, imperfections, shrinkages and faults and all expenses consequent thereon and incidental thereto shall be borne by the Contractor and shall be recoverable from any moneys due to him under the contract.</p>
<p>48.3</p>	<p>Final Supplementary Agreement: After the work is completed or otherwise concluded by the parties with mutual consent, and taken over by the HRID as per terms and conditions of the contract agreement, and there is unequivocal no claim on either side under the Contract other than as mentioned in item 4 of Annexure XIV, the parties shall execute the Final Supplementary Agreement as per Annexure XIV.</p>

<p>49.</p>	<p>Approval only by Maintenance Certificate: No certificate other than Maintenance Certificate, if applicable, referred to in Clause 50 of the Conditions shall be deemed to constitute approval of any work or other matter in respect of which it is issued or shall be taken as an admission of the due performance of the contract or any part thereof.</p>
<p>50.1</p>	<p>Maintenance Certificate: The Contract shall not be considered as completed until a Maintenance Certificate, if applicable, shall have been signed by the Engineer stating that the works have been completed and maintained to his satisfaction. The Maintenance Certificate shall be given by the Engineer upon the expiration of the period of maintenance/ Guarantee Period or as soon thereafter as any works ordered during such period pursuant to Sub Clause (2) to Clause 48 of these Conditions shall have been completed to the satisfaction of the Engineer, and full effect shall be given to this Clause notwithstanding the taking possession of or using the works or any part thereof by the HRIDC.</p> <p>The Competent Authority to issue above Maintenance Certificate shall normally be the authority who is competent to sign the contract. If this Competent Authority is of the rank lower than JA Grade, then a JA Grade Officer (concerned with the work) should issue the Certificate. The Certificate, inter alia, should mention that the work has been completed in all respects and that all the contractual obligations have been fulfilled by the Contractor and that there is no due from the Contractor to HRIDC against the contract concerned.</p>
<p>50.2</p>	<p>Cessation of HRIDC Liability: The HRIDC shall not be liable to the Contractor for any matter arising out of or in connection with the contract for execution of the works unless the Contractor has made a claim in writing in respect thereof before the issue of the Maintenance Certificate under this clause.</p>
<p>50.3</p>	<p>Unfulfilled Obligations: Notwithstanding the issue of the Maintenance Certificate the Contractor and (subject to Sub-Clause (2) of this Clause) the HRIDC shall remain liable for the fulfillment of any obligation incurred under the provision of the contract prior to the issue of the Maintenance Certificate which remains unperformed at the time such Certificate is issued and for the purposes of determining the nature and extent of any such obligations, the contract shall be deemed to remain in force between the parties thereto.</p>
<p>51.1</p>	<p>Final Payment: On the Engineer's certificate of completion in respect of the works, adjustment shall be made and the balance of account based on the Engineer or the Engineer's representative's certified measurements or Engineer's certified "contractor's authorized engineer's measurements" of the total quantity of work executed by the Contractor upto the date of completion and on the rates accepted in Bill(s) of Quantities and for extra works on rates determined under Clause 39 of these Conditions shall be paid to the Contractor subject always to any deduction which may be made under these presents and further subject to the Contractor having signed</p>

	<p>delivered to the Engineer enclosing either a full account in detail of all claims he may have on the HRIDC in respect of the works or having delivered No Claim Certificate and the Engineer having after the receipt of such account given a certificate in writing that such claims are not covered under excepted matter i.e. Clauses 7(j), 8, 18, 22(5), 39.1, 39.2, 40A, 43(2), 45(i)(a), 55, 55-A(5), 57, 57A, 61(1), 61(2) and 62(1), 63(iv) and 63.2.11 of the Standard General Conditions of Contract or in any Clause (stated as excepted matter) of the Special Conditions of the Contract, that the whole of the works to be done under the provisions of the Contracts have been completed, that they have been inspected by him since their completion and found to be in good and substantial order, that all properties, works and things, removed, disturbed or injured in consequence of the works have been properly replaced and made good and all expenses and demands incurred by or made upon the HRIDC for or in the respect of damage or loss by from or in consequence of the works, have been satisfied agreeably and in conformity with the contract.</p>
<p>51.2</p>	<p>Post Payment Audit: It is an agreed term of contract that the HRIDC reserves to itself 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 till the release of security deposit or settlement of claims, whichever is later, if as a result of such examination any over-payment to him is discovered to have been made in respect of any works done or alleged to have been done by him under the contract.</p>
<p>51-A.</p>	<p>Production of Vouchers etc. by the Contractor:</p> <p>(i) For a contract of more than one crore of rupees, the Contractor shall, whenever required, produce or cause to be produced for examination by the Engineer any quotation, invoice, cost or other account, book of accounts, voucher, receipt, letter, memorandum, paper of writing or any copy of or extract from any such document and also furnish information and returns verified in such manner as may be required in any way relating to the execution of this contract or relevant for verifying or ascertaining cost of execution of this contract (the decision of the Engineer on the question of relevancy of any documents, information or return being final and binding in the parties). The Contractor shall similarly produce vouchers etc., if required to prove to the Engineer, that materials supplied by him, are in accordance with the specifications laid down in the contract.</p> <p>(ii) If any portion of the work in a contract of value more than one crore of rupees be carried out by a sub-contractor or any subsidiary or allied firm or company (as per Clause 7 of the Standard General Conditions of Contract), the Engineer shall have power to secure the books of such sub-contract or any subsidiary or allied firm or company, through the Contractor, and such books shall be open to his inspection.</p>

	<p>(iii) The obligations imposed by Sub Clause (i) & (ii) above is without prejudice to the obligations of the Contractor under any statute rules or orders binding on the Contractor.</p>
<p>52.</p>	<p>Withholding and Lien in Respect of Sums Claimed: Whenever any claim or claims for payment of a sum of money arises out of or under the contract against the Contractor, the HRIDC shall be entitled to withhold and also have a lien to retain such sum or sums in whole or in part from the security, if any, deposited by the Contractor and for the purpose aforesaid, the HRIDC shall be entitled to withhold the said cash Security Deposit or the Security if any, furnished as the case may be and also have a lien over the same pending finalization or adjudication of any such claim. In the event of the security being insufficient to cover the claimed amount or amounts or if no security has been taken from the Contractor, the HRIDC shall be entitled to withhold and have a lien to the extent of the such claimed amount or amounts referred to supra, from any sum or sums found payable or which at any time thereafter may become payable to the Contractor under the same contract or any other contract with this or any other Railway/HRIDC or any Department of the Central Government pending finalization or adjudication of any such claim.</p> <p>It is an agreed term of the contract that the sum of money or moneys so withheld or retained under the lien referred to above, by the HRIDC will be kept withheld or retained as such by the HRIDCs till the claim arising out of or under the contract is determined by the arbitrator (if the contract governed by the Arbitration Clause) or by the competent court as the case may be and that the Contractor will have no claim for interest or damages whatsoever on any account in respect of such withholding or retention under the lien referred to supra and duly notified as such to the Contractor. For the purpose of this clause, where the Contractor is a partnership firm or a company, the HRIDC shall be entitled to withhold and also have a lien to retain towards such claimed amount or amounts in whole or in part from any sum found payable to any partner / company, as the case may be whether in his individual capacity or otherwise.</p>
<p>52-A</p>	<p>Lien in Respect of Claims in other Contracts:</p> <p>(i) Any sum of money due and payable to the Contractor (including the Security Deposit returnable to him) under the contract may be withheld or retained by way of lien by the HRIDC, against any claim of this or any other HRIDC or any other Department of the Central Government in respect of payment of a sum of money arising out of or under any other contract made by the Contractor with this or any other Department of the Central Government.</p> <p>(ii) However, recovery of claims of HRIDC in regard to terminated contracts may be made from the Final Bill, Security Deposits and Performance Guarantees of other contract or contracts, executed by the Contractor. The Performance Guarantees submitted by the Contractor against other contracts, if required,</p>

	<p>may be withheld and encashed. In addition, 10% of each subsequent ‘on-account bill’ may be withheld, if required, for recovery of HRIDC dues against the terminated contract.</p> <p>(iii) It is an agreed term of the contract that the sum of money so withheld or retained under this Clause by the HRIDC will be kept withheld or retained as such by the HRIDC till the claim arising out of or under any other contract is either mutually settled or determined by arbitration, if the other contract is governed by Arbitration Clause or by the competent court as the case may be and Contractor shall have no claim for interest or damages whatsoever on this account or on any other ground in respect of any sum of money withheld or retained under this Clause and duly notified as such to the Contractor.</p>
<p>53.</p>	<p>Signature on Receipts for Amounts: Every receipt for money which may become payable or for any security which may become transferable to the Contractors under these presents, shall, if signed in the partnership name by anyone of the partners of a Contractor's firm be a good and sufficient discharge to the HRIDC in respect of the moneys or security purported to be acknowledged thereby and in the event of death of any of the Contractor, partners during the pendency of the contract, it is hereby expressly agreed that every receipt by anyone of the surviving Contractor partners shall if so signed as aforesaid be good and sufficient discharge as aforesaid provided that nothing in this Clause contained shall be deemed to prejudice or effect any claim which the HRIDC may hereafter have against the legal representative of any Contractor partner so dying for or in respect to any breach of any of the conditions of the contract, provided also that nothing in this clause contained shall be deemed to prejudice or effect the respective rights or obligations of the Contractor partners and of the legal representatives of any deceased Contractor partners interest.</p>
	<p>LABOUR :-</p>
<p>54.</p>	<p>Wages to Labour: The Contractor shall be responsible to ensure compliance with the provision of the Minimum Wages Act, 1948 (hereinafter referred to as the “said Act”) and the Rules made thereunder in respect of any employees directly or through petty Contractors or sub-contractors employed by him for the purpose of carrying out this contract.</p> <p>If, in compliance with the terms of the contract, the Contractor supplied any labour to be used wholly or partly under the direct orders and control of the HRIDC whether in connection with any work being executed by the Contractor or otherwise for the purpose of the HRIDC such labour shall, for the purpose of this Clause, still be deemed to be persons employed by the Contractor.</p> <p>If any moneys shall, as a result of any claim or application made under the</p>

	<p>said Act be directed to be paid by the HRIDC, such money shall be deemed to be moneys payable to the HRIDC by the Contractor and on failure by the Contractor to repay the HRIDC any moneys paid by it as aforesaid within seven days after the same shall have been demanded, the HRIDCs shall be entitled to recover the same from Contractor's bills/Security Deposit or any other dues of Contractor with the Government of India.</p>
54-A.	<p>Apprentices Act: The Contractor shall be responsible to ensure compliance with the provisions of the Apprentices Act, 1961 and the Rules and Orders issued thereunder from time to time in respect of apprentices directly or through petty Contractors or sub-contractors employed by him for the purpose of carrying out the Contract.</p> <p>If the Contractor directly or through petty Contractors or sub-contractors fails to do so, his failure will be a breach of the contract and the HRIDC may, in its discretion, rescind the contract. The Contractor shall also be liable for any pecuniary liability arising on account of any violation of the provisions of the Act.</p>
55.	<p>Provisions of Payments of Wages Act: The Contractor shall comply with the provisions of the Payment of Wages Act, 1936 and the rules made thereunder in respect of all employees employed by him either directly or through petty Contractors or sub-contractors in the works. If in compliance with the terms of the contract, the Contractor directly or through petty Contractors or sub-contractors shall supply any labour to be used wholly or partly under the direct orders and control of the Engineer whether in connection with the works to be executed hereunder or otherwise for the purpose of the Engineer, such labour shall nevertheless be deemed to comprise persons employed by the Contractor and any moneys which may be ordered to be paid by the Engineer shall be deemed to be moneys payable by the Engineer on behalf of the Contractor and the Engineer may on failure of the Contractor to repay such money to the HRIDCs deduct the same from any moneys due to the Contractor in terms of the contract. The HRIDC shall be entitled to recover the same from Contractor's bills/Security Deposit or any other dues of Contractor with the Government of India all moneys paid or payable by the HRIDC by way of compensation of aforesaid or for costs of expenses in connection with any claim thereto and the decision of the Engineer upon any question arising out of the effect or force of this Clause shall be final and binding upon the Contractor.</p>
55-A.	<p>Provisions of Contract Labour (Regulation and Abolition) Act, 1970:</p>
55-A.(1)	<p>The Contractor shall comply with the provision of the contract labour (Regulation and Abolition) Act, 1970 and the Contract labour (Regulation and Abolition) Central Rules 1971 as modified from time to time, wherever applicable and shall also indemnify the HRIDC from and against any claims under the aforesaid Act and the Rules.</p>
55-A.(2)	<p>The Contractor shall obtain a valid license under the aforesaid Act as modified from</p>

	<p>time to time before the commencement of the work and continue to have a valid license until the completion of the work. Any failure to fulfill the requirement shall attract the penal provision of the Act.</p>
55-A.(3)	<p>The Contractor shall pay to the labour employed by him directly or through sub-contractors the wages as per provision of the aforesaid Act and the Rules wherever applicable. The Contractor shall notwithstanding the provisions of the contract to the contrary, cause to be paid the wages to labour, indirectly engaged on the works including any engaged by sub-contractors in connection with the said work, as if the labour had been immediately employed by him.</p>
55-A.(4)	<p>In respect of all labour directly or indirectly employed in the work for performance of the Contractor's part of the contract, the Contractor shall comply with or cause to be complied with the provisions of the aforesaid Act and Rules wherever applicable.</p>
55-A.(5)	<p>In every case in which, by virtue of the provisions of the aforesaid Act or the rules, the HRIDC is obliged to pay any amount of wages to a workman employed by the Contractor or his sub-contractor in execution of the work or to incur any expenditure on account of the contingent, liability of the HRIDC due to the Contractor's failure to fulfill his statutory obligations under the aforesaid Act or the rules, the HRIDC will recover from the Contractor, the amount of wages so paid or the amount of expenditure so incurred and without prejudice to the rights of the HRIDC under the Section 20, Sub-Section (2) and Section 2, Sub-Section (4) of the aforesaid Act, the HRIDC shall be at liberty to recover such amount or part thereof from Contractor's bills/Security Deposit or any other dues of Contractor with the Government of India. The HRIDC shall not be bound to contest any claim made against it under Sub-Section (1) of Section 20 and Sub-Section (4) of Section 21 of the aforesaid Act except on the written request of the Contractor and upon his giving to the HRIDC full security for all costs for which the HRIDC might become liable in contesting such claim. The decision of the Engineer regarding the amount actually recoverable from the Contractor as stated above shall be final and binding on the Contractor.</p>
55-B.	<p>Provisions of Employees Provident Fund and Miscellaneous Provisions Act, 1952: The Contractor shall comply with the provisions of Para 30 & 36-B of the Employees Provident Fund Scheme, 1952; Para 3 & 4 of Employees' Pension Scheme, 1995; and Para 7 & 8 of Employees Deposit Linked Insurance Scheme, 1976; as modified from time to time through enactment of "Employees Provident Fund & Miscellaneous Provisions Act, 1952", wherever applicable and shall also indemnify the HRIDC from and against any claims under the aforesaid Act and the Rules.</p>
55-C	<p>(i) Contractor is to abide by the provisions of various labour laws in terms of above clause 54, 55, 55-A and 55-B of the Standard General Conditions of Contract.</p>

<p>55-D.</p>	<p>Provisions of “The Building and Other Construction Workers (Regulation of Employment and Conditions of Service) Act, 1996” and “The Building and Other Construction Workers’ Welfare Cess Act, 1996”: The tenderers, for carrying out any construction work, shall get themselves registered with the Registering Officer under Section-7 of the Building and Other Construction Workers Act, 1996 and Rules made thereto by the concerned State Govt., and submit Certificate of Registration issued by Registering Officer of the concerned State Govt. (Labour Dept.). The Cess shall be deducted from contractor’s bills as per provisions of the Act.</p>
<p>56.</p>	<p>Reporting of Accidents: The Contractor shall be responsible for the safety of all employees directly or through petty Contractors or sub-contractor employed by him on the works and shall report serious accidents to any of them however and wherever occurring on the works to the Engineer or the Engineers Representative and shall make every arrangement to render all possible assistance.</p>
<p>57.</p>	<p>Provision of Workmen’s Compensation Act: In every case in which by virtue of the provisions of Section 12 Sub-Section (1) of the Workmen's Compensation Act 1923, HRIDC is obliged to pay compensation to a workman directly or through petty Contractor or sub-contractor employed by the Contractor in executing the work, HRIDC will recover from the Contractor the amount of the compensation so paid, and, without prejudice to the rights of HRIDC under Section 12 Sub-section (2) of the said Act, HRIDC shall be at liberty to recover such amount or any part thereof from Contractor’s bills/Security Deposit or any other dues of Contractor with the Government of India. HRIDC shall not be bound to contest any claim made against it under Section 12 Sub-Section (1) of the said Act except on the written request of the Contractor and upon his giving to HRIDC full security for all costs for which HRIDC might become liable in consequence of contesting such claim.</p>
<p>57-A.</p>	<p>Provision of Mines Act: The Contractor shall observe and perform all the provisions of the Mines Act, 1952 or any statutory modifications or re-enactment thereof for the time being in force and any rules and regulations made thereunder in respect of all the persons directly or through the petty Contractors or sub-contractors employed by him under this contract and shall indemnify the HRIDC from and against any claims under the Mines Act, or the rules and regulations framed thereunder, by or on behalf of any persons employed by him or otherwise.</p>
<p>58.</p>	<p>HRIDC not to Provide Quarters for Contractors: No quarters shall normally be provided by the HRIDC for the accommodation of the Contractor or any of his staff employed on the work. In exceptional cases where accommodation is provided to the Contractor at the HRIDC discretion, recoveries shall be made at such rates as may be fixed by the HRIDC for the full rent of the buildings and equipments therein as well as charges for electric current, water supply and conservancy.</p>

<p>59.1</p>	<p>Labour Camps: The Contractor shall at his own expense make adequate arrangements for the housing, supply of drinking water and provision of latrines and urinals for his staff and workmen, directly or through the petty Contractors or sub-contractors and for temporary creche (Bal-Mandir) where 50 or more women are employed at a time. Suitable sites on HRIDC land, if available, may be allotted to the Contractor for the erection of labour camps, either free of charge or on such terms and conditions that may be prescribed by the. All camp sites shall be maintained in clean and sanitary conditions by the Contractor at his own cost.</p>
<p>59.2</p>	<p>Compliance to Rules for Employment of Labour: The Contractor(s) shall conform 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 petty contractors or sub-contractors on the works.</p>
<p>59.3</p>	<p>Preservation of Peace: The Contractor shall take requisite precautions and use his best endeavours to</p> <ul style="list-style-type: none"> (i) Prevent any riotous or unlawful behaviour by or amongst his workmen and other employed directly or through the petty Contractors or sub-contractors on the works and for the preservation of peace and protection of the inhabitants and (ii) Security of property in the neighbourhood of the works. In the event of the HRIDC requiring the maintenance of a Special Police Force at or in the vicinity of the site during the tenure of works, the expenses thereof shall be borne by the Contractor and if paid by the HRIDC shall be recoverable from the Contractor.
<p>59.4</p>	<p>Sanitary Arrangements: The Contractor shall obey all sanitary rules and carry out all sanitary measures that may from time to time be prescribed by the Railway or any other Medical Authority and permit inspection of all sanitary arrangements at all times by the Engineer, the Engineer's Representative or the Medical Staff of the Railway. Should the Contractor fail to make the adequate sanitary arrangements, these will be provided by the HRIDC and the cost thereof recovered from the Contractor.</p>
<p>59.5</p>	<p>Outbreak of Infectious Disease: The Contractor shall remove from his camp such labour and their families as refuse protective inoculation and vaccination when called upon to do so by the Engineer or the Engineer's Representative on the advice of the Railway Medical Authority. Should cholera, plague, or other infectious disease break out, the Contractor shall burn the huts, beddings, clothes and other belongings of or used by the infected parties and promptly erect new huts on healthy sites as required by the Engineer, failing which within the time specified in the Engineer's requisition, the work may be done by the HRIDC and the cost thereof recovered from the Contractor.</p>
<p>59.6</p>	<p>Treatment of Contractor's Staff in Railway/HRIDC Hospitals: Not applicable</p>

<p>59.7</p>	<p>Medical Facilities at Site: The Contractor shall provide medical facilities at the site as may be prescribed by the Engineer on the advice of the Railway or any authorised Medical Authority in relation to the strength of the Contractor's resident staff and workmen.</p>
<p>59.8</p>	<p>Use of Intoxicants: The sale of ardent spirits or other intoxicating beverages upon the work or in any of the buildings, encampments or tenements owned, occupied by or within the control of the Contractor or any of his employees shall be forbidden and the Contractor shall exercise his influence and authority to the utmost extent to secure strict compliance with this condition.</p>
<p>59.9</p>	<p>Restrictions on the Employment of Retired Engineers of Railway Services Within One Year of their Retirement: The Contractor shall not, if he is a retired Government Engineer of Gazetted rank, himself engage in or employ or associate a retired Government Engineer of Gazetted rank, who has not completed one year from the date of retirement, in connection with this contract in any manner whatsoever without obtaining prior permission of the President and if the Contractor is found to have contravened this provision it will constitute a breach of contract and administration will be entitled to terminate the contract and forfeit his Performance Guarantee as well as Security Deposit.</p>
<p>60.1</p>	<p>Non-Employment of Labourers below the age of 15: The Contractor shall not employ children below the age of 15 as labourers directly or through petty Contractors or sub-contractors for the execution of work.</p>
<p>60.2</p>	<p>Medical Certificate of Fitness for Labour: It is agreed that the Contractor shall not employ a person above 15 and below 19 years of age for the purpose of execution of work under the contract unless a medical certificate of fitness in the prescribed form (Proforma at Annexure-VIII) granted to him by a certifying surgeon certifying that he is fit to work as an adult, is obtained and kept in the custody of the Contractor or a person nominated by him in this behalf and the person carries with him, while at work; a token giving a reference to such certificate. It is further agreed that the responsibility for having the adolescent examined medically at the time of appointment or periodically till he attains the age of 19 years shall devolve entirely on the Contractor and all the expenses to be incurred on this account shall be borne by him and no fee shall be charged from the adolescent or his parent for such medical examination.</p>
<p>60.3</p>	<p>Period of Validity of Medical Fitness Certificate: A certificate of fitness granted or renewed for the above said purposes shall be valid only for a period of one year at a time. The certifying surgeon shall revoke a certificate granted or renewed if in his opinion the holder of it, is no longer fit for work in the capacity stated therein. Where a certifying surgeon refuses to grant or renew a certificate or revoke a certificate, he shall, if so required by the person concerned, state his reasons in writing for doing so.</p>

<p>60.4</p>	<p>Medical Re-Examination of Labourer: Where any official appointed in this behalf by the Ministry of Labour is of the opinion that any person employed in connection with the execution of any work under this contract in the age group 15 to 19 years is without a certificate of fitness or is having a certificate of fitness but no longer fit to work in the capacity stated in the certificate, he may serve on the Contractor, or on the person nominated by him in this regard, a notice requiring that such persons shall be examined by a certifying surgeon and such person shall not if the concerned official so directs, be employed or permitted to do any work under this contract unless he has been medically examined and certified that he is fit to work in the capacity stated in the certificate.</p> <p>EXPLANATIONS:</p> <p>(1) Only Qualified Medical Practitioners can be appointed as "Certifying Surgeons" and the term "Qualified Medical Practitioners" means a person holding a qualification granted by an authority specified in the Schedule to the Indian Medical Degrees Act, 1916 (VII to 1916) or in the Schedule to the Indian Medical Council Act, 1933 (XXVII) of 1933.</p> <p>(2) The Certifying surgeon may be a medical officer in the service of State or Municipal Corporation.</p>
	<p>DETERMINATION OF CONTRACT :-</p>
<p>61.1</p>	<p>Right of HRIDC to Determine the Contract: The HRIDC shall be entitled to determine and terminate the contract at any time should, in the HRIDC opinion, the cessation of work becomes necessary owing to paucity of funds or from any other cause whatever, in which case the value of approved materials at site and of work done to date by the Contractor will be paid for in full at the rate specified in the contract. Notice in writing from the HRIDC of such determination and the reasons therefor shall be conclusive evidence thereof.</p>
<p>61.2</p>	<p>Payment on Determination of Contract: Should the contract be determined under sub clause (1) of this clause and the Contractor claims payment for expenditure incurred by him in the expectation of completing the whole of the work, the HRIDC shall admit and consider such claims as are deemed reasonable and are supported by vouchers to the satisfaction of the Engineer. The HRIDC decision on the necessity and propriety of such expenditure shall be final and conclusive.</p>
<p>61.3</p>	<p>The Contractor shall have no claim to any payment of compensation or otherwise, howsoever on account of any profit or advantage which he might have derived from the execution of the work in full but which he did not derive in consequence of determination of contract.</p>

62.1	<p>Determination of Contract owing to Default of Contractor: If the Contractor should:</p> <ul style="list-style-type: none"> (i) Becomes bankrupt or insolvent, or (ii) Make an arrangement for assignment in favour of his creditors, or agree to carry out the contract under a Committee of Inspection of his creditors, or (iii) Being a Company or Corporation, go into liquidation (other than a voluntary liquidation for the purposes of amalgamation or reconstruction), or (iv) Have an execution levied on his goods or property on the works, or (v) Assign the contract or any part thereof otherwise than as provided in Clause 7 of these Conditions, or (vi) Abandon the contract, or (vii) Persistently disregard the instructions of the Engineer, or contravene any provision of the contract, or (viii) Fail to adhere to the agreed programme of work by a margin of 10% of the stipulated period, or (ix) Fail to Execute the contract documents in terms of Para 8 of the Instructions to Tenderers. (x) Fail to submit the documents pertaining to identity of JV and PAN in terms of Para 17.11 of Tender Form (Second Sheet) of Annexure I available in the Instructions to Tenderers. (xi) Fail to remove materials from the site or to pull down and replace work after receiving from the Engineer notice to the effect that the said materials or works have been condemned or rejected under Clause 25 and 27 of these Conditions, or (xii) Fail to take steps to employ competent or additional staff and labour as required under Clause 26 of these Conditions, or (xiii) Fail to afford the Engineer or Engineer's representative proper facilities for inspecting the works or any part thereof as required under Clause 28 of these Conditions, or (xiv) Promise, offer or give any bribe, commission, gift or advantage either himself or through his partner, agent or servant to any officer or employee of the HRIDC or to any person on his or on their behalf in relation to the execution of this or any other contract with this HRIDC. (xv) Fail to adhere to the provisions of Para 16 of Tender Form (Second Sheet) of Annexure I of the Instructions to Tenderers, or provision Clause 59(9) of these Conditions. (xvi)Submits copy of fake documents / certificates in support of credentials, submitted by the tenderer <p>Then and in any of the said Clause, the Engineer on behalf of the HRIDC may serve the Contractor with a notice (Proforma at Annexure-IX) in writing to that effect and</p>
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	<p>if the Contractor does not within seven days after the delivery to him of such notice proceed to make good his default in so far as the same is capable of being made good and carry on the work or comply with such directions as aforesaid of the entire satisfaction of the Engineer, the HRIDC shall be entitled after giving 48 hours' notice (Proforma at Annexure-X or XII, as the case may be) in writing under the hand of the Engineer to rescind the contract as a whole or in part or parts (as may be specified in such notice) and after expiry of 48 hours' notice, a final termination notice (Proforma at Annexure-XI or XIII, as the case may be) should be issued.</p> <p>Note: Engineer at his discretion may resort to the part termination of contract with notices (Proforma at Annexure- IX, XII and XIII), only in cases where progress of work is more than or equal to 80% of the original scope of work.</p>
<p>62.2</p>	<p>Right of HRIDC after Rescission of Contract owing to Default of Contractor: In the event of any or several of the courses, referred to in Sub-Clause (1) of this Clause, being adopted:</p> <p>(a) The Contractor shall have no claim to compensation for any loss sustained by him by reason of his having purchased or procured any materials or entered into any commitments or made any advances on account of or with a view to the execution of the works or the performance of the contract and Contractor shall not be entitled to recover or be paid any sum for any work thereto for actually performed under the contract unless and until the Engineer shall have certified the performance of such work and the value payable in respect thereof and the Contractor shall only be entitled to be paid the value so certified.</p> <p>(b) In the contract which has been rescinded as a whole, the Security Deposit already with HRIDC under the contract shall be encashed/ forfeited and the Performance Guarantee already submitted for the contract shall be encashed. The balance work shall be got done independently without risk & cost of the failed Contractor. The failed 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 shall be debarred from participating in the tender for the balance work in his/her individual capacity or as a partner of any other JV /partnership firm.</p> <p>Further the authorized representative of failed Contractor cannot be accepted as authorized representative in new contract.</p> <p>(c) In the contract rescinded in part or parts,</p> <p>(i) The full Performance Guarantee available for the contract shall be recovered. No additional Performance Guarantee shall be required for balance of work being executed through the part terminated contract. The contract value of part terminated contract stands reduced to the balance value of work under the contract.</p> <p>(ii) The Security Deposit of part terminated contract shall be dealt as per clause 16(2) of these Conditions.</p> <p>(iii) The defaulting Contractor shall not be issued any completion certificate for the contract.</p> <p>(iv) The balance work shall be got done independently without risk & cost of the</p>

	<p>failed Contractor. The failed 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 shall be debarred from participating in the tender for the balance work in his/her individual capacity or as a partner of any other JV /partnership firm.</p> <p>(v) Further the authorized representative of failed Contractor will not be accepted as authorized representative in new contract.</p> <p>(d) The Engineer or the Engineer's Representative shall be entitled to take possession of any materials, tools, implements, machinery and buildings on the works or on the property on which these are being or ought to have been executed, and to retain and employ the same in the further execution of the works or any part thereof until the completion of the works without the Contractor being entitled to any compensation for the use and employment thereof or for wear and tear or destruction thereof.</p> <p>(e) The Engineer shall as soon as may be practicable after removal of the Contractor fix and determine ex-parte or by or after reference to the parties or after such investigation or enquiries as he may consider fit to make or institute and shall certify what amount (if any) had at the time of rescission of the contract been reasonably earned by or would reasonably accrue to the Contractor in respect of the work then actually done by him under the contract and what was the value of any unused, or partially used materials, any constructional plant and any temporary works upon the site. The legitimate amount due to the Contractor after making necessary deductions and certified by the Engineer should be released expeditiously.</p>
	<p align="center">SETTLEMENT OF DISPUTES – INDIAN RAILWAY ARBITRATION AND CONCILIATION RULES :-</p>
<p>63.</p>	<p>Conciliation of Disputes:</p> <p>(i) This clause is applicable in the tender having advertised value less than or equal to Rs 50 Crore.</p> <p>(ii) All disputes and differences of any kind whatsoever arising out of or in connection with the contract, whether during the progress of the work or after its completion and whether before or after the determination of the contract, shall be referred by the Contractor to the "MD/HRIDC " through “Notice of Dispute” provided that no such notice shall be served later than 30 days after the date of issue of Completion Certificate by the Engineer. The MD/HRIDC shall, within 30 days after receipt of the Contractor’s “Notice of Dispute”, notify the name of conciliator(s) to the Contractor.</p> <p>(iii)The Conciliator(s) shall assist the parties to reach an amicable settlement in an independent and impartial manner within the terms of contract.</p> <p>(iv)If the parties reach agreement on a settlement of the dispute, they shall draw</p>

	<p>up and sign a written settlement agreement duly signed by Engineer In-charge, Contractor and conciliator(s). When the parties sign the settlement agreement, it shall be final and binding on the parties.</p> <p>(v) The parties shall not initiate, during the conciliation proceedings, any arbitral or judicial proceedings in respect of a dispute that is the subject matter of the conciliation proceedings.</p> <p>(vi) The conciliation proceedings shall be terminated as per Section 76 of ‘The Arbitration and Conciliation Act, 1996.</p>
<p>63.1</p>	<p>Matters Finally Determined by the HRIDC: All disputes and differences of any kind whatsoever arising out of or in connection with the contract, whether during the progress of the work or after its completion and whether before or after the determination of the contract, shall be referred by the Contractor to the Engineer and the Engineer shall, within 120 days after receipt of the Contractor’s representation, make and notify decisions on all matters referred to by the Contractor in writing provided that matters for which provision has been made in Clauses 7(j), 8, 18, 22(5), 39.1, 39.2, 40A, 43(2), 45(i)(a), 55, 55-A(5), 57, 57A, 61(1), 61(2), 62(1), 63(iv) and 63.2.11 of the Standard General Conditions of Contract or in any Clause (stated as excepted matter) of the Special Conditions of the Contract, shall be deemed as ‘excepted matters’ (matters not arbitrable) and decisions of the HRIDC authority, thereon shall be final and binding on the Contractor; provided further that ‘excepted matters’ shall stand specifically excluded from the purview of the Dispute Adjudication Board (DAB) and Arbitration.</p>
<p>63.2</p>	<p>Dispute Adjudication Board (DAB): This clause is applicable in the tender having advertised value more than Rs 50 Crore.</p>
<p>63.2.1</p>	<p>Any dispute/s if not settled with the Engineer, shall be referred to DAB.</p> <p>The DAB shall consist of a panel of three Retired Railway Officers, retired not below senior administrative grade (SAG). The DAB shall be formed within 90 days of signing of Contract Agreement. For this purpose, a panel of DAB members shall be maintained in the MD/HRIDC office. The complete panel, which shall not be less than five members, shall be sent by MD/HRIDC to the Contractor to nominate one member of the DAB from the panel as Contractor’s nominee within two weeks of receipt of the panel. On receipt of Contractor’s nominee, the MD/HRIDC shall nominate one member from the same panel as HRIDC nominee for the DAB. Both above nominees shall jointly select presiding member of the DAB from the same</p>

	panel.
63.2.2	The appointment of DAB shall be effectuated by way of a tri-partite agreement among the HRIDC, Contractor and the respective DAB members. The terms of the remuneration of each member shall be as fixed by Ministry of Railways from time to time. Each party shall be responsible for paying one-half of this remuneration.
63.2.3	If one or more of the members appointed refuses to act as DAB member, or is unable or unwilling to perform his functions as DAB member for any reason whatsoever or dies or in the opinion of the MD/HRIDC fails to act without undue delay, the parties shall terminate the mandate of such DAB member and thereupon new DAB member shall be appointed in the same manner, as the outgoing DAB member had been appointed.
63.2.4	The appointment of any member may be terminated by mutual agreement of both Parties, but not by the HRIDC or the Contractor acting alone. Unless otherwise agreed by both the Parties, the appointment of the DAB (including each member) shall expire upon expiry of this Contract Agreement.
63.2.5	<p>Before start of DAB proceedings, each DAB member shall give the following certificate to the HRIDC and the Contractor:</p> <p style="text-align: center;"><i>“I have no any past or present relationship in relation to the subject matter in dispute, whether financial, business, professional or other kind. Further, I have no any past or present relationship with or interest in any of the parties whether financial, business, professional or other kind, which is likely to give rise to justifiable doubts as to my independence or impartiality.”</i></p>
63.2.6	DAB proceedings shall be conducted as decided by the DAB. The DAB shall give its decision within 90 days of a Dispute referred to it by any of the Parties, duly recording the reasons before arriving at the decision. The DAB shall decide the issue within terms and conditions of the contract. This time limit shall be extendable subject to the Parties mutual agreement.

63.2.7	The DAB decision shall not be binding on both the Parties. In case any party is not satisfied by the decision of DAB, then the aggrieved party may approach Arbitral Tribunal for arbitration proceedings.
63.2.8	No dispute shall be referred to Arbitral Tribunal unless the same has been referred to DAB for adjudication. However, in case DAB is not formed due to any reason, the disputes can be directly referred to Arbitral Tribunal to adjudicate the dispute.
63.2.9	In the specific cases of any misconduct by any of the members of the DAB, the parties shall have the right to specifically bring it to the notice of the DAB such conduct, through a statement filed with necessary documents in proof of such misconduct and the DAB, after taking NOTICE of such conduct initiate the replacement of the member concerned, in the same manner the member to be replaced was appointed.
63.2.10	Once the decision is given by DAB, DAB cannot review the decision at its own or on the request of one party, unless both parties agree for review of decision by DAB
63.2.11	In case DAB decision is not challenged by either party within 180 days of receipt of decision of DAB, the decision shall be considered as final and parties would be barred for referring the same to Arbitral Tribunal for adjudication
63.2.12	The obligation of the HRIDC and the Contactor shall not be altered by reasons of issue being or under reference to DAB.
63.2.13	The DAB shall conduct the proceedings at any convenient venue which shall be decided by DAB in consultations with parties.
63.2.14	It is a term of this contract that the Parties shall not approach any Court of Law for settlement of such disputes or differences unless an attempt has first been made by the parties to settle such disputes or differences through DAB and Arbitral Tribunal.

64.1	Demand for Arbitration:
64.1(i)	In the event of any dispute or difference between the parties hereto as to the construction or operation of this contract, or the respective rights and liabilities of the parties on any matter in question, dispute or difference on any account or as to the withholding by the HRIDC of any certificate to which the Contractor may claim to be entitled to, or if the HRIDC fails to make a decision within 120 days, then and in any such case, but except in any of the “excepted matters” referred to in Clause 63.1 of these Conditions, the Contractor, after 120 days but within 180 days of his presenting his final claim on disputed matters shall demand in writing that the dispute or difference be referred to arbitration.
64.1(ii)) (a)	The demand for arbitration shall specify the matters which are in question, or subject of the dispute or difference as also the amount of claim item-wise. Only such dispute or difference, in respect of which the demand has been made, together with counter claims or set off, given by the HRIDC, shall be referred to arbitration and other matters shall not be included in the reference.
64.1(ii)) (b)	The parties may waive off the applicability of Sub-Section 12(5) of Arbitration and Conciliation (Amendment) Act 2015, if they agree for such waiver in writing, after dispute having arisen between them, in the format given under Annexure XV of these conditions.
64.1(iii)) (a)	The Arbitration proceedings shall be assumed to have commenced from the day, a written and valid demand for arbitration is received by the HRIDC.
64.1(iii)) (b)	The claimant shall submit his claims stating the facts supporting the claims along with all the relevant documents and the relief or remedy sought against each claim within a period of 30 days from the date of appointment of the Arbitral Tribunal.
64.1(iii)) (c)	The HRIDC shall submit its defence statement and counter claim(s), if any, within a period of 60 days of receipt of copy of claims from Tribunal, unless otherwise extension has been granted by Tribunal.
64.1(iii)) (d)	Place of Arbitration: The place of arbitration would be within the geographical limits of the Division of the HRIDC where the cause of action arose or the Headquarters of the concerned HRIDC or any other place with the written consent of both the parties.
64.1(iv))	No new claim shall be added during proceedings by either party. However, a party may amend or supplement the original claim or defense thereof during the course of arbitration proceedings subject to acceptance by Tribunal having due regard to the

	delay in making it.
64.1(v)	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 HRIDC that the final bill is ready for payment, he/they will be deemed to have waived his/their claim(s) and the HRIDC shall be discharged and released of all liabilities under the contract in respect of these claims.
64.2	Obligation During Pendency of Arbitration: Work under the contract shall, unless otherwise directed by the Engineer, continue during the arbitration proceedings, and no payment due or payable by the HRIDC shall be withheld on account of such proceedings, provided, however, it shall be open for Arbitral Tribunal to consider and decide whether or not such work should continue during arbitration proceedings.
64.3	Appointment of Arbitrator:
64.3(a)	Appointment of Arbitrator where applicability of section 12 (5) of Arbitration and Conciliation Act has been waived off:
64.3(a) (i)	In cases where the total value of all claims in question added together does not exceed 1,00,00,000/- (Rupees One Crore), the Arbitral Tribunal shall consist of a Sole Arbitrator who shall be a Gazetted Officer of Railway not below Junior Administrative Grade, nominated by the MD/HRIDC. The sole arbitrator shall be appointed within 60 days from the day when a written and valid demand for arbitration is received by MD/HRIDC.
64.3(a) (ii)	In cases not covered by the Clause 64(3)(a)(i), the Arbitral Tribunal shall consist of a panel of three Gazetted Railway Officers not below Junior Administrative Grade or 2 Railway Gazetted Officers not below Junior Administrative Grade and a retired Railway Officer, retired not below the rank of Senior Administrative Grade Officer, as the arbitrators. For this purpose, the HRIDC will send a panel of at least four (4) names of Gazetted Railway Officers of one or more departments of the HRIDC which may also include the name(s) of retired Railway Officer(s) empanelled to work as HRIDC Arbitrator to the Contractor within 60 days from the day when a written and valid demand for arbitration is received by the MD/HRIDC. Contractor will be asked to suggest to MD/HRIDC at least 2 names out of the panel for appointment as Contractor's nominee within 30 days from the date of dispatch of the request by HRIDC. The MD/HRIDC shall appoint at least one out of them as the Contractor's nominee and will, also simultaneously appoint the balance number of arbitrators either from the panel or from outside the panel, duly indicating the 'presiding arbitrator' from amongst the 3 arbitrators so appointed. MD/HRIDC shall complete this exercise of appointing the Arbitral Tribunal within 30 days from the

	<p>receipt of the names of Contractor’s nominees. While nominating the arbitrators, it will be necessary to ensure that one of them is from the Accounts Department. An officer of Selection Grade of the Accounts Department shall be considered of equal status to the officers in Senior Administrative Grade of other departments of the Railway for the purpose of appointment of arbitrator.</p>
<p>64.3.(a) .iii</p>	<p>The serving railway officer working in arbitral tribunal in the ongoing arbitration cases as per clause 64.(3)(a)(i) and clause 64.(3)(a)(ii) above, can continue as arbitrator in the tribunal even after his retirement.</p>
<p>64.3 (b)</p>	<p>Appointment of Arbitrator where applicability of Section 12 (5) of Arbitration and Conciliation Act has not been waived off:</p> <p>(i) In cases where the total value of all claims in question added together does not exceed 50,00,000/- (Rupees Fifty Lakh), the Arbitral Tribunal shall consist of a Retired Railway Officer, retired not below the rank of Senior Administrative Grade Officer, as the arbitrator. For this purpose, the HRIDC will send a panel of at least four (4) names of retired Railway Officer(s) empanelled to work as HRIDC Arbitrator duly indicating their retirement dates to the Contractor within 60 days from the day when a written and valid demand for arbitration is received by the Engineer. Contractor will be asked to suggest to MD/HRIDC at least 2 names out of the panel for appointment as arbitrator within 30 days from the date of dispatch of the request by HRIDC. The MD/HRIDC shall appoint at least one out of them as the arbitrator within 30 days from the receipt of the names of Contractor’s nominees.</p> <p>(ii) In cases where the total value of all claims in question added together exceed 50,00,000/- (Rupees Fifty Lakh), the Arbitral Tribunal shall consist of a Panel of three (3) retired Railway Officer, retired not below the rank of Senior Administrative Grade Officer, as the arbitrators. For this purpose, the HRIDC will send a panel of at least four (4) names of retired Railway Officer(s) empanelled to work as HRIDC Arbitrator duly indicating their retirement date to the Contractor within 60 days from the day when a written and valid demand for arbitration is received by the MD/HRIDC Contractor will be asked to suggest to MD/HRIDC at least 2 names out of the panel for appointment as Contractor’s nominee within 30 days from the date of dispatch of the request by HRIDC. The MD/HRIDC shall appoint at least one out of them as the Contractor’s nominee and will, also simultaneously appoint the balance number of arbitrators either from the panel or from outside the panel, duly indicating the ‘Presiding Arbitrator’ from amongst the 3 arbitrators so appointed. MD/HRIDC shall complete this exercise of appointing the Arbitral Tribunal within 30 days from the receipt of the names of Contractor’s nominees. While nominating the arbitrators, it will be necessary to ensure that one of them has served in the Accounts Department.</p>
<p>64.3(c) (i)</p>	<p>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</p>

	<p>or dies or in the opinion of the MD/HRIDC fails to act without undue delay, the MD/HRIDC shall appoint new arbitrator/arbitrators to act in his/their place in the same manner in which the earlier arbitrator/arbitrators had been appointed. 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).</p>
<p>64.(3) (c) (ii)</p>	<p>(a) The Arbitral Tribunal shall have power to call for such evidence by way of affidavits or otherwise as the Arbitral Tribunal shall think proper, and it shall be the duty of the parties hereto to do or cause to be done all such things as may be necessary to enable the Arbitral Tribunal to make the award without any delay. The proceedings shall normally be conducted on the basis of documents and written statements.</p> <p>(b) Before proceeding into the merits of any dispute, the Arbitral Tribunal shall first decide and pass its orders over any plea submitted/objections raised by any party, if any, regarding appointment of Arbitral Tribunal, validity of arbitration agreement, jurisdiction and scope of the Tribunal to deal with the dispute (s) submitted to arbitration, applicability of time ‘limitation’ to any dispute, any violation of agreed procedure regarding conduct of the arbitral proceedings or plea for interim measures of protection and record its orders in day to day proceedings. A copy of the proceedings duly signed by all the members of tribunal should be provided to both the parties.</p>
<p>64.3(c) (iii)</p>	<p>(i) Qualification of Arbitrator (s):</p> <p>(a) Serving Gazetted Railway Officers of not below JA Grade level.</p> <p>(b) Retired Railway Officers not below SA Grade level, one year after his date of retirement.</p> <p>(c) Age of arbitrator at the time of appointment shall be below 70 years.</p> <p>(ii) An arbitrator may be appointed notwithstanding the total number of arbitration cases in which he has been appointed in the past.</p> <p>(iii) While appointing arbitrator(s) under Sub-Clause 64.(3)(a)(i), 64.(3)(a)(ii), 64.(3)(b)(i) & 64.(3)(b)(ii) above, due care shall be taken that he/they is/are not the one/those who had an opportunity to deal with the matters to which the contract relates or who in the course of his/their duties as Railway servant(s) expressed views on all or any of the matters under dispute or differences. A certification to this effect as per annexure- XVI shall be taken from Arbitrators also. The proceedings of the Arbitral tribunal or the award made by such Tribunal will, however, not be invalid merely for the reason that one or more arbitrator had, in the course of his service, opportunity to deal with the matters to which the contract relates or who in the course of his/their duties expressed views on all or any of the matters under dispute.</p>
<p>64.(3)(d)(i)</p>	<p>The arbitral award shall state item wise, the sum and reasons upon which it is based. The analysis and reasons shall be detailed enough so that the award could be inferred therefrom.</p>

<p>64.(3)(d)(ii)</p>	<p>A party may apply for corrections 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 a specific point of award to Tribunal within 60 days of receipt of the award.</p>
<p>64.(3)(d)(iii)</p>	<p>A party may apply to 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.</p>
<p>64.(4)</p>	<p>In case of the Tribunal, comprising of three members, any ruling on award shall be made by a majority of members of Tribunal. In the absence of such a majority, the views of the Presiding Arbitrator shall prevail.</p>
<p>64.(5)</p>	<p>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.</p>
<p>64. (6)</p>	<p>The cost of arbitration shall be borne by the respective parties. The cost shall inter-alia include fee of the arbitrator(s), as per the rates fixed by Railway Board from time to time and the fee shall be borne equally by both the parties, provided parties sign an agreement in the format given at Annexure XV to these conditions after/ while referring these disputes to Arbitration. Further, the fee payable to the arbitrator(s) would be governed by the instructions issued on the subject by Railway Board from time to time irrespective of the fact whether the arbitrator(s) is/are appointed by the HRIDC Administration or by the court of law unless specifically directed by Hon'ble court otherwise on the matter.</p>
<p>64.(7)</p>	<p>Subject to the provisions of the aforesaid Arbitration and Conciliation Act 1996 and the rules thereunder and relevant para of the Standard General Conditions of Contract and any statutory modifications thereof shall apply to the appointment of arbitrators and arbitration proceedings under this Clause.</p>
<p>64.(8)</p>	<p>In case arbitration award is challenged by a party in the Court of Law, 75% of award amount, pending adjudication by Court of Law, shall be made by party to other party. In case payment is to be made by HRIDC to Contractor, the terms & conditions as incorporated in the Ministry of Railways Letter No. 2016/CE(I)/CT/ARB/3(NITI Aayog)/Pt. dated 08th Mar,2017 as amended from time to time, shall be followed. In case Contractor has to pay to the HRIDC, then 75% of the award amount shall be deducted by the HRIDC from the Contractor's bills, Performance Guarantee/ Security Deposit or any other dues of Contractor with the Government of India.</p>

PART- III

SPECIAL CONDITIONS OF CONTRACT

1.0	This Tender shall be governed by General condition, Special conditions and Technical Specifications.
1.1	If there are varying or conflicting provisions in documents forming part of contract, their order of precedence will be as per Para 1.01 of instruction to tenderer.
1.2	Scheme of work - Within a period of 15 days beginning from date of issue of Letter of Acceptance of Tender, contracts have to submit the detailed programme of work indicating the time schedule of various items of works in the form of Bar Chart. He shall also submit the details of organisation (in terms of labour and supervisors), plant and machinery that he intends to utilize (from time to time) for execution of the work within stipulated date of completion. The Engineer or his representative shall approve the same, if found correct. Material shall be supplied (by the contractor) only after the approval of drawings and assessment.
1.3	Drawings - Within a period of 30 days beginning from date of issue of Letter of Acceptance of Tender, contracts have to submit all the drawing, designs, diagram required to Start/complete this work. All the drawing shall be furnished by contractor itself. Any calculations, schedules, information, data, progress charts etc. required by the Engineer in connection with the contract shall be furnished by the Contractor at his own expenses. In case of new developments in designs, comments on Research Designs and Standards Organization (hereinafter called RDSO's) and decision of Engineer to implement the same basic drawings /designs/employment schedules will be submitted by the contractor to the Engineer. In the event of Contractor suggesting any alteration/deviation in standard drawings, he shall submit the retraced drawings with full calculations and justification of the change to the Engineer. The Engineer if convinced of the need of the alteration shall approach RDSO for necessary approval. In case of any ambiguity in the interpretation of design and drawing, the decision of the Engineer shall be final and conclusive.
1.4	Quality Assurance Programme (QAP): - (a) Quality Assurance Programme in Supply and Erection All materials used in work shall be of best quality and of class most suited for purpose specified and procured from sources approved by Research, Design and Standard Organisation/ Central Organisation for Railway Electrification. It is essential that manufacturer from whom supply is arranged should have long experience of design and manufacture of equipment, components, materials and fittings. Requisite facilities for testing prototypes supplied against this contract should be available with manufacturer. In

case of those equipments, components or fittings for which requisite facilities for testing of prototypes are not available with manufacturer, manufacturer shall arrange to carry out prototype tests on his own cost in a testing laboratory approved by Engineer. Only tested quality steel shall be used. Contractor shall ensure that Engineer prescribed Quality Assurance Standards are rigidly followed in manufacture and erection/installation of all materials/components and fittings/equipment required for work.

Quality of Materials and Erection - All erection work carried out shall also be of best quality acceptable to the Engineer.

(b) (i) All equipment, materials, fittings and component will be subject to Quality Control Programme of manufacturer, being a part of Quality Assurance Programme of Contractor. Materials may also be inspected by Engineer or his representative either at manufacturer works or at Contractors' depot. Engineer or his representative shall have right to be present during all stages of manufacture and shall be accorded free of charge all reasonable accorded facilities for inspection and testing as well as examine stage inspection report of manufacturer in addition to quality audit which Contractor may institute as a part of his programme so as to satisfy himself that materials are in accordance with specifications, approved drawings and designs and Engineer prescribed Quality Assurance Standards.

(ii) Erection - All erection work will also be subjected to Quality Assurance Programme including inspection by Engineer or his representative to ensure that work is done in accordance with specifications and approved drawings and designs and Engineer's prescribed Quality assurance standards.

(iii) Expenses of Engineer' Representative - All expenses of Engineer representative shall be borne by contractor whether inspected material is finally utilised in work or not. Decision of General Manager/IE&A or his successor shall be final in respect of acceptability or otherwise of any material, fittings, component or equipment required for the work.

(C) For proper control of quality and to ensure that materials, equipment and fittings are manufactured according to specification and erection in according to approved instructions, drawings, specifications, Contractor shall adopt a suitable quality assurance programme to ensure quality at all necessary points, whether at manufacturer's works, or in his depot or at work site as well as during erection. Such quality assurance programme shall also meet requirement of Engineer's prescribed Quality Assurance Standards. This programme of the Contractor shall generally cover the following: -

- i. Organisation to manage and implement Quality Assurance Programme.
- ii. Documentation control system.

	<p>iii. Basic control system. iv. Adopted at manufacturer's work v. Adopted at Contractor's Depot and work site.</p> <p>(d) Procedure adopted for QAP: - ii.) Source Inspection. (ii) Incoming raw material inspection. (iii) Verification of material purchased. (iv) Fabrication Controls. (v) Site erection control.</p> <p>(e) Manufacture and quality control procedure. (i) Field activity. (ii) System of handling and storage. (iii) System of quality audit. (iv) System of maintenance of records.</p> <p>(a) For purpose of obtaining On Account Payment, Contractor shall submit along with invoice, documents indicated in prescribed Quality Assurance Standards which should inter-alia cover following as may be applicable in each case. (i) Material test reports on raw materials used. (ii) Inspection Plan with reports of the inspection plan check points. (iii) Routine test report. (iv) Factory test results as required under specification. (v) Quality audit report including test check report of Engineer's representative, if any.</p> <p>NOTE: -</p> <p>1. The supply of all materials shall be from the approved sources only (as mentioned in the RDSO's/CORE's approved list of vendors). However, items / materials for which RDSO/CORE approved sources do not exist, the same may be procured as per relevant BIS/Specifications or from other sources after one-time approval of the source (for particular work only) from the Engineer.</p> <p>2. Apart from deviations, if any, proposed by the contractor and accepted by the Engineer, in case of ambiguity in tender paper in respect of procurement of materials required for the subject work, the decision of the Engineer shall be final.</p>
1.5	<p>SPECIFIED STORES AND WORKSHOP: - The Contractor shall set up at least one main store within a period of 30 days beginning from date of issue of Letter of Acceptance of Tender for receiving and storing steel</p>

	<p>work and other materials and establish a workshop for small fabrication and assembly work at his own cost. If available, HRIDC will arrange railway land inside the railway boundary free of cost to the Contractor for specified store and workshop. However, HRIDC shall not be under obligation to provide land for the above store/workshop until and unless conveniently possible.</p>
<p>1.6</p>	<p>SITE OFFICE FOR HRIDC OFFICIALS: -</p> <p>The Contractor should construct the temporary site offices right at the outset of work comprising of 03 well-furnished office rooms with attached toilets (total approximate 30 sqm area) for HRIDC officials. The contractor should arrange allied staff along with a small pantry for the proper working of HRIDC officials at required location as per the approval of the site Engineer. The Contractor shall provide all necessary furniture, Almira, clock, display boards, phones, 4 Nos. Mobile sets/ Walkie-talkie, curtains, 02 Nos computers of latest configurations with printers (all in one) HP make or any other approved brand with internet facilities, electricity along with standby arrangement if required, fans, AC etc. for the use of HRIDC staff. Failure to provide site office within 01 months shall attract a penalty of Rs 1.00 lacks per month, for the period till he constructs the office subject to maximum of completion period of the contract, recoverable from running bill. No payment for providing above facilities will be made by HRID. Contractor may please note this and take into account while quoting their rates. If available, HRIDC will arrange railway land inside the railway boundary free of cost to the Contractor for construction of temporary site office for the use of HRIDC officials., However, HRIDC shall not be under obligation to provide land for the above temporary site office until and unless conveniently possible.</p>
<p>1.7</p>	<p>TRAFFIC BLOCKS: -</p> <p>i. Engineer will make arrangements to obtain traffic blocks (hereinafter referred to as blocks) necessary for running and operation of work train/light ladder trolleys/track lorries for works to be carried out along or adjacent to track. Contractor shall, however, carry out maximum amount of work possible without blocks. Works such as grouting of traction masts, muffing and erection of brackets shall invariably be done without blocks. Installation of droppers and adjustment of traction overhead equipment may also be permitted to be carried out with light ladder trolleys protected by banner flags in accordance with General and Subsidiary Rules of Indian Railway.</p> <p>ii. Contractor shall arrange a minimum of two mobile phones in working condition with Sim Card in working condition to improve communication with HRIDC Authorities at site/control/ divisional offices at New Delhi. It should be with respective divisional/control office to carry out maximum amount of work possible without blocks. Mobile sets shall be returned to contractor after completion of work.</p> <p>iii. Blocks will normally be granted during day light hours, if however, it becomes absolutely necessary, blocks may be granted during night also. Contractor shall</p>

	<p>confirm that he will equip himself to carry out all construction during night blocks efficiently by suitable special lighting equipments without any extra cost if required to do so. The blocks granted will ordinarily be for one track at a time.</p> <p>iv. Block period shall be counted from time track is placed at Contractor's disposal at work-spot till it is cleared by the Contractor.</p> <p>v. Blocks will be subject to normal operating conditions and rules of the HRIDC. All formalities of exchanging private number etc with traffic control will be carried out by Engineer staff and for this purpose Engineer will depute a representative for each erection gang, who will be responsible for imposing traffic blocks and also removing same after men, material and equipment have been cleared by the Contractor from running tracks and same declared safe for traffic by Engineer's representative in case of works involving safety of running tracks.</p> <p>vi. Blocks required for carrying out works necessitated by thefts, pilferage, accidents or such other incidents, shall be granted by Engineer over and above normal requirements of block.</p>
<p>1.8</p>	<p>CORRECTNESS OF WORK AND MATERIALS –</p> <p>(a) Contractor shall be solely responsible for correctness of positions, levels and dimensions of works according to approved drawings, notwithstanding that he may have been assisted by Engineer or his men in setting out same. If any dimension figured upon a drawing differs from that obtained by scaling drawings figured dimensions should be normally taken as correct, unless it is a prima facie mistake. But all such cases shall be brought to notice of Engineers and discrepancy set right before execution.</p> <p>(b) Contractor's responsibility for discrepancy – All designs and drawings uploaded by Contractor shall be based on a thorough study and shall be such that Contractor is satisfied about their suitability. Engineer's approval will be based on these considerations, notwithstanding approval communicated by Engineer, during progress of contract for designs and drawings, prototype samples of components, materials and equipment after inspection of materials, after erection and adjustments to installations, ultimate responsibility for correct design and execution of work shall rest with contractor unless Engineer insists on adoption of his own designs in spite of Contractor not being agreeable to it. Contractor shall be responsible for and shall bear and pay cost for any alternation or works arising from any discrepancies, errors or omissions in designs and drawings supplied by him, whether such designs and drawings have been approved by Engineer or not.</p>
<p>1.9</p>	<p>ADDITIONS AND ALTERATIONS TO ERECTED EQUIPMENT: -</p> <p>The Engineer may require ADDITIONAL INSTALLATIONS OR MODIFICATIONS OR REPLACEMENTS as per new designs as evolved or decided during the currency of the contract to be carried out on the works he deems</p>

	<p>necessary, either during the execution or after a part or whole of the installations coming within the purview of the contract has been put into commercial service. Further it may be necessary and expedient to energies overhead equipment which has been completed and finally adjusted in portions in yards. This will necessitate erection of new equipment in the vicinity or joining energized equipment. In case the prices for such additional works or modifications or replacements are not covered by the schedule of prices and are such that either party considers additional prices for such works justified, such additional works or modifications shall be carried out by the Contractor. Any additional prices for such work items would be mutually settled between the Engineer and the contractor, based on proper rate analysis and with reference to the current prevalent market rates or the rates available with the HRIDC Administration in that or nearby area/s. In case additional installations or modifications or replacements are required to be carried out under this para, the Engineer shall grant a reasonable extension of time, should it be necessary.</p>																																
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<p>1.11</p>	<p>WORK TRAIN/ LADDER TROLLEY/ CRAIN/: -</p> <p>i. The contractor shall arrange work train (If required) and ladder trolley at his own cost.</p> <p>ii. Crane of adequate capacity with a jib of requisite length will be arranged by the Contractor at his own cost. Road crane for handling heavy materials at the contractor's depot for loading and unloading of material will be arranged by the contractor who will also arrange his own crew for its operation and maintenance. All charges including pay and allowances of the crew and all running expenditure will be borne by the contractor.</p>												
<p>1.12</p>	<p>INSURANCE: -</p> <p>(a) The Contractor shall take out and keep in force a policy or policies of insurance against all liabilities of the Contractor or the Engineer at common law or under any statute in respect of accidents to persons who shall be employed by the Contractor in or about the site of the Contractor's Offices for the purpose of carrying out the works on the site. The Contractor shall also take out and keep in force a policy or policies of Insurance against all recognized risks to their offices and depots. Such insurance shall in all respects be to the approval of the Engineer and if he so requires in his name.</p> <p>(b) INSURANCE OF MATERIALS AND INSTALLATIONS</p> <p>Contractor shall take out and keep in force a policy or policies or insurance for all materials in storage and traction installation excluding foundations under erection and/or erected until such materials and installation are provisionally handed over to Engineer. For this purpose, traction installations in a section shall be deemed to have been provisionally handed over, when provisional acceptance certificate is issued for section or traction installations, in section or commissioned or on expiry of three months after installations are given ready in all respect for handing over, whichever is earlier, for commercial use. If validity of contract is extended, validity of insurance should also be extended subsequently. Contractor shall not be liable for</p>												

	<p>losses or damages to equipment erected, in course of erection or in stores at contractor's depot in consequence of mutiny or other similar causes over which contractor has no control and which cannot be insured, such losses or damages shall, if required by Engineer, be made good by contractor, at cost of Engineer.</p> <p>(c) Contractor should, however, insure materials brought to site against risks in consequence of war and invasion, as required under emergency risks (goods) Insurance Act in force from time to time.</p> <p>(d) Contractor shall take out all insurance covers in connection with the contract with Govt. recognized insurance company.</p> <p>(e) Contractor shall, in respect of all staff engaged by him or by his sub-contractor, indemnify and keep Engineer at all times indemnified and protected against all claims made and liabilities incurred under Workmen's Compensation Act, the factories Act and 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.</p> <p>(f) Contractor shall indemnify and keep Engineer 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 within HRIDC premises and any loss or damage to HRIDC property sustained due to acts or omission of contractor, his sub-contractors, his agents or his staff during 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 time being.</p> <p>(g) 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 bad design, workmanship, material or negligence on part of contractor and further liability of contractor will be limited to Rs. 25 lacs for any one accident.</p> <p>(h) Contractor shall be responsible for all repairs and rectification of damages to traction installations erected or under erection due to railway accidents, thefts, pilferage or any other cause, without delay to minimize or to avoid traffic detentions, in a section until installation is provisionally handed over to Engineer.</p>
<p>1.13</p>	<p>CLEARING DAMAGED INSTALLATIONS - Contractor shall at his cost arrange for expeditious clearing of Railway Track/s of traction installations, obstruction or fouling track/s when they are damaged as a result of railway accident or any other cause, upon oral/telephonic/written instructions from Engineer's representative, until installations are provisionally handed over to Engineer. If contractor fails to clear tracks expeditiously and within reasonable time, Engineer will arrange to clear track/s of damaged installations and recover expenses incurred from contractor. If during such clearance operations further damage is caused to</p>

	<p>installations, Engineer is not liable to reimburse contractor cost of such further damage to installations.</p> <p>Contractor shall arrange for temporary slewing of overhead equipment for crane operations for derailment of rolling stock due to accidents for which contractor is not responsible, if required by HRIDC or Engineer, at the cost of Engineer until the installations are provisionally handed over to Engineer. If contractor fails to slew overhead equipment within reasonable time the Engineer will arrange to slew equipment and recover extra expenses, if any incurred from the contractor. After the crane operations are completed, the contractor shall restore overhead equipment to its normal position.</p>
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<p>1.14</p>	<p>SAFETY MEASURES –</p> <p>(a) The Contractor shall take all precautionary measures in order to ensure the protection of his own personnel moving or working on the Railway/HRIDC premises, but shall then conform to the rules and regulations of the HRIDC. If and when, in the course of the work there is likely to be any danger to persons in the employment of the Contractor due to running traffic while working in the Railway siding and premises, the Contractor shall provide necessary protection i.e. Flagmen, Flag etc. required in block working. Competency for the above shall, however, be given by the HRIDC authorities. The Engineer shall remain indemnified by the Contractor in the event of any accident occurring in the normal course of work, arising out of the failure of Contractor or his men to exercise reasonable precaution at all places of work.</p> <p>(b) Blasting of rock for foundation work shall be done only after due notice is given to the Engineer and time/s and date/s for blasting operations agreed to by the Engineer. Blasting, if required to be done in the vicinity of the track, shall not be undertaken until the Engineer's flagmen on duty take necessary steps to protect trains and the track is adequately protected by the Contractor against damage by blasted rock. The Contractor shall follow detailed instructions which will be issued to him regarding blasting operations in the vicinity of tracks. The flagmen for protection of trains and the Track in such cases will be provided by the contractor but deputation at site will be done by the Engineer.</p> <p>(c) During stringing operations every care shall be taken to prevent conductors hanging low over tracks on which traffic block has not been given. All conductors shall be pulled out before traffic block is cleared so that such conductors do not infringe with moving traffic. Ladder trolleys shall be used with caution. They shall not be put on tracks until the flagmen are on duty to protect the trolleys and the Engineer's representative authorises in writing for the trolleys to be put on the tracks. Ladder trolleys shall be promptly removed on instructions from the Engineer's representative and well in advance of trains. No claims shall rest on the Engineer in the event of a ladder being run over by train. The flagmen for the above job will be provided by the contractor.</p>
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(d) Competency for the above shall, however, be given by the HRIDC authority. Protection of track by banner flags shall be done in accordance with General Rules of Indian Railways and Subsidiary Rules of the concerned zonal Railway where work is being carried out. Flagmen so deployed by the contractor shall be medically fit for A/3 category (as per Indian Rly Medical On Line). prescribed fee for which shall be borne by the contractor.

(e) Contractor shall abide by all Railway regulations in force for the time being and ensure that the same are followed by his representatives, Agents, sub-contractors or workmen. He shall give due notice to his employees and workers about provision of the para.

(f) While working within station limits, especially on passenger platforms, contractor shall ensure that all times sufficient space is left for free movement of passenger traffic. He must cover and/or barricade excavations carried out in such areas and continue to maintain these till the work is completed, with a view to avoid any accident to public, contractors or to HRIDC staff.

(g) Works must be carried out most carefully without any infringement of Indian Railway Act or General and Subsidiary Rules in force on Railway in such a way that they do not hinder Railway operation or affect proper functioning of or damage any HRIDC equipment, structure or rolling stock except as agreed to by Engineer, provided that all damage and disfiguration caused by contractor to any HRIDC property must be made good by contractor at his own cost failing which cost of such repairs shall be recovered from contractor.

(h) If safety of track or track drainage etc. is affected as a consequence of works undertaken by contractor, contractor shall take immediate steps to restore normal conditions. In case of delay, Engineer shall, after giving due notice to contractor in writing, take necessary steps and recover costs from contractor. Moreover, if any time works to be carried out directly concern safety of trains, contractor's staff must comply fully with Railway regulations given to him by the authorized HRIDC Staff. The contractor's employees and workers may for no reasons operate in installation concerning train safety or train movement. They shall notify authorized representative of Engineer who will take all necessary steps in this regard.

Contractor shall be responsible for safe custody of all equipment till provisional acceptance.

(i) 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 bad design, workmanship material or negligence on the part of the contractor and further liability of contractor will be limited to Rs. 25 lacs for any one accident.

(j) Contractor shall ensure that unauthorized, careless or inadvertent operation of switchgear, which may result in accident to staff and/or damage to equipment, does not occur.

(k) Contractor shall abide by all instructions issued by the Engineer from time to time in

	<p>connection with protection/safety of track/ Railway installations /personnel as well as quality control. Contractor should not leave excavated pits un-filled overnight. Due to any reason if it becomes necessary to leave pit unfilled overnight, it should be filled back effectively with sand bags to the satisfaction of Engineer's representative.</p> <p>(1)During execution of work, contractors shall ensure that all safety precautions are taken by their men to protect themselves and site to prevent any untoward incident. In this regard contractor will ensure that adequate number of safety helmets, safety belts, safety jackets with reflective arms band, rope, ladders, emergency light etc. are available at site before the work is actually started. Above list is only indicative and is not exhaustive and safety item will be arranged as per requirement. HRIDC reserve the right to stop work in absence of proper safety gear and no claim shall be entertained in this regard. Decision of the Engineer-in-charge will be final and binding upon contractor. Cost of all safety gear is deemed to have been included in rates quoted and nothing extra is payable under this contract.</p>
<p>1.15</p>	<p>ELECTRICAL CONTRACTOR LICENCE-</p> <p>The tenderer shall possess a Valid Electrical Contractor's Licence for HT/EHT Voltage equal to or more than 25 KV from the concerned statutory authority. The above said Electrical Contractor's Licence is to be uploaded along with the offer otherwise the offer shall be summarily rejected.</p> <p>In case the tenderer is a Partnership firm, the Electrical Contractor's Licence shall be either in the name of partnership firm or in the name of any of the constituent partners of such partnership firm.</p>
<p>1.16</p>	<p>PROVISIONAL ACCEPTANCE: -</p> <p>(a) Immediately after completion of works at each switching station or after completion of work in a section of overhead equipment between two consecutive switching stations including the works of he said switching stations hereinafter referred to as a sub-group, the Contractor shall certify and advise the Engineer in writing that the section/stations are: -</p> <p>(i) Complete (ii) Ready for satisfactory commercial service and (iii) Ready to be handed over.</p> <p>He will also place at the disposal of the Engineer the required staff for checking it and putting it into operation.</p> <p>(b) The test or tests as decided by Engineer, which would be carried out subsequently in connection with the taking over by the Engineer of the equipment and installations shall be carried out jointly by the Engineer or his repretative and the Contractor within a month after the receipt of the Contractor's notifications, as stated in sub-para above.</p> <p>(c) After inspection and satisfactory conclusion of tests and when the Engineer is</p>

satisfied with the satisfactory working of the installations he will issue a 'Provisional Acceptance Certificate' which would be signed by both the parties. The Provisional Acceptance Certificate will not be withheld for any minor defects.

(d) Should the result/s of inspection and the test/s be not satisfactory, an extension of one month will be granted to the Contractor to make good the defects and deficiencies pointed out by the Engineer. Fresh inspection and tests will then be carried out after the Contractor has attended to the defects and deficiencies. If these tests are also not satisfactory, the Engineer may proceed at the Contractor's expenses by all means deemed expedient, to have the installation made satisfactory until they comply with the specifications and approved drawings and designs.

(e) In such a case, or in case of delay in completing the work under this Contract within the time limit, the Engineer reserves the right if he deems it possible to use in a reasonable manner any section or any part of the section even if some installations of the sections are not completely erected. The Engineer will give to the Contractor for this purpose seven days' previous notice. The Contractor shall then take at his own expense all necessary steps to complete the works in accordance with the provisions of the contract. In case it becomes impossible to proceed with the above mentioned taking over tests, for reasons other than for which the Contractor is responsible, the "Provisional Acceptance Certificate" shall be issued at or within a mutually agreed reasonable period after completion of the relevant sections as indicated in sub-Para/s above.

Note: -

1. Provisional Acceptance Certificate for each section will be issued immediately after all tests (excluding current collection tests) are completed to satisfaction of Engineer. Should Engineer be unable to complete tests and energisation of line within a reasonable time which shall not exceed One month from date of contractor's notification, issue of Provisional Acceptance Certificate shall not be delayed and shall be issued within a maximum time of Three months after notification has been issued. Current collection tests shall normally be carried out for entire section within three months of date of energisation of section.
2. The issue of Provisional Acceptance Certificate shall not be withheld for rectification of minor defects which may reasonably be considered not essential for energisation and operation of installation. In such cases, only value of materials and cost of rectification of minor defects shall be withheld from payments of Provisional Acceptance until rectification is completed.
3. Contractor shall be responsible for upkeep of OHE & other assets even after issue of PAC till CRS inspection, section/station is put in commercial use & handing over to the Division.

<p>1.17</p>	<p>DEFECTIVE EQUIPMENT’S TO BE CHANGED: -</p> <p>(a) Notwithstanding the issue of Provisional Acceptance Certificate and partial or full use of any equipment, if the completed equipment or any portion thereof before it is finally taken over at the end of the guarantee period be found to be or to have become defective in course of usage by the HRIDC due to faulty material, design or workmanship, or otherwise fails to fulfil the requirement of the Contract and/or its purpose, the Engineer shall normally give the Contractor prompt notice setting forth the particulars of each defects or failure and the Contractor shall forthwith make the defects good or modify or replace the equipment, as may be directed by the Engineer's at his own cost in all respects to make it comply satisfactorily with the said requirements. Should the Contractor fail to do within a reasonable time the service of the said notice upon him or should time not permit of service of such notice, the Engineer may repair or reject and replace the whole or part of such defective equipment as the case may be, at the cost of the Contractor. The Contractor's full liability under this clause shall be satisfied by the payment to the Engineer of the extra total cost, if any, of such replacement delivered and erected as provided for in the original Contract, such extra cost being the ascertained difference between the price paid by the Engineer under the provisions above mentioned for such replacement and the Contractor's price for the plant so replaced, plus the sum, if any, paid by the Engineer to the Contractor in respect of such defective equipment. Should the Engineer not so replace the rejected equipment within a reasonable time, the Contractor’s liability under this clause shall be satisfied by the repayment by the Contractor of all moneys paid by the Engineer to him in respect of such rejected equipment. Rejected/defective materials shall be returned to the Contractor to the extent possible.</p> <p>(b)Provisions of this para will apply only in respect of the equipments and components supplied by the Contractor or his sub-Contractor.</p>
<p>1.18</p>	<p>GUARANTEE AND GAURANTEE PERIOD/MAINTENECE PERIOD: -</p> <p>(a) Contractor shall Guarantee that all equipment and works executed under this contract shall be free from all defect and faults in material, design, workmanship and manufacture and shall be of acceptable standards for contracted work and in full conformity with technical specifications, drawings and other contract stipulations, for a period of 18 months from date of commercial operation or from date of Provisional Acceptance by Engineer whichever is earlier.</p> <p>(b)During period of Guarantee/Maintenance Period Contractor shall keep available an experienced Engineer and necessary equipment to attend to any defective installations resulting from defective erection and/or defects in equipment supplied by Contractor.</p>

	<p>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. Contractor shall bear the cost of modifications, additions or substitutions that may be considered necessary due to faulty materials, design or workmanship for satisfactory working of the equipment. The final decision shall rest with the Engineer or his successor(s)/ Nominee.</p> <p>(c) During period of Guarantee the Contractor shall be liable for replacement at site of any parts which may be found defective in equipment whether such equipment be of his own manufacture or those of his sub-contractor whether arising from faulty design, materials, workmanship or negligence in any manner on part of Contractor provided always that such defective parts as are not repairable at site are promptly returned to Contractor if so required by him at his (Contractor's) own expenses. In case of type defects in Contractor's equipment and components detected during guarantee period, contractor should replace all such Items irrespective of fact whether all such Items have failed or not. The Contractor shall bear cost of repairs carried out on his behalf by Engineer at site. In such a case, contractor shall be informed in advance of works proposed to be carried out by Engineer.</p> <p>(d) If it becomes necessary for Contractor to replace or renew any defective portion of equipment under para aforesaid then provision of said para shall also apply to portions of equipment so replaced or renewed until expiration of six months from date of such replacement or renewal or until end of above mentioned period whichever is later. Such extension shall not apply in case of defects of a minor nature, decision of Engineer or his successor/nominee being final in the matter. If any defect be not remedied within a reasonable time during aforesaid period Engineer may proceed to do work at Contractor's risk and expense, but without prejudice to any other rights and remedies which Engineer may have against the Contractor in respect of such defects or faults.</p> <p>(e) Repaired or renewal parts shall be delivered and erected at site free of charge to Engineer.</p> <p>(f) Any materials, fittings, components or equipment supplied shall also be covered by provisions of this paragraph. Liability of Contractor under guarantee will be limited to re-supply of equipment, components. Such re-supply shall be effected at the Contractor's depot or, in event of closure of depot, at stores depot of Engineer of maintenance of overhead equipment of section covered by contract.</p>
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<p>1.19</p>	<p>FINAL ACCEPTANCE: -</p> <p>(a) The final acceptance of the entire equipment installed on this tender, shall take effect from the date of expiry of the period of guarantee as defined in paragraph 1.18 of the expiry of the last of the respective periods of guarantee of various sections for which provisional Acceptance Certificates are issued or brought into commercial operation, provided in any case that the Contractor has complied fully with his obligations under clause 1.18 in respect of each section of the Group, provided also that the attention has been paid by way of maintenance by the Engineer.</p> <p>(b) If on the other hand the contractor has not so complied with his obligation under para 1.18 in respect of any section, the Engineer may either extend the period of guarantee in respect of that section until the necessary works are carried out by the Contractor or carry out those works or being them carried out suo motu on behalf of the Contractor at the Contractor's expenses. After expiry of the period of guarantee for each section, a certificate of final acceptance for the section shall be issued by the Engineer and the last of such certificate will be called the last and final acceptance certificate. The contract shall not be considered as completed until the issue of final acceptance certificate by the Engineer.</p> <p>(c) The Engineer shall not be liable to the Contractor for any matter arising out of or in connection with the contract or execution of the work unless the Contractor shall have made a claim in writing in respect thereof before the issue of final acceptance certificate under this clause.</p> <p>(d) Notwithstanding the issue of final acceptance certificate, the Contractor and the Engineer (subject to sub-clause as above) shall remain liable for fulfillment of any obligation incurred under the provision of the contract prior to the issue of final acceptance certificate which remains unperformed at the time such certificate is issued and for determining the nature and extent of such obligation the contract shall be deemed to remain in force between the parties hereto.</p>
<p>1.20</p>	<p>RELEASED MATERIAL: -</p> <p>The contractor shall return to all the released OHE material from the existing system at the first available opportunity but not later than a week at the store of concern SSE In-Charge of Northern Railway or decided by Engineer. If the contractor fails to return the released material in specified time, the cost of released material will be recovered from the progress bill before releasing any payment.</p>
<p>1.21</p>	<p>In this work, modification is to be done in the feeding post of existing SSP by using suitable height of gentry arrangement and other required electrical equipment. By doing this arrangement, the supply of Existing SSP is to be connected to the supply of elevated track. Complete design and drawing of such type of arrangement will be prepared by contractor and same will be duly approved by NR and HRIDC authorities.</p>

1.22	<p>PRICE AND PAYMENT :-</p> <p>A. SCHEDULE OF PRICES -</p> <p>(i) PRICES FOR ITEM WITH S.O.R.</p> <p>The rates given against various items of work in five sections of Schedule-1, Section-1 to 5 {except section 4(b)} of the tender paper are the standard schedule of rates (S.O.R.). The tenderers are advised to quote only single percentage each below/at par/above against each section of the S.O.R. in Summary of prices on https://etenders.hry.nic.in site. The rate at which payment are to made shall be arrived at by loading SOR rate uniformly for each item with escalation of estimate (% above SOR) and loading of percentages quoted by the tenderer over advertised value of the section. The prices so obtained shall be the unit prices for the various items of works given in Schedule-1, Section-1 & 5. The offers where more than one percentage has been given for different items for OHE Work of Schedule-1, Section-1 to 5 shall liable to be rejected.</p> <p>(ii) PRISE FOR NON SOR Items (Non schedule items) {Schedule-1, Section-6 and section 4(b)}</p> <p>The rates of NON SOR items (Schedule-1, Section-6 and section 4(b)) have to be quoted separately on https://etenders.hry.nic.in site. The tenderer is advised to quote only single percentage, below/at par/above against each section, for the Non SOR items in Summary of prices. The actual payment to be made against any item of Schedule-1, Section-6 and section 4 (b) shall be derived after loading the Non SOR prices with the tenderer's quoted percentage. The prices so obtained shall be the unit prices for the various items of works given in Schedule-1, Section-6 and section 4(b). The offers where more than one percentage has been given for different items for Non SOR items shall liable to be rejected.</p> <p>B. UNIT PRICES FOR MATERIALS -</p> <p>The unit prices indicated in column 4 of Schedule-1, Section – 1 to 5 are inclusive of the prices of materials including all incidental charges for transport, loading/unloading and handling of materials, commission for arranging dispatch by rail direct from manufacturer's factory and completing all necessary formalities in this respect, such as submission of forwarding notes, arranging placement of wagon, collection of HRIDC receipts, all insurance premia, bankers charges for bank guarantee, indemnity bonds inclusive of cost of stamps etc. as also siding or shunting charges, if any, levied by the HRIDC .</p> <p>The prices shall include all taxes (GST), duties and levies (including Octroi etc.) Applicable on this works contract. Therefore, they should quote their prices taking into account the rate of taxes as leviabale in the event of sale through works contract to the Central Government Organization in that state. It is clarified that required forms applicable for this purpose will be supplied to the contractor as applicable in the state</p>
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where the contract is being executed.

The price shall also include provision for losses and wastages in transit and erection.

C. UNIT PRICES FOR ERECTION –

The unit prices indicated in column 5 of Schedule-1, Section – 1 to 5 are inclusive of cost of erection and testing to be done by the Contractor and also cover all cost of administration of the contractor, insurance premium, banker's charges for guarantees, cost of stamps, cost of storage, loading and unloading and handling of materials, and for any road transport which the Contractor may use for carriage of materials between his depot and depot/s and site of work. The unit prices shall include cost of works and adjustments necessary to be done by the Contractor during or after the tests carried out by the Engineer.

D. INVOICING PROCEDURE -

(i) The contractor shall submit his invoicing procedure for approval by the Engineer within 2 months from the date of receipt of Letter of Acceptance of tender. Separate bills will be submitted by the contractor for different activities as being done presently. However, all these bills will normally be submitted once in a month only. More than one bill for one type of payment in a month can be allowed on case to case basis by obtaining HRIDC Officials approval. Separate invoices shall be submitted for different type of payments. Each invoice of the bill shall be submitted with original supporting documents wherever these are acceptable to the Engineer's where copies of original documents are required in support of several invoices included in the bill, true certified copies of the original documents may be forwarded to the Engineer with his consent.

(ii) Invoices shall be submitted only on the basis of agreed principles and prices, quantities and measurement of works completed and shall be approved by the Engineer's prior to the submission of invoices. For this purpose, the Schedule of quantities and measurements submitted by the Contractor for approval of the Engineer may be only up to the extent of work completed except in the case of payments on provisional acceptance under Para 1.16.

E. PAYMENTS FOR DESIGNS -

The entire payments for designs against items 1 (a) & (b) of Schedule 1 Section 1 will be made in the final bill.

F. ON ACCOUNT PAYMENTS: -

On account payment will be made for equipment, components, fittings and materials required for execution of work and additional supply as described below. No On Account payment will be made on supplies of concreting materials. On Account payment made will subsequently be adjusted against progress payment and against payment due on provisional acceptance and /or against payment due on supply of

spares and other supplies. All On Account payment shall be covered by a standing indemnity bond as per Annexure-XLIII.

On account payments for SOR equipment, components, fittings and materials, on receipt of the same at the Contractor's depot, will be made to the extent of 85% on the unit prices of such equipment, components, fittings and materials as per rates arrived after loading the rates mentioned in Part – V, Form-7, Schedule- 3 Section 1 to 5 with respective percentage (above / below) rates quoted by the tenderer.

On Account payment for Non SOR items will be made as per Part V, Form 5, Schedule 1, Section 6.

All invoices shall be accompanied by the following:

- I. Supplies Challan.
- ii. Inspection Certificate granted by Engineer's representative.
- iii. Certificate of receipt of materials at Contractor's depot/s duly accepted by Engineers duly countersigned by a gazetted officer.
- iv. Certificate that stores have been insured against all liabilities of contractor.
- Quality Assurance documents.
- vi. GST Gate Pass for supplies/supplier invoice marked as original.

On account payments will commence only when assessment of quantities of items in Schedule-1 Section 1 to 6 is approved by the Engineer.

G. PROGRESS PAYMENTS FOR SUPPLY AND ERECTION: -

Progress payment for foundations, mast erection, bracket erection and wiring shall be as under.

- i. Foundation: On completion of foundation, the contractor shall receive payments to extent of 70% of prices of foundation and 20% after mast erection & muffing.
- ii. Mast Erection: On completion of erection of Masts and portals, contractor shall receive payments to extent of 90 % of the prices for erection of Mast & Portals.
- iii. Bracket Assemblies: On completion of erection of bracket assemblies contractor shall receive payments to extent of 70 % of prices of erection of bracket assemblies and 20% after erection of OHE.
- iv. Erection of OHE: On completion of erection of other items & wiring the contractor shall receive payment to the extent of 70%.
- v. After final adjustment of OHE and SED Checking Contractor shall receive 20% balance payment of Item above.
- vi. The contractor shall receive balance 10% payment against these items after

	<p>issue of PAC.</p> <p>On completion of each item of work in Schedule-1, contractor shall be paid due payments to extent of 90% of prices for supply and/or erection included in Schedule-1. Portions of Progress payments towards supply shall be progressively set off against On account payment for supply made under On Account until the entire On account payments are adjusted. Thereafter progress payment towards supply shall commence.</p> <p>H. PAYMENT FOR ADDITIONAL SUPPLIES: -</p> <p>Contractor shall receive payments for additional supplies ordered, if any, in accordance with prices included in Schedule 3, on delivery of such supplies to Engineer after due adjustment against On account payment made in terms of tender conditions</p> <p>I. RECOVERIES FROM CONTRACTOR: -</p> <p>i. All recoveries for materials supplied and services rendered by Engineer to Contractor and other refunds due from contractor shall unless otherwise specified, ordinarily be made by deductions from payments due to Contractor covering value of supply and erection in progress payment for erection, and from payment on Provisional Acceptance Cost of materials supplied by the Engineer(if any) will be recovered in full by Engineer at relevant price in schedule-3 or book at or last purchase rate, whichever is higher, to extent of requirement of such materials from payments to be made to the Contractor.</p> <p>ii. Cost of materials if supplied by HRIDC will be recovered from contractor bill.</p> <p>iii. Security Deposit Amount will be recovered from ONA/ Progress payment bills of the contractor @ 6% till it reaches 5% of the contract value including Bid security amount.</p>
<p>1.23</p>	<p>SITE REGISTERS:</p>
	<p>The following registers will be maintained at site by the Contractor(s):</p> <p>i) Site Order Register: The Contractor(s) shall promptly sign orders given therein by the Engineer or his representative or his superior officers and comply with them. The compliance shall be reported by the Contractor(s) to the Engineer-in-charge in reasonable time so that it can be checked/verified</p> <p>ii) Labour Register: This register will be maintained to show daily strength of labour in different categories employed by the Contractor(s).</p> <p>iii) Plant and Machinery Register: This register will record daily particulars of machinery with the Contractor(s) and will be signed jointly by the Engineer's representative and the Contractor(s).</p>

	<p>iv) Quality control register for various materials</p> <p>v) Daily progress register</p> <p>vi) Hindrance register: This register will maintain the number of days when work could not progress/remained suspended and reason thereof. This list given above is not exhaustive.</p> <p>vii). Contractor(s) may be asked to maintain additional registers, if required by Engineer. Any other register instructed by Engineer time to time shall also be prepared by contractor.</p>
1.24	TOOLS AND PLANTS:
	<p>Necessary tools and plants required for handling, assembling and linking shall be arranged by the Contractor himself at his own cost. T & P on hire basis will be provided by the HRIDC if readily available with HRIDC and necessary hire charges will be recovered from the Contractor.</p>

PARTICULAR SPECIFICATIONS OF CONTRACT

1.0	<p>SECTION UNDER THIS TENDER:</p> <p>The section is KKDE-NRE section of Northern Railway in the states of Haryana.</p>												
2.0	<p>TRACKS TO BE WIRED:</p> <p>(a) The route and track lengths of the section to be equipped with overhead equipment are as under: -</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th style="text-align: center;">Section</th> <th style="text-align: center;">HRIDC / Division</th> <th style="text-align: center;">RKM</th> <th style="text-align: center;">TKM</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">KKDE-NRE section</td> <td style="text-align: center;">Kurukshetra Elevated track</td> <td style="text-align: center;">6.0</td> <td style="text-align: center;">5.925</td> </tr> </tbody> </table> <p>(b)The tentative schematic electrical sectioning of the tracks to be wired is indicated in the sectioning diagram, which will be furnished by contractor itself and same will be duly approved by HRIDC authorities.</p> <p>General Power Supply Diagram shall be supply/prepared by contractor itself</p>	Section	HRIDC / Division	RKM	TKM	KKDE-NRE section	Kurukshetra Elevated track	6.0	5.925				
Section	HRIDC / Division	RKM	TKM										
KKDE-NRE section	Kurukshetra Elevated track	6.0	5.925										
3.0	<p>GENERAL PARTICULARS:</p> <p>(a) The soil characteristics of the sections are generally consists of Hard and Normal/Sandy soil. The bearing capacity of soil is likely to be 8000 to 11000 kgf/sqm. The actual bearing capacity shall however, be determined by contractor.</p> <p>(b) ACCESS TO ROAD Road approach available in the section.</p> <p>(c) FOOT OVER BRIDGES AND ROAD OVER BRIDGES The number of FOBs/ROBs etc in the section is given below: -</p> <table style="margin-left: auto; margin-right: auto;"> <tr> <td style="padding-right: 20px;">FOBs</td> <td style="padding-right: 20px;">-</td> <td>Nil</td> </tr> <tr> <td>ROBs/ Flyovers</td> <td>-</td> <td>Nil</td> </tr> </table> <p>(d) STATIONS There are 01 stations is in the section.</p> <p>(e)</p> <table style="margin-left: 20px;"> <tr> <td style="padding-right: 10px;">(i)</td> <td style="padding-right: 10px;">Bridges:</td> <td>Nil</td> </tr> <tr> <td>(ii)</td> <td>Tunnels:</td> <td>Nil</td> </tr> </table> <p>Remodelling works affecting the tracks to be wired will be intimated as and when work is planned /commenced at various stations.</p>	FOBs	-	Nil	ROBs/ Flyovers	-	Nil	(i)	Bridges:	Nil	(ii)	Tunnels:	Nil
FOBs	-	Nil											
ROBs/ Flyovers	-	Nil											
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(ii)	Tunnels:	Nil											

4.0	<p>CLIMATIC CONDITIONS</p> <p>a) TEMPERATURE For the overhead equipment, which will be in open space, a minimum temperature of 4°C and a maximum temperature of 45°C are to be considered. The mean temperature will be taken as 35°C.</p> <p>(b) RAINFALL Rains occur generally from June to October. The average rainfall during the monsoon season June to September is approximately 75 cm annually.</p> <p>(c) HUMIDITY The maximum relative humidity is nearly 40% to 65%.</p> <p>(d) THUNDER STORMS The region is under thunder storm during the monsoon season June to October.</p> <p>(e) WIND PRESSURE In terms of IS: 875-1987. Amendment I, Wind pressure applicable is 155 Kgf/sq.m.This conforms with the wind pressure adopted by State Electricity Boards for the design of their EHT transmission lines</p>									
5.0	<p>ROLLING STOCK: - Electric locomotives with height not exceeding 4.165 m with their pantographs in the locked down position and diesel locomotives 4.42 m(14 Ft & 6 inches) high would run on this section.</p>									
6.0	<p>OVER DIMENSIONAL CONSIGNMENTS: The maximum height of over dimensional consignment, which will pass on this section, is 4.8 mtr with movement restricted specified lines.</p>									
7.0	<p>(a) POWER SUPPLY: - Electric power will be supplied to the Overhead Equipment through TSS Located at Kukukshetra for feeding OHE in the section.</p> <p>(b) SWITCHING STATIONS - Tentative number of sectioning and sub - sectioning stations are as under:</p> <table data-bbox="375 1545 951 1654"> <tr> <td>(i) Feeding Post/TSS</td> <td>-</td> <td>NIL</td> </tr> <tr> <td>(ii) Sectioning post</td> <td>-</td> <td>NIL</td> </tr> <tr> <td>(iii) Sub - sectioning post</td> <td>-</td> <td>01</td> </tr> </table> <p>Note: - In this work modification is to be done in the feeding post of existing SSP by using suitable height of gentry arrangement and other required electrical equipment. By doing this arrangement, the supply of Existing SSP is to be connected to the supply of elevated track. Complete design and drawing of such type of arrangement will be prepared by contractor and same will be duly approved by NR and HRIDC authorities.</p>	(i) Feeding Post/TSS	-	NIL	(ii) Sectioning post	-	NIL	(iii) Sub - sectioning post	-	01
(i) Feeding Post/TSS	-	NIL								
(ii) Sectioning post	-	NIL								
(iii) Sub - sectioning post	-	01								

8.0	<p>L.T. SUPPLY TRANSFORMER STATIONS:</p> <p>Auxiliary Transformers will be installed for giving power supply to colour light signaling, stations & switching station. In single line sections 01 ATs will be provided at Thanesar station.</p>
9.0	<p>TYPE OF OHE:</p> <p>The overhead equipment used will normally be of regulated type OHE with a maximum span of 67.5 meters and pre-sag of 10mm. the regulated tramway type will be used for yard & siding and semi regulated in cross section.</p>
10.0	<p>RETURN CONDUCTORS:</p> <p>No return conductor and Booster Transformer will be provided in the section. However if any change in the plan takes place, particular of the section and actual numbers of Booster Transformer stations would be informed as soon as possible</p>
11.0	<p>PEGGING PLANS:</p> <p>The pegging plan will be furnished by the contractor</p>
12.0	<p>TRACTION SUB-STATION FEEDERS :</p> <p>It may be required to provide 25 KV feeders from sub-station to the feeding point which will be finalized at design approval stage.</p>
13.0	<p>TRACK CIRCUITS :</p> <p>No double rail track circuits are envisaged at present. The station area will be single rail track circuited.</p>
14.0	<p>LABOUR & MATERIALS :</p> <p>Unskilled labour is available almost all over the section while skilled labour would be available generally at the main towns in the section.</p>
15.0	<p>CONTRACTOR'S DEPOT & WORK TRAINS :</p> <p>The contractor should arrange suitable space at his cost to set up one main depot in the Group. The location will also to be finalized by contractor. Work train (if required) should be arranged by contractor at his own cost.</p>
16.0	<p>DURATION OF TRAFFIC BLOCKS :</p> <p>(a) Track occupation may be granted at any time during day or night to suit convenience of traffic operations and will ordinarily be granted on one track at a time over a distance covered by one or two consecutive block sections. Work trains will</p>

	<p>normally be allowed to take advantage of block shadows. Normally, the total durations of block on any section will be max of 3 to 4 hours in a day for all the tracks in the section taken together, the total of blocks on any track being limited to 2 or 3 hours in a day. Block provided may be utilised for one or more work trains or track Lorries or ladder trolleys to suit convenience of work.</p>
<p>17.0</p>	<p>REMOTE CONTOL CENTRE :</p> <p>The traction Sub-station and SP/SSP proposed shall remotely control from the Remote Control Centre at New Delhi.</p>
<p>18.0</p>	<p>ADDRESSES:</p> <p>The list of addresses, to which correspondence and documents relating to the contract, should be sent is as under :-</p> <p>(i) For all policy, Contractual and Commercial matters :-</p> <p>(a) Prior to the award of contract. The General Manager (IE&A) HRIDC Gurugram - 160017</p> <p>or his successor/nominee (whose address will be intimated in due course)</p> <p>(b) After award of contract. The General Manager(IE&A) HRIDC, Gurugram -122003</p> <p>or his successor/nominee (whose address will be intimated in due course)</p> <p>(iii) For matters relating to particular design/ working drawing :-</p> <p>DGM/Electrical HRIDC, Gurugram- 122003</p> <p>or his successor/nominee (whose address will be intimated in due course)</p> <p>(iv) For matters relating to basic design and drawings for fittings, components equipments and prototype tests :-</p> <p>The Director General (TI) Research Designs & Standard Organisation</p>

	<p>Manak Nagar, Lucknow 226001.</p> <p>(v) Matters relating to progressing of field work, scheduling of quantities and submission of bills.</p> <p>DGM/Electrical HRIDC Gurugram- 122003</p> <p>OR officers nominated by him.</p>									
<p>19.0</p>	<p>QUANTITIES APPROXIMATE:</p> <p>Schedule-1, Section-1 to Section-6 in Form-5 gives the approximate quantities of various items of OHE work</p>									
<p>20.0</p>	<p>TECHNICAL DATA FOR DESIGN OF PROTECTION SCHEME :</p> <p>The technical data required for the design of the protection scheme is given as below:</p> <p>(a) The short circuit level on the 132 kV side of Traction sub-station will be intimated later after it is obtained from SEB authorities. The maximum short circuit current for a fault on the 25 kV Bus at TSS will also be intimated later.</p> <p>(b) The approximate value of the impedance of Traction overhead equipment is indicated below: -</p> <table border="1" data-bbox="431 1289 1450 1549"> <thead> <tr> <th></th> <th>Excluding return Conductor and BT (Ohms/km)</th> <th>Including return conductor and BT (Ohms/Km)</th> </tr> </thead> <tbody> <tr> <td>Single Track</td> <td>5.16 /_70</td> <td>.75 /_70</td> </tr> <tr> <td>Double Track</td> <td>-----</td> <td>-----</td> </tr> </tbody> </table> <p>(c) Phase angle. The normal phase angle of the load would be about 40 deg.</p> <p>(d) General supply diagram. The general supply diagram showing the arrangements for feeding the traction overhead equipment with 25 kV single phases AC supply shall be supply/prepared by contractor.</p>		Excluding return Conductor and BT (Ohms/km)	Including return conductor and BT (Ohms/Km)	Single Track	5.16 /_70	.75 /_70	Double Track	-----	-----
	Excluding return Conductor and BT (Ohms/km)	Including return conductor and BT (Ohms/Km)								
Single Track	5.16 /_70	.75 /_70								
Double Track	-----	-----								

PART - IV

EXPLANATORY NOTES FOR NON- SCHEDULE ITEMS

<p>Item No.1 (a)</p>	<p>Preparation of designs and drawings for overhead equipment and verification of pegging plans.</p> <p>The price shall cover overhead equipment pegging plans indicating location of structures in stages, and preparation of all drawings and designs required to be furnished by the Contractor. The price shall include the following:-</p> <ul style="list-style-type: none"> (i) Making minor modifications with the approval of the Engineer to the layout of the structures and overhead equipment, if necessary, and submission of overhead equipment layout plans, including stagger, location of cut in insulators etc. (ii) Preparation of cross section drawings and structure erection drawings for each structure locations. (iii) Choice of type and size of foundations to suit soil and loading conditions, except for the ones which are considered as "Works under other Agencies". (iv) Preparation of long section drawings of overhead equipment where such drawings are required including detailed study of overline structures such as foot over bridges, road over bridges etc. for maintaining the specified height of contact wire and requisite clearances. (v) Preparation of other designs and drawings including drawings of small parts steel work (other than those for which RDSO standard drawings are available) and detailed designs for booster transformer stations and LT. Supply Transformer stations. (vi) Supply of requisite no. of copies of all drawings, including completion drawings specified in Part –IV DESIGN & DRWAING to the ENGINEER. <div style="border: 1px solid black; padding: 10px; margin-top: 10px;"> <p>NOTES FOR MEASUREMENTS : For the purpose of payment against this item, the length of track shall be measured as under :-</p> <ol style="list-style-type: none"> 1. General: By the difference in the chainages of the length under consideration, as incorporated in the layout plans. 2. Turnouts: The track taking off shall be deemed as starting from the toe of the switch of the Turnout. </div>
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	<p>3. Cross-overs : The length of track shall be taken as the difference in the chainages of the toes of switches of the two turnouts constituting the crossover.</p> <p>4. Diamond crossing with or without slips: <i>The two tracks crossing each other shall be measured independently as per note 1 above as though there were no crossing. No extra shall be provided for slip points.</i></p> <p>5. Dead ends and tops of loops: <i>The lengths for payment under this item shall be upto the chainage of anchor mast of the terminating OHE.</i></p> <p>6. Feeders and return feeders from grid sub-station to feeding station</p> <p>This item will also be applicable independently in case of feeders/return feeders/ conductors from grid substation to overhead equipment feeding stations or in a case of feeders/conductors running on independent structures (not supporting OHE) along or across tracks.</p> <p>In such a case the length of line to be considered for purpose of item (a) shall be measured by the distance between the center of gantries of the grid sub-station and feeding stations in case of feeder/return feeders/conductors line from grid sub-station, or by the distance between the center line of the two structures to which the feeders/ return feeders/conductors are anchored in case of feeders running along the track if such feeder/return feeders/conductors are running completely on independent structures or by the distance between the center of the two structures supporting the OHE on either side of the first and last independent structure in case of feeders/return feeders/conductors running along the track supporting OHE.</p>
<p>Item No.1 (b)</p>	<p>Preparation of designs and drawings for switching stations (FP/SP/SSP) The price shall cover on a flat rate basis per switching station, survey, investigation of soil bearing pressure, preparation of cross section drawings, preparation of general arrangement drawings, detailed layout of equipment, bus-bar connections and insulators, layout of earthing system and earth connections, cable run layout, detailed designs and drawings for steel work and structural support, excluding the ones for which supply is made by the Engineer, suitable concrete plinths for equipment and drawings for equipments, components, fitting and materials supplied by the Contractor. The price shall include supply of requisite number of copies of all drawings, including completion drawings as specified in Part –IV DESIGN & DRWAING to the ENGINEER.</p>
<p>Item No- 2(a)</p>	<p>(i) Concrete for foundation and plinth in hard soil. (ii) Concrete for foundation and plinth in rocky soil. (For concrete mix of M 10 and M 15 Grade in Foundation)</p> <p>The price shall cover excavation, supply and handling of all materials and accessories, temporary arrangements for excavation in hard soil and concrete/masonry</p>

	<p>drains/walls requiring use of chisel and hammer 2(a)(i) or requiring blasting 2(a)(ii), Shoring where necessary, casting concrete including frame work where necessary, tamping of concrete, grouting of masts and finishing the top of concrete foundation or anchor blocks. The price also includes dismantling of all connected temporary arrangements, back filling with earth and compacting the same to the required height and width as per drawing to ensure safety of foundation, confining the exposed height of foundation block to within 10 cm., and removal of spoil.</p> <p>The Engineer shall certify where use of chisel and hammer or blasting has been necessary. The contractor shall arrange for supply of explosives and all tools and plants for blasting operations at his own cost. If half or more of the depth or width of excavation is in hard soil/concrete/masonry drains/walls or in rock, the entire foundations shall be paid for under item 2(a)(i) or 2(a)(ii) as the case may be. If half of the depth or width of the excavation is in hard soil/concrete/masonry drains/walls and the other half is in rock, the entire foundation shall be paid under item 2(a)(ii). The price shall include the cost of cement.</p> <p>Notes for measurement for items 2 (a) (i) and (ii):-</p> <ol style="list-style-type: none"> 1. The payable volume of the foundations under item 2(a)(i) and (ii) shall be the designed one as shown in the drawings for which the hole has been blasted, irrespective of the actual configuration assumed by the latter due to the blasting. 2. The depth of the excavation shall be measured from the formation level to the maximum excavated point.
<p>Item No- 2 (az)</p>	<p>(i) Concrete for foundation and plinth in hard soil.</p> <p>(ii) Concrete for foundation and plinth in rocky soil. (for concrete mix of M 15 and M 20 Grade in Foundation)</p> <p>Same as 2(a)(i) and 2(a)(ii) above.</p>
<p>Item No- 2 (b)</p>	<p>Concrete for foundation and plinth in other than hard soil and rock. (for concrete mix of M 10 and M 15 Grade in Foundation)</p> <p>The price shall include all works mentioned in item 2(a) in all classes of soil except hard soil, concrete or masonry drains and walls and rock.</p>
<p>Item No- 2 (bz)</p>	<p>Concrete for foundation and plinth in other than hard soil and rock. (for concrete mix of M 15 and M 20 Grade in Foundation)</p> <p>Same as 2(b) above.</p>
<p>Item No-</p>	<p>Reinforced concrete for foundation and plinth in other than hard soil and rock</p>

<p>2 (c)</p>	<p style="text-align: center;">(Grade M-15)</p> <p>The price shall cover excavation and all reinforced concrete work for foundations excluding supply of steel for reinforcement {which will be paid separately under Item 3(g)} and including other materials shoring where necessary, casting concrete including frame work where necessary, grouting and finishing the tops of foundation blocks. The price shall also include dismantling of all connected temporary arrangements, back filling as required and removal of spoil. The price shall also cover all concrete work for foundation (including that of Height Gauge) or anchor blocks on bridge piers, irrespective of whether they are actually reinforced or not, and counter weight foundations. Rails and fasteners required for counter weight foundations shall be supplied by the Engineer free at the Contractor's depot or work spot according to convenience of the Engineer. Dowel bars as may be required for bond with bridge structures shall be supplied and erected free of cost by the Engineer. Dowel bars will not be considered as reinforcement for the purpose of this item. The price shall, include the cost of cement.</p> <p>Note : Erection charges for CC/RCC in Hard Soil & rock shall be payable @ erection charges of Item 2(a)(i)/2(az)(i) & item 2(a)(ii)/2(az)(ii) respectively.</p>
<p>Item No- 2 (cz)</p>	<p style="text-align: center;">Reinforced concrete for foundation and plinth in other than hard soil and rock (Grade M-20)</p> <p>Same as for Item 2(c) above except Concrete mix shall be M-20.</p> <p>Note : (i)Erection charges for CC/RCC in Hard Soil & rock shall be payable @ erection charges of Item 2(a)(i)/2(az)(i) & item 2(a)(ii)/2(az)(ii) respectively.</p> <p style="text-align: center;">(ii) Cost of steel for reinforcement if any, shall be payable under item 3(g).</p>
<p>Item No- 2(czz)</p>	<p style="text-align: center;">Re-inforced cement concrete grade M-25 for foundation and plinth.</p> <p>This item is exclusively applicable for casting foundation with Reinforced cement concrete of Grade M-25 suitable for special portal structures at stations and yards. Foundation shall be cast as per drawing no. CERC-6575-RC-CE-DC-001 applicable for special portal structures. The prices include following activities.</p> <ul style="list-style-type: none"> [i] Excavation of pit of appropriate size. [ii] Provision of PCC in grade M-10. [iii] Casting of RCC in M-25 grade concrete. [iv] Provision of 36 mm dia foundation bolts. [v] Provision of Reinforcement. [vi] Re-filling, compaction, ramming of pit after casting of foundation. <p>The price shall cover excavation, supply and handling of all materials and</p>

	<p>accessories, temporary arrangements for excavation in concrete/ masonry drains/ walls requiring use of chisel and hammer, shoring wherever necessary, casting concrete, finishing the top of foundation after erection of portal structures. The price also includes dismantling of all connected temporary arrangements and removal of spoil after completion of casting work.</p> <p>Note: [i] 75 mm thick PCC ratio 1:3:6 (M-10) required for foundation bed shall be paid under item 34 (b). Cost of supply of steel Reinforcement shall be payable against item 3(g) including cutting, straightening, hooking, bending, binding, erecting and placing and keeping in position including all lead and lift and including cost of binding wire.</p> <p>[iii] Cost of supply of 36 mm dia Bolts, nuts, washers etc. shall be payable against item 3(m), however, erection price is inclusive in this item.</p> <p>[iv] Price is inclusive of re-fillings, compaction, ramming of pit after casting of foundation</p> <p>Notes for items 2 (a) to (c)</p> <ol style="list-style-type: none"> 1. The prices under item 2 shall be same for any shape or size of concrete blocks. In calculating the individual volume of concrete, fraction of a cubic metre beyond the third decimal shall be rounded off to the next nearest third decimal. 2. The prices under items 2(a), (b) and (c) shall apply for concreting of all foundations for mast, gantries, portals, anchor blocks for guy rods, and fencing uprights. 3. For purposes of computation of volume of concrete under item 2, the volume of steel work embedded in the foundation block shall be ignored. 4. Cost of all concrete will be paid for only under item 2 and the prices of other items shall not include cost of concrete except for Item-17. 5. For purpose of computation of volume of concrete under item-2. The volume of concrete shall include the volume of sand and bitumen in sand cored foundation. However, for the purpose of computation of quantity of cement utilised in sand core foundations, the volume of the sand and bitumen used in core hole should be deducted from the total volume of the foundation. 6. For purposes of computation of volume of concrete, the volume of each muff for all masts shall be taken as 0.02 cum except for masts with balance weights and for each column of portal, each headspan mast, 2 or 3 track cantilever masts, and special fabricated masts for which the volume of muff shall be taken as 0.08 cu.m. irrespective
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	<p>of the size and shape of muff, on a flat basis.</p> <p>7. The prices under items 2 (a), (b) and (c) shall also include the cost of concrete cable trenches and trench covers at the switching stations as well as embodiment of drain pipes, where required.</p> <p>8. The prices under items 2 (a),(b) and (c) shall also cover the cost of diversion of masonry/earth drain wherever necessary for casting of foundations.</p> <p>9. Concrete mix for foundation and grouting/muffing under item 2(a),(b) and (c) will be as per para 2.2.4.</p> <p>10. In case Ready Mix concrete is used, no extra payment shall be payable to the contractor. Payment shall be done at the rates given in the contract irrespective of concrete is nominal or Ready Mix.</p>
Item No- 2 (e)	<p>Extra for supply & sinking of concrete shells</p> <p>The price shall cover extra on items 2(a),(b) and (c) for supply and sinking of a concrete shell before casting of concrete for traction structure foundations or anchor blocks including pumping of water where necessary. Engineer shall decide whether sinking of concrete shells is necessary.</p> <p>NOTE : The above price shall be per concrete shell of standard size. If more than one concrete shell is used in a foundation, the price shall be proportionately augmented.</p>
Item No.2 (f)	<p>Casting of Foundations using mechanised Augur:</p> <p>The price shall cover excavation, supply and handling of all materials including supply and erection of steel for reinforcement, accessories/temporary arrangements and all associated operations for casting of foundations by mechanised Augur in all type of soils except rocks. All machines, tools and equipment needed for the above shall be supplied by the Contractor at his own cost. The price shall include the cost of cement.</p> <p>NOTE : 1. The payable volume of the foundation shall be the designed one as shown in the drawings for which the pit has been excavated irrespective of the actual configuration assumed by the latter after auguring.</p> <p>2. The depth of the excavation shall be measured from the formation level to the maximum excavated point.</p>
Item 2(j)	<p>Concrete for Cylindrical type side bearing foundations (M-15 and M-20) (SBC - 11000 kgf/sqm)</p> <p>Cylindrical type foundation for side bearing locations for 11000 kgf/sqm safe bearing capacity (SBC) as an alternative to Conventional Side Bearing type foundation for</p>

	<p>conventional and High Rise OHE as per RDSO's drawing Nos.</p> <p>(i) TI/DRG/CIV/FND/RDSO/00002/17/0 Rev-0 for Conventional OHE. (ii) TI/DRG/CIV/FND/RDSO/00003/17/0 Rev-0 for High Rise OHE.</p> <p>The price shall cover excavation of pits with the help of mechanized augar, supply and handling of all materials and accessories including re- enforcement steel (epoxy coated) conforming to IS: 432 Part -1. The price shall include cutting, bending and binding of re-enforcement bars.</p> <p>Price shall include shoring if required, concrete grouting of mast and finishing the top of foundation of mst. The price shall also include dismantling of all temporary arrangement and removal of spoil.</p> <p>Machinery/Plant and Augur required for digging of pit shall be arranged by contractor at their own cost.</p>
<p>Item No- 3(a)(i)</p>	<p>:Supply and Erection of traction masts fabricated from Rolled mild steel beam (BFB) of size 152mm x 152mm x 37.1 Kg/m and Galvanized in length 9.5 m or 8.5 m long.</p> <p>The price shall cover the cost of supply of finished traction mast fabricated from Rolled mild steel beam (BFB) 152mm x 152mm x 37.1 Kg/m designated SC-150, table 3.1 of IS-808/1989 duly drilled as per RDSO's Drawing No. ETI/OHE/G/00144, Sh.No.3 Mod-C, with latest mod. and galvanized as per Specification No. ETI/OHE/13 (4/84) with A&C Slip No.1 to 3 with latest spec. The length of mast will be 9.5 or 8.5 meter as required. The steel shall be conforming to IS-2062/2006 (latest) Gr 'A' SK Zinc conforming to IS-209/1992 (or latest).</p> <p>The price shall cover cost of erection, alignment and setting before grouting of individual traction masts. The price shall also include the cost of repairing of platform shelters in case the shelter is dismantled/removed/damaged during the course of erection of a mast at platforms.</p>
<p>Item No- 3(a)(ii)</p>	<p>Supply and Erection of traction masts, main mast of Switching stations and Booster transformer stations fabricated from Rolled mild steel Joist (RSJ) of size 203 mm x 152 mm x 52.0 kg/m and galvanized in various lengths.</p> <p>The price shall cover the cost of supply of traction mast, main mast of Switching stations and Booster transformer stations fabricated from Rolled mild steel joist (RSJ) 203mm x 152mm x 52.0 Kg/m designation WB-200, table 2.2 of IS-808/1989 duly drilled as per RDSO's Drawings given below for various types of masts and galvanized as per Specification No. ETI/OHE/13 (4/84) with A&C Slip No.1 to 3, with latest spec. The steel shall be conforming to IS-2062/1992 (latest) Gr 'A' SK Zinc conforming to IS-209/1992 (or latest).</p> <p>Drg No. (i) ETI/OHE/G/00144, Sh.No.3 latest Mod 9.5 M long</p>

	<p>(ii) ETI/C/0030 latest Mod 11.4 m (S1) (iii) ETI/C/0031 latest Mod 11.4 m (S2) (iv) ETI/C/0036 latest Mod 8.0 m (S4) (iv) ETI/C/0181 latest Mod 12.4 m (S6) (iv) ETI/C/0184 latest Mod 9.4 m (S9)</p> <p>The price shall also cover the cost of supply of any other structures fabricated out of RSJ beam.</p> <p>The price shall cover cost of erection, alignment and setting before grouting of individual traction masts and main masts of Switching and Booster Transformers stations including those for head spans. The price shall also include the cost of repairing of platform shelters in case the shelter is dismantled/removed/damaged during the course of erection of a mast at platforms.</p>
<p>Item No-3(b)(i)</p>	<p>Supply and erection of fabricated and galvanized structures (O,N&R type portals) with necessary components other than masts.</p> <p>The price shall cover the cost of supply of O, N and R type portals with components as per RDSO's Drg. No. :</p> <p>(i) ETI/C/0008 Sheet No.1 latest Mod for 'N' type (ii) ETI/C/0017 Sheet No.1 latest Mod for 'O' type (iii) ETI/C/0011 Sheet No.1 latest Mod for 'R' type</p> <p>The structures shall be fabricated from steel conforming to IS:2062/2006, Gr.E-250 (Fe 410 W), Quality-A, IS-808/1989 and galvanised as per RDSO's specification No.ETI/OHE/13 (4/84) with A&C slip Nos 1 to 3 , with latest spec.</p> <p>The price shall cover, cost of erection, alignment and setting before grouting, wherever required, of portals assembly of boom components and erection of the same. The prices shall also include supply and erection of galvanised bolts, nuts washers etc. wherever required as per approved designs and drawings. The price shall cover assembling, adjustment and erection of all types of booms including TTC booms and any special structures across the track, not covered under item 3(b)(iii). The price shall also include the cost of repairing of platform shelters in case the shelter is dismantled/removed/damaged during the course of erection of a portal at platforms.</p>
<p>Item No-3(b)(ii)</p>	<p>Supply and erection of structural steel (traction mast) fabricated and galvanized, of all type B-Series Mast.</p> <p>The price shall cover the cost of supply of B-Series traction mast 9.5 m and/or 11.4 m long i.e. B-Series Mast fabricated and galvanized as per RDSO Drg No. ETI/C/0071 (Mod-E), TI/DRG/CIV/B-Mast/00001/ 13/0 with latest mod and specification No. ETI/OHE/13 (4/84), with latest spec. Steel shall be conforming to IS-2062/2011 Gr. A and Zinc conforming to IS-209 latest.</p>

	<p>The price shall also cover the supply of all size of B-Series mast required which has not been mentioned.</p> <p>The price shall cover cost of erection, alignment and setting before grouting of individual traction masts and main masts of Switching and Booster Transformers stations including those for head spans. The price shall also include the cost of repairing of platform shelters in case the shelter is dismantled/removed/damaged during the course of erection of a mast at platforms.</p> <p>Note: 11.4 m long masts shall have provision for erection of Brackets (Cantilevers) for conventional as well as for High Rise OHE.</p>																																																												
<p>Item No- 3(b)(iii)</p>	<p>Supply and erection of special fabricated & galvanised steel structure other than portals and traction masts not covered under item 3(b)(i) & 3(b)(ii).</p> <p>The price shall cover the cost of supply and erection of special fabricated & galvanised steel structures (other than BFB/RSJ/B-Series masts and portals) for conventional and High Rise OHE. The structure to be supplied under this item shall be TTC, G-type, BFB type portals, Bridge masts, emergency masts and double/fabricated “S” series masts such as S3, S5, S7, S8, S-100, S-101, T-150, Dwarf Masts etc. Any other similar structure required during the execution of work shall also be supplied under this item.</p> <p>The price shall include the cost of steel, fabrication, galvanisation, and supply at site for erection. Steel shall be conforming to IS-2062 Gr.’A ‘ SK 2011 (latest), Zinc conforming to IS- 209/1997 (latest) and galvanisation to RDSO’s specification No. ETI/OHE/13(4/84) with A&C slip No.1 to 3, with latest spec. The various structures covered under this item are:-</p> <table border="1" data-bbox="324 1228 1479 1934"> <thead> <tr> <th>SN</th> <th>Description</th> <th>Drg No.</th> <th>Mod</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>TTC with 5.5/8.0m boom</td> <td>ETI/C/0009 sheet 1</td> <td>Latest</td> </tr> <tr> <td>2</td> <td>G-type portal upright & end pieces</td> <td>ETI/C/0056</td> <td>Latest</td> </tr> <tr> <td>3</td> <td>BFB portal</td> <td>ETI/C/0026 Sh.1</td> <td>Latest</td> </tr> <tr> <td>4</td> <td>S-7,12.4m</td> <td>ETI/C/0182</td> <td>Latest</td> </tr> <tr> <td>5</td> <td>S-8,12.4m</td> <td>ETI/C/0183</td> <td>Latest</td> </tr> <tr> <td>6</td> <td>S-100, for LT, transformer at SWS</td> <td>ETI/C/0043</td> <td>Latest</td> </tr> <tr> <td>7</td> <td>S-101, for Isolators inside SWS</td> <td>ETI/C/0044</td> <td>Latest</td> </tr> <tr> <td>8</td> <td>S-3,11.4m</td> <td>ETI/C/0180</td> <td>Latest</td> </tr> <tr> <td>9</td> <td>S-5,11.4m</td> <td>ETI/C/0042</td> <td>Latest</td> </tr> <tr> <td>10</td> <td>T-150, for LT supply transformer</td> <td>ETI/PSI/037</td> <td>Latest</td> </tr> <tr> <td>11</td> <td>Dwarf Mast</td> <td>ETI/OHE/G/1402</td> <td>Latest</td> </tr> <tr> <td>12</td> <td>Special BFB Portal for 5 tracks (General Arrangement) for High Rise OHE</td> <td>TI/DRG/CIV/BFB-POTAL/00001/13/0 Sh. No. 1</td> <td>Latest</td> </tr> <tr> <td>13</td> <td>G-Type Portal Special Upright and End Piece for High Rise OHE</td> <td>TI/DRG/CIV/G-PORTAL/00001/13/0</td> <td>Latest</td> </tr> <tr> <td>14</td> <td>Two Track Cantilever Structure (TTC) General Arrangement for High Rise OHE</td> <td>TI/DRG/CIV/TTC/</td> <td></td> </tr> </tbody> </table>	SN	Description	Drg No.	Mod	1	TTC with 5.5/8.0m boom	ETI/C/0009 sheet 1	Latest	2	G-type portal upright & end pieces	ETI/C/0056	Latest	3	BFB portal	ETI/C/0026 Sh.1	Latest	4	S-7,12.4m	ETI/C/0182	Latest	5	S-8,12.4m	ETI/C/0183	Latest	6	S-100, for LT, transformer at SWS	ETI/C/0043	Latest	7	S-101, for Isolators inside SWS	ETI/C/0044	Latest	8	S-3,11.4m	ETI/C/0180	Latest	9	S-5,11.4m	ETI/C/0042	Latest	10	T-150, for LT supply transformer	ETI/PSI/037	Latest	11	Dwarf Mast	ETI/OHE/G/1402	Latest	12	Special BFB Portal for 5 tracks (General Arrangement) for High Rise OHE	TI/DRG/CIV/BFB-POTAL/00001/13/0 Sh. No. 1	Latest	13	G-Type Portal Special Upright and End Piece for High Rise OHE	TI/DRG/CIV/G-PORTAL/00001/13/0	Latest	14	Two Track Cantilever Structure (TTC) General Arrangement for High Rise OHE	TI/DRG/CIV/TTC/	
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00001/13/0 Sh.-1 Latest

The price shall cover, cost of erection, alignment and setting before grouting , wherever required, gantries, including tower/ steel tower/steel work for feeders for traction sub-station, drop arms, standard super masts and suspension brackets for feeders and return conductors, dwarf masts or stub masts for anchoring, complete with anchor plates drilled and welded in position, multiple cantilever cross arm, chairs, adopters for bracket assemblies and all other small part steel works, the erection of which is carried out by the Contractor irrespective of whether they are supplied by the Engineer or the Contractor. The prices shall also include supply and erection of galvanised bolts, nuts washers etc. wherever required as per approved designs and drawings. The prices shall also include the cost of repairing of platform shelters in case the shelter is dismantled/ removed/damaged during the course of erection of a mast/portal at platforms.

Note for Item 3(a)(i), 3(a)(ii), 3(b)(i), 3(b)(ii) & 3(b)(iii) :

(i) The price for the items 3(a)(i), 3(a)(ii) and 3(b)(i), 3(b)(ii) , 3(b)(iii) shall also include the cost of stenciling of location number on masts/portal uprights in the manner as directed by the Engineer. The price shall also include straightening of masts/portals uprights wherever approved by the Engineer and cutting of mast/portals/upright to suit the site condition.

(ii) For the purpose of payment for supply and/or erection, the black weights as per respective RDSO drawing for individual traction masts (RSJ, BFB & B series, S-1, S4, S-6 & S-9), head span, Portal structures (O, N & R type), special steel structures (TTC, BFB, G & P type portal, Dwarf masts, S3, S5, S8, S100, S101, T-150 etc) shall be payable to the contractor.

(iii) For the purpose of payment for supply and/or erection, of bridge mast or any other structures which are not covered in RDSO's drawings, if any, the black weights of such structures including all components as shown in respective approved drawing, shall be payable to the contractor by Engineer.

(iv) No payment is permissible for increased weight of any structure or their components on account of galvanization.

(v) The payment shall be made on the basis of the final lengths/weight of the structures, in case the same are cut or modified as indicated above before erection.

(vi) In case of any dispute in unit weights mentioned in drawings, the matter will be decided by the Engineer of the project and decision taken in the matter will be final and binding on to the contractor.

Standard weights of Galvanised steel structures

S. No.	Structure Type	Standard Length	Black Wt. (kg)	Weight of finished
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		in Meters	as per Drawing	Galvanized Structure (kg)
1	RSJ	9.50	494.00	499.77
2	BFB	9.50	352.45	357.64
3	B-150	9.50	369.69	378.67
4	B-175	9.50	422.89	432.40
5	B-200	9.50	474.19	483.95
6	B-250	9.50	659.27	672.34
7	NU	10.445	365.26	385.30
8	NE1	5.38	183.88	193.63
9	NE2	5.88	199.18	209.80
10	NB 1.5	1.5	68.83	70.33
11	NB 3.0	3.0	110.99	113.69
12	NB 4.5	4.5	160.58	164.47
13	NB 6.0	6.0	210.20	215.14
14	NB 7.5	7.5	252.36	258.50
15	NB 9.0	9.0	301.95	309.28
19	RU	10.58	627.48	651.87
20	RE-1	11.6	634.33	662.13
21	RE-2	12.1	660.56	689.75
22	RB 7.5	7.5	432.58	440.78
23	RB 9.0	9.0	507.71	517.15
24	RB 10.5	10.5	586.49	597.65
25	RB 12.0	12.0	665.26	677.78
26	RB 13.0	13.0	717.88	731.60
Note: The tolerance of (+/-) 2.5% of the weight of finished galvanized structures as per column-E above will be the limit.				
Item 3(b) (iv)	<p>Design, Supply, Fabrication, Erection & Painting of Height Gauge at level crossings (for clear span up to 7.3m and / or above 7.3m upto 12.2m)</p> <p>The price shall cover supply of Height Gauges duly fabricated painted complete in all respect. However, provision of particular type of Height Gauge at various level crossings shall be decided and advised by the Engineer during execution of work. Contractor shall procure the structures/Steel required for the work accordingly. Following RDSO/ CORE drawings are applicable for different types of Height Gauges.</p> <p>SN Description RDSO/CORE Drg. No.</p> <p>1 Standard Plan, Details of Height Gauge for span 7.3 m to 10.0 m, Details of structure and foundation. CORE Drawing No. RE/CIVIL/S/148-2011 Mod-1 & 2 OR TI/DRG/CIV/HGAUGE/RDSO/00001/14/0 Mod-A</p> <p>2 Standard Plan, Height Gauge for level crossing (For clear span up to 7.3 m) Details of structures and foundation. TI/DRG/CIV/HGAUGE/RDSO/00001/05/0</p> <p>3 Standard plan, Height Gauge for level crossing (For clear span above 7.3 m up to 12.2 m) Details of structures and foundations.</p>			

	<p style="text-align: center;">TI/DRG/CIV/HGAUGE/RDSO/00002/05/0</p> <p>Price shall cover supply of various steel sections conforming to IS 2062/2011, IS 808/1989, Fabrication at site or supply duly fabricated from CORE/IS approved sources for structures & SPS. Price shall cover supply of bolts, nuts & washers etc necessary for fastening the components of Height Gauge.</p> <p>Price shall cover cost of painting of Booms & upright with Red Oxide / Zinc Chromate to IS: 2074 as first coat and 2nd coat with enamel paint to IS: 2933-1975 Black and white colour alternatively 300 mm wide band.</p> <p>Crash Barrier and Rail Barricading shall be provided as required and as per provision in drawings.</p> <p>The price shall cover cost of erection, alignment and setting while grouting of upright and side supports. The price shall cover labour charges required for welding / fabrication of side supports / uprights and other components at site.</p> <p>Note:-</p> <p>(i) For the purpose of payment against item 3(b)(iv) for all the components (upright, boom, side supports, crash barrier / Barricading etc.), weight of structures/ fabricated steel works will be calculated according to standard unit weight of respective sections for required quantity. Contractor will be required to submit Bill of materials for each type of Height Gauge along with Black weight thereof for approval by the Engineer before claiming the payment.</p> <p>(ii) In case of any dispute in unit weights, the matter will be decided by the CPD of the project and decision taken in the matter will be final and binding on to the contractor.</p> <p>(iii) No crane / tools & Plants will be provided by Engineer for fabrication, erection or transportations of Height Gauge or black steel required for the work.</p> <p>(iv) Prices for foundation works (CC & RCC) shall be admissible under item 34(b) and 2(cz) respectively.</p>
<p>Item 3(b)(v)</p>	<p style="text-align: center;">Supply and Erection of special type portal structures including uprights, Booms and components.</p> <p>The price shall cover the cost of supply of special type portal structure with components as per Drawing to be supplied by the Engineer.</p> <p>The structure shall be fabricated from steel confirming to IS - 2062/ 2006 No. E - 250 (Fe 410W) quality- A, IS - 808 / 1989 and galvanised as per RDSO specification No. ETI/OHE/13 (4/84) with A&C slips Nos 1 to 3.</p> <p>The price shall cover, cost of erection, alignment and setting before grouting, wherever required of portal assembly of boom components and erection of the same. The prices shall also include supply and erection of galvanised bolt, nuts, washers etc wherever required as per approved designs and drawings. The price shall cover assembling, adjustment and erection of booms. The price shall also include the cost of repairing of</p>

	<p>platform shelters in case the shelter is dismantled/ removed/ damaged/ during the course of erection of a portal at platform.</p> <p>The Price shall also cover the cost of stenciling of location number on the portal upright in the manner as directed by the Engineer. The price shall include cost of straightening of uprights/Booms if required.</p>
<p>Item No- 3 (c)</p>	<p>Supply only of fabricated steel work other than mast</p> <p>The price shall cover the cost of supply only of all fabricated steel work excluding fasteners which are required to be supplied by the Contractor. The cost of erection for such steel work, if carried out by the Contractor shall be paid for under item 3(b)(iii).</p> <p>For standard fabricated steel work for which RDSO'S approved drawings are available, the weight of steel work as specified in RDSO'S drawing shall be considered for payment. However, in case the unit sectional weight of any member indicated in RDSO's drawing is not in conformity with the unit sectional weight as per the latest IS specification, the weight of the fabricated steel work shall be calculated on the basis of latest IS specification and the same will be considered for payment. For the non-standard fabricated steel work, the calculated weight to be considered for payment under this item shall be included in the relevant drawing based on, latest IS sectional weight at the time of submitting the designs for approval of the Engineer.</p> <p>The price shall include the cost of supply of bracket top and bottom mast fittings suitable for PSC masts.</p> <p>Notes for Items 3(a)(i), 3(a)(ii), 3(b)(i), 3(b)(ii), 3(b)(iii) & 3(c)</p> <ol style="list-style-type: none"> 1. For the purpose of payment against items 3(a)(i), 3(a)(ii), 3(b)(i), 3(b)(ii), 3(b)(iii) & 3(c), weight of structures or fabricated steel work will be calculated according to the weight of black steel given in section books for the lengths of various members shown in the approved drawings. There will be no addition for increased weight due to galvanizing or painting or weld material or reduction for holes or skew cuts. 2. The rates against item 3(b)(iii) shall be applicable to the erection of small part steel work, which are not covered under the various other items of work. Unless specifically indicated none of the other items of work shall include the cost of supply and/or erection of small part steel work, which will invariably be paid for under item 3(b)(iii) or and 3(c) as applicable.
<p>Item No- 3(e)(i)</p>	<p>Supply and erection of a Guy Rod Assembly</p> <p>The price shall cover supply and erection of Guy Rod Assembly, for both conventional and High Rise OHE, of various lengths for traction masts, feeder line towers or supports complete with mast guy rod fittings, guy rod with adjustments and part/s be grouted in the anchor block. The price shall not include the cost of supply and erection of a dwarf or stub mast with anchor plates drilled and welded in position, where required, for</p>

anchorage, and small parts steel work, complete with bolts and nuts etc., if any for attaching the mast guy rod fittings to the mast/structure which shall be paid for separately under the relevant item. Prices indicated against all other items should be exclusive of the price of supply and erection of guy rod, if any which will be paid for under this item.

COMPONENTS REQUIREMENT

Rly. Id. No.	Description of components	Qty. per u
3232	Mast guy rod fitting (welded) complete with 4 short bolts, nuts, lock nuts and washers for attachment to mast/S.P.S including appropriate fittings.	1 off
5001/ 5001-1/ 5001-3	Anchor bolts (complete with nuts lock nuts and split pins)	1 Set
5002	Guy rod stirrup	1 off
5004 or 5005 or 5005-2 or 5006-1 or 9070 or 9071 or 5006-2	Guy rod with nut, lock nut, washer and split pin	1 off
5007-1	Anchor 'v' bolt	2 off
5008	Anchor	2 off
5220	Guy rod double strap assembly	1 off or 2 off (as required)

NOTE: 1. In case the Contractor desires to adopt a different design for guy rod assembly, the same shall be indicated by him in the Tender and the components required should be clearly listed under this item as deviation.

2. Supply and erection of guy rod assembly at anticreep portals will also be paid for under this item.

Item No- 3(e)(ii) Supply and erection of Anchoring Arrangement of traction mast with Galvanised steel stranded wire

The price shall cover supply and erection of Anchoring Arrangement with Galvanised steel stranded wire of required length for traction masts, feeder line towers or supports complete with mast guy rod fittings, Galvanised steel stranded wire of 9.3 or 9.7 m and part/s be grouted in the anchor block as per RDSO's drawing No. TI/DRG/OHE/GSSW/0002/09/0. The price shall not include the cost of supply and erection of a dwarf or stub mast with anchor plates drilled and welded in position, where required, for anchorage, and small parts steel work, complete with bolts and nuts etc., if any for attaching the mast guy rod fittings to the mast/structure which shall be paid for separately under the relevant item. Prices indicated against all other items should be exclusive of the price of supply and erection of guy rod, if any which will be

	<p>paid for under this item.</p> <p style="text-align: center;">COMPONENTS REQUIREMENT</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: center;">Rly.Id.No.</th> <th style="text-align: center;">Description of components</th> <th style="text-align: center;">Qty. per unit</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">3232</td> <td>Mast guy rod fitting (welded) complete with 4 short bolts, nuts, lock nuts and washers for attachment to mast/S.P.S including appropriate fittings</td> <td style="text-align: center;">1 of</td> </tr> <tr> <td style="text-align: center;">5023-1</td> <td>Eye Bolt (complete with M24 nut, Lock nut Plain washer, thimble and split pins 5x40</td> <td style="text-align: center;">1 Set</td> </tr> <tr> <td style="text-align: center;">5002</td> <td>Guy rod stirrup</td> <td style="text-align: center;">1 off</td> </tr> <tr> <td style="text-align: center;">5004-1or 5005-1</td> <td>Galvanised Steel Stranded Wire 12.5 mm dia</td> <td style="text-align: center;">1 off</td> </tr> <tr> <td style="text-align: center;">5007-1</td> <td>Anchor 'v' bolt</td> <td style="text-align: center;">2 off</td> </tr> <tr> <td style="text-align: center;">5008</td> <td>Anchor loop</td> <td style="text-align: center;">2 off</td> </tr> <tr> <td style="text-align: center;">5220</td> <td>Guy rod double strap assembly</td> <td style="text-align: center;">1 off or 2 off (required)</td> </tr> </tbody> </table>	Rly.Id.No.	Description of components	Qty. per unit	3232	Mast guy rod fitting (welded) complete with 4 short bolts, nuts, lock nuts and washers for attachment to mast/S.P.S including appropriate fittings	1 of	5023-1	Eye Bolt (complete with M24 nut, Lock nut Plain washer, thimble and split pins 5x40	1 Set	5002	Guy rod stirrup	1 off	5004-1or 5005-1	Galvanised Steel Stranded Wire 12.5 mm dia	1 off	5007-1	Anchor 'v' bolt	2 off	5008	Anchor loop	2 off	5220	Guy rod double strap assembly	1 off or 2 off (required)
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Item No- No.3(f)	<p>Erection of PSC Mast.</p> <p>The erection price shall cover cost of erection, alignment and getting before grouting of individual PSC masts wherever these are to be located. The price shall also include the cost of stenciling of location number on masts in the manner directed by the Engineer.</p>																								
Item No.3(g)	<p>Supply of steel reinforcement for RCC work including cost of cutting , straightening, bending , biding, erecting and placing & keeping in position including all lead & lift & including cost of binding wire</p> <p>The item covers the price of supply of tested quality of steel for reinforcement of appropriate size and for reinforcement steel above 8 mm or suitable dia shall be High strength deformed steel bars conforming to IS:1786/1985 and below 8 mm dia shall be mild steel and medium tensile steel bars conforming to IS:432(Pt.I)/ 1982.</p> <p>Price shall cover the cost towards cutting, straightening hooking, bending, binding, erecting and placing and keeping in position including all lead and lift and including cost of binding wire.</p> <p>Test certificates for steel will be furnished by the Contractor at his own cost from a laboratory approved by the Engineer-in-Charge. Nothing extra will be paid for unauthorised overlaps and wastage of steel involved in cutting the bars to their required sizes.</p>																								

<p>Item No.3(i)</p>	<p>Supply and Erection of 25 kV Caution Boards/Plates</p> <p>The price shall cover price of material including Caution Boards, SPS items, nuts, bolts etc. as required and erection charges Caution Boards shall be of two types.</p> <p>(i) General Caution Notice at entrance to station (Hindi & English). No. ETI/OHE/G/7551 latest Mod.</p> <p>(ii) Caution Plate 25000 V. No. ETI/OHE/G/7531 latest Mod.</p> <p>Price shall be inclusive of Sales tax, Excise duty, Freight etc. Boards shall required to be installed on a steel structure/Rail post/wall of a building therefore mode of erection shall be as per requirement of the site.</p>									
<p>Item No.3(j)</p>	<p>Supply and erection of protective screen on ROB/FOBs</p> <p>The price shall cover on per track basis on both sides of ROB/FOB, the cost of all material required for fabrication of protective screen including angle, Tee, expanded metal (Jali), GI sheet, paints etc. The price shall also include the labour cost for fabrication, erection and painting at various locations. The fabrication and erection work shall be done as per RDSO Drg.No.ETI/C/0068 latest Mod.</p>									
<p>Item No 3(k)</p>	<p>Supply and erection of Danger Plate on a Height Gauge</p> <p>The price shall cover supply of Danger Board (as per RDSO drawing No. ETI/C/0069 Rev-C) including necessary Bolts, Nuts, Washers etc and erection thereof on the boom of each Height Gauge.</p>									
<p>Item No.4(a) (i) :</p>	<p>Supply without Insulator and erection of a single bracket assembly</p> <p>The price shall cover on a flat rate basis any bracket assembly on a traction mast or support on drop arm and shall include those on high/low level platform, in the vicinity of turnouts, over bridges or and at locations with reduced encumbrance or terminating wires. The price shall include the cost of supply of all components including galvanised steel tube, dropper wires, bolts and nuts etc. but excluding small parts steel work and solid core insulators. Cost of insulators will be paid in Schedule-1, Section-5 and cost of SPS will be paid under item 3(c) of Schedule-1, Section-3. The price shall cover erection of all components including insulators, small parts steel work and dropper wires. However, this does not include the anticreep arrangement at masts/structures. The price shall include:</p> <table border="1" data-bbox="378 1707 1482 1934"> <thead> <tr> <th>Rly. Id No.</th> <th>Description of components</th> <th>Qty. per</th> </tr> </thead> <tbody> <tr> <td>3020-1</td> <td>Mast fitting for hook insulator (Forged)with 2 off bolts, nuts, lock nuts and washers of 16 dia.</td> <td>1 set</td> </tr> <tr> <td>2400</td> <td>Tubular stay arm assembly (including galvanised steel tube).</td> <td>1 set</td> </tr> </tbody> </table>	Rly. Id No.	Description of components	Qty. per	3020-1	Mast fitting for hook insulator (Forged)with 2 off bolts, nuts, lock nuts and washers of 16 dia.	1 set	2400	Tubular stay arm assembly (including galvanised steel tube).	1 set
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	2110/ 2130/ 2380	Catenary suspension bracket assembly or hook bracket	1 off	
	1160)	Suspension clamp	1 off	
	2120, 2140, 2040, 2080	Bracket tube assembly complete with tube cap and sleeve where required (including galvanised steel tube).	1 set	
	3070-1/2)	Mast bracket fitting assembly including 2 off bolts, nuts, lock nuts and washers of 16 m for attachment to structure or to small part steel work.	1 set	
	2151-2, 2152-2, 2161-2, 2162-2	Register arm hook Top & Bottom complete (Forged) with bolts, nuts and lock nuts.	1 off	
	2420 or 2430, 2270-4 or 5	Register arm assembly or raised register arm assembly (including galvanised steel tube).	1 set	
	2460 Style 02 or 2470Style 02	Register arm dropper assembly including dropper wire complete with bolts, nuts etc.	1 set	
	2391-1, 2540/2520	Steady arm hook (BFB) (Forged) or bent steady arm (where required)	As required	
	2361-1, 2491-2, 2492-2	25 mm drop bracket (Forged) with bolts & locknuts. 25 mm Steady arm clamp (Forged) with bolts & locknuts.	-do-	
	1220/1370/-1	Contact wire swivel clip or raised register arm clamp	1 off	
	2550-1/2	Antiwind clamp	As required	
Item No- 4(a)(ii)	Extra on 4(a) (i) for supply and erection of additional fittings on a single bracket assembly for supporting two OHEs			
	The price is applicable as an extra to item 4(a) (i) or 4(a) (v) for the provision of additional fittings required to support an additional OHE on a single bracket assembly payable under item 4(a)(i) or 4(a)(v). The price shall include supply of all extra fittings excluding the double contact wire swivel clip. The price shall include erection of all extra fittings, including the double contact wire swivel clip.			
Item No- 4(a)(iii)	Supply without insulator and erection of a single bracket assembly suitable for tramway type overhead equipment (regulated).			
	The price shall cover on a flat rate basis any bracket assembly, on a traction mast or support on drop arm, and shall include those on high level platform, in the vicinity of turnouts, over bridges or over-laps and at locations with reduced encumbrance or terminating wires. The price shall include the cost of supply of all components including galvanised steel tubes, dropper wires, bolts and nuts etc. but excluding small parts steel work and solid core insulators (Cost of insulators will be paid in Schedule-1, Section-5). Cost of SPS will be paid under item 3(c) of Schedule-1, Section-3. The price shall cover erection of all components including insulators, small part steel work and dropper wires.			

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Item No.4(a)(i v)	<p>Extra on item 4(a)(iii) for supporting two tramway type OHE (Regulated).</p> <p>The price is applicable as an extra to item 4(a)(iii) for the provision of additional fittings required to support an additional OHE on complete bracket assembly payable under item 4(a)(iii). The price shall include supply of all extra fittings, excluding the double contact wire swivel clip.</p>																																				
Item No.4 (ax)	<p>Supply of Insulators for item Nos.4 (a)(i) & 4 (a) (iii).</p> <p>The price shall cover only supply of the following Insulators mentioned against each items required for execution of work covered under items 4(a)(i) & 4(a)(iii). Erection cost of insulators are inclusive in items 4(a)(i) & 4(a)(iii) respectively.</p> <table border="1"> <thead> <tr> <th>Item No.</th> <th>Insulator</th> </tr> </thead> <tbody> <tr> <td>4(ax)(i)</td> <td>Stay Arm Porcelain (CD-1050 mm)</td> </tr> <tr> <td>4(ax)(iv)</td> <td>Bracket Porcelain (CD-1050 mm)</td> </tr> <tr> <td>4(ax)(ii)</td> <td>Stay Arm Composite (CD-1050 mm)</td> </tr> <tr> <td>4(ax)(v)</td> <td>Bracket Composite (CD-1050 mm)</td> </tr> <tr> <td>4(ax)(iii)</td> <td>Stay Arm Composite (CD-1600 mm)</td> </tr> <tr> <td>4(ax)(vi)</td> <td>Bracket Composite (CD-1600 mm)</td> </tr> </tbody> </table>	Item No.	Insulator	4(ax)(i)	Stay Arm Porcelain (CD-1050 mm)	4(ax)(iv)	Bracket Porcelain (CD-1050 mm)	4(ax)(ii)	Stay Arm Composite (CD-1050 mm)	4(ax)(v)	Bracket Composite (CD-1050 mm)	4(ax)(iii)	Stay Arm Composite (CD-1600 mm)	4(ax)(vi)	Bracket Composite (CD-1600 mm)																						
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Item No-4(b)(i)	Supply without insulator and erection of pull-off arrangement for one OHE																																				

	<p>The price shall cover supply of all components required for a pull-off arrangement to pull one equipment only including supply of copper conductors, small jumper(50) wire, head-span mast fittings complete with M.S. angle, equalising plate assembly, steady-arm, catenary dropper clip, contact wire swivel clip and fittings excluding solid core insulators (Cost of insulator will be paid in Schedule-1, Section-5). The price shall cover erection of all components including solid core insulators, small jumper wire and conductors.</p> <p>NOTE : (i) For composite OHE' a catenary dropper clip with necessary bimetallic strip/ washer to be used in place of catenary dropper clip (Id. No.1192). (ii) 5 mm diameter Hard drawn Copper wire shall be used for Register Arm Dropper for all locations except for those on long Girder Bridges, where wear rate is high for which 7 mm diameter Hard drawn Copper wire shall be used for Register Arm Dropper.</p>								
<p>Item No-4(b)(ii)</p>	<p>Extra for each additional equipment pulled.</p> <p>The price shall cover as an extra to item 4(b)(i) supply and erection of all additional fittings required including the supply of required conductors/ jumper wires, in case the pull off pulls more than one equipment the prices applicable for each extra equipment pulled.</p>								
<p>Item No. 4(b)(iii)</p>	<p>Supply without insulator and erection of a pull-off arrangement for regulated Tramway type OHE.</p> <p>The price shall cover supply of all components including conductors required for a pull off arrangement to pull one equipment only, complete with steady arm, contact wire swivel clip and fittings, including solid core insulator (Cost of insulator will be paid in Schedule-1, Section-5), . The price shall cover erection of all components including solid core insulators, small jumpers.</p>								
<p>Item No.4 (bx)</p>	<p>Supply of Insulators for item Nos. 4 (b)(i) & 4 (b)(iii)</p> <p>The price shall cover only supply of following Insulators mentioned against each item required for execution of work covered under items 4(b)(i) & 4(b)(iii). Erection cost of insulators are inclusive in items 4 (b)(i) & 4 (b)(iii) respectively.</p> <table border="1" data-bbox="412 1598 1382 1751"> <thead> <tr> <th>Item No.</th> <th>Insulator</th> </tr> </thead> <tbody> <tr> <td>4(bx)(i)</td> <td>Porcelain 9 Tonne (CD-1050 mm)</td> </tr> <tr> <td>4(bx)(ii)</td> <td>Composite 9 Tonne (CD-1050 mm)</td> </tr> <tr> <td>4(bx)(iii)</td> <td>Composite 9 Tonne (CD-1600 mm)</td> </tr> </tbody> </table>	Item No.	Insulator	4(bx)(i)	Porcelain 9 Tonne (CD-1050 mm)	4(bx)(ii)	Composite 9 Tonne (CD-1050 mm)	4(bx)(iii)	Composite 9 Tonne (CD-1600 mm)
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<p>Item No. 5(a)(i) :</p>	<p>Supply and erection of mounting arrangement for span wire.</p> <p>The price shall cover supply of all components including adjusters, terminal fittings and mast attachments required to attach a span wire or a head-span wire or a</p>								

	<p>cross span wire or a steady span wire or a support span wire for supporting contact wire only, at both ends, to traction masts/structures or special brackets. The price shall include the cost of solid core insulators (Cost of insulator will be paid in Schedule-1, Section-5), and small parts steel work, if any. The price shall cover erection of all components including mounting arrangements for span wire and solid core insulators but excluding small parts steel work, if any.</p>
Item No- 5(a)(ii):	<p>Supply and erection of a span wire</p> <p>The price shall cover supply and erection of a span wire per meter. The payable length in case of head span wires shall be the horizontal distance between the inner faces of all traction masts/structure on which the mast attachments are mounted, and in case of Large Span Wire, the actual length shall be measured at the time of erection. No extra payment shall be made on account of the sag. The price is applicable for all types of span wires including Large Span Wires. Erections of a meter beyond the first decimal shall be rounded off to the nearest first decimal.</p>
Item No- 5(az)(ii):	<p>Supply and erection of a span wire</p> <p>Same as item 5(a)(ii) but excluding supply of Catenary wires</p> <p>NOTE : The quantity for which the payment is made for the supply and erection of large span wire under this item shall be deducted from the corresponding length in the span for which payment is made under item 6(a).</p>
Item No- 5 (b):	<p>Supply without insulator and erection of suspension of one conventional OHE/ composite OHE from head span</p> <p>The price shall cover supply of a suspension assembly to carry complete all copper OHE/ Composite OHE on head spans inclusive of all dropper assemblies (exclusive of dropper wire) and from head-span, cross-span steady wire attachment, steady arm/rod, catenary suspension clamps and other fittings required to make complete suspension arrangements for copper OHE/Composite OHE on head span. The price shall cover the erection of all components, fittings, and droppers for suspension of OHE from head span.</p>
Item No- 5 (c)	<p>: Supply of without insulator and erection of Suspension /registration of contact wire only</p> <p>The price shall cover supply dropper wire and supply and erection of all fittings required for suspension/ registration of a contact wire only whether under head spans carrying other types of OHE or not or on any bracket for carrying contact wire only. The price shall include the followings:-</p> <p>(i) Vee clamp or double vee clamp with adjuster, or steady arm with steady wire clamp.</p> <p>(ii) Contact wire swivel clip.</p>
Item	Supply of Insulators for item 5(a)(i), 5(b) and 5(c)

<p>No.5 (ax)</p>	<p>The price shall cover only supply of any of the following Insulators mentioned against each item required for execution of item covered under items 5(a)(i), 5(b) and 5(c). Erection cost of insulators are inclusive in items 5(a)(i), 5(b) and 5(c) respectively.</p> <table border="1" data-bbox="412 415 1382 567"> <thead> <tr> <th>Item No.</th> <th>Insulator</th> </tr> </thead> <tbody> <tr> <td>5(ax)(i)</td> <td>Porcelain 9 Tonne (CD-1050 mm)</td> </tr> <tr> <td>5(ax)(ii)</td> <td>Composite 9 Tonne (CD-1050 mm)</td> </tr> <tr> <td>5(ax)(iii)</td> <td>Composite 9 Tonne (CD-1600 mm)</td> </tr> </tbody> </table>	Item No.	Insulator	5(ax)(i)	Porcelain 9 Tonne (CD-1050 mm)	5(ax)(ii)	Composite 9 Tonne (CD-1050 mm)	5(ax)(iii)	Composite 9 Tonne (CD-1600 mm)							
Item No.	Insulator															
5(ax)(i)	Porcelain 9 Tonne (CD-1050 mm)															
5(ax)(ii)	Composite 9 Tonne (CD-1050 mm)															
5(ax)(iii)	Composite 9 Tonne (CD-1600 mm)															
<p>Item No-6 (a)</p>	<p>Supply and erection of overhead equipment only.</p> <p>The price shall cover the supply of contact wire (107 Sqmm HDGCC), catenary(65 Sq. mm 19/2.1mm), dropper wire(5mm), jumper wires (50 Sq.mm, 19/1.80mm or) as per the specifications.</p> <p>The price shall cover supply of all components including dropper clips, parallel clamps for jumpering and splices (where their use is approved) and small parts steel works complete with bolts and nuts etc. for attachment of number plates to mast/structure, if any. The price shall cover erection of all components and wires and conductors including contact wire, catenary, droppers, jumpers and terminating wires, if any, but excluding small parts steel work, if any. The price shall be excluding the cost of erection of large span wire, which will be paid under item 5(a)(ii).</p> <p>The price shall include provision of Retro reflective number plates on traction masts or structures. The prices shall exclude supply of small parts steel work for fixing of retro reflective number plate (like as Clamps & plates) will be paid under item no.3(c). The price shall include bolts and nuts for attachment of Retro reflective number plates to masts/ structures. The price shall also include the cost of painting the setting distance and rail level on masts/structures, stenciling of symbol for direction of emergency telephone socket. The price shall not include termination of conductors which will be paid for under item 8.</p> <table border="1" data-bbox="326 1423 1471 1902"> <thead> <tr> <th>Rly. Ident No.</th> <th>Description of components</th> <th>Qty. for unit</th> </tr> </thead> <tbody> <tr> <td>1040-2 or SK-534/1 & SK-575/2 or SK- 576/1 & SK-535/2 or 1041-3.</td> <td>Contact wire parallel clamp small</td> <td>As required</td> </tr> <tr> <td>1180/SK-572/1 &SK-572/2</td> <td>Contact wire dropper clip (107)</td> <td>-do-</td> </tr> <tr> <td>1192</td> <td>Catenary dropper clip complete with bolts, nuts etc</td> <td>-do-</td> </tr> <tr> <td>7501/7503</td> <td>Enameled/ Retro reflective number plates complete with 2 Galv. MS. bolts m 10x35/30, nuts and lead washer for m 10 bolts but excluding SPS for</td> <td>-do-</td> </tr> </tbody> </table>	Rly. Ident No.	Description of components	Qty. for unit	1040-2 or SK-534/1 & SK-575/2 or SK- 576/1 & SK-535/2 or 1041-3.	Contact wire parallel clamp small	As required	1180/SK-572/1 &SK-572/2	Contact wire dropper clip (107)	-do-	1192	Catenary dropper clip complete with bolts, nuts etc	-do-	7501/7503	Enameled/ Retro reflective number plates complete with 2 Galv. MS. bolts m 10x35/30, nuts and lead washer for m 10 bolts but excluding SPS for	-do-
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		attachment of number plate to masts/structures.											
	1110-2	Contact wire ending clamp	-do-										
	1120	Catenary ending clamp	-do-										
	1140	Large span wire clamp (130)	-do-										
	5020-1/5020-2	9-T, Adjuster (Forged)	-do-										
	5030	Anchor double strap assembly	-do-										
	5191/5192	Compensating plate/equalizing plate	-do-										
Item No-6 (az)	Supply and erection of overhead equipment only Same as item 6(a) but excluding supply of Contact and Catenary wires.												
Item No-6 (ax)(i)	Supply of Hard Drawn Grooved Copper Contact Wire 107 Sq. mm required for item nos. 6(az), 6(bz), 6(cz), 10(az), 10(bz), 10(cz), 12(az), 12(cz) and 31(gz). The price shall cover only supply of 107 Sq. mm Hard Drawn Grooved Copper Contact Wire required for item nos. 6(az), 6(bz), 6(cz), 10(az), 10(bz), 10(cz), 12(az), 12(cz) and 31(gz) in MT.												
Item No-6 (ax)(ii)	Supply of Cadmium Copper Catenary Wire 65 Sq. mm, 19/2.10mm required for item nos. 5(az)(ii), 6(az), 9(dz), 9(ez), 10(az), 10(bz), 10(cz), 12(cz), 15(az)(iii) and 31(gz). The price shall cover only supply of 65 Sq. mm, 19/2.10mm, Cadmium Copper Catenary Wire required for item nos. 5(az)(ii), 6(az), 9(dz), 9(ez), 10(az), 10(bz), 10(cz), 12(cz), 15(az)(iii) and 31(gz) in MT.												
	<u>Item No-6(b) : Supply and Erection of contact wire only</u> The price shall cover the supply of contact wire (107 Sqmm HDGCC)as per the specifications of the tender paper, and erection of contact wire only. The price shall exclude termination which will be paid for under item 8. The price shall include provision of Retro-reflective and enameled number plates on traction masts/structures and painting of setting distance structures and rail levels on masts/structures. The price shall exclude the supply of small part steel works complete with bolts and nuts for attachment of enameled number plates to masts/ structures.												
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Contact wire (107 Sq mm)	As required	Contractor											
Retro-reflective and Enameled number plates	As required	Contractor											
Item No-6(bz)	Supply and Erection of contact wire only												

	Same as item 6(b) but excluding supply of Contact wires.
Item No-6(c)	<p>Supply and Erection of contact wire only (regulated with bridle wire)</p> <p>The price shall cover the supply of contact wire (107 Sqmm HDGCC), dropper wire (5mm), 7/2.10, 20 Sq.mm Bridle wire as per the specifications of the tender paper, erection and provision of bridle wires with clamps and two droppers including clips, Retro-reflective and enameled number plates on traction masts/structures, painting of setting distance and rail levels on masts/ structures, stenciling of symbol for direction of emergency telephone socket if required. The price shall exclude supply of required small part steel works complete with bolts and nuts for attachment of enameled number plates to masts/ structures. The price shall exclude termination which will be paid for under item 8.</p>
Item No-6(cz)	<p>Supply and Erection of contact wire only (regulated with bridle wire)</p> <p>Same as item 6(c) but excluding supply of Contact wires.</p> <p>Note : All bolts and nuts below 14mm dia on current carrying parts of OHE shall be stainless steel.</p> <p>Note for Measurement:</p> <ol style="list-style-type: none"> For the purpose of payment against item 6(a), (b), (c), & (d) the length of over head equipment, which shall include terminating wires, shall be measured from the center lines of the traction masts/structures at which the two ends of each tension length of over head equipment are anchored. The length shall be the difference between the actual chainages of the two traction masts/structures at which the ends of each tension length are anchored or by the sum of the actual spans between the same two points whichever is higher as included in the “As Erected” layout plans. No extra payment will be made on account of either due to sag in these wires/conductors or scraps generated.. The price under items 6(a),6(b),6(c) & 6(d) does not cover the cost of supply and erection of cut-in-insulators, the supply and erection of which shall be paid for under item 11. For the purpose of progress payment reference to layout plans “As Approved” shall be made. However, the price under this item shall be adjusted according to the final length of OHE indicated in the “As Erected” layout plan. <p>Note for Number Plates:</p> <ol style="list-style-type: none"> Retro-reflective OHE number plates should be provided generally at all locations. (Reference-Railway Board's letter No. 2001/Elect(G)/170/1 Dated 22/23.12.2016) Sigma Board in fogg prone area only, for identification of all signals shall be provided two masts prior to all signal locations for easy identification during foggy weather. (Reference-Railway Board's letter No. 2001/Elect(G)/170/1 Pt. Dated 07.05.2012).

<p>Item No-7(a):</p>	<p>Supply and Erection of all Aluminum 25 KV feeder/return conductor (Single Spider)</p> <p>The price shall cover supply and erection of Hard-drawn stranded All Aluminium conductor conforming to IS-398(Pt.I) with ammendment-1 and of size 19/3.99mm (240 Sq.mm) feeder/return conductor (along or across the tracks). The price shall not include the cost of suspension assembly (which will be paid for under item-11) and termination (which will be paid for under item-8.) and small part steel work, complete with bolts and nuts etc, if any. The price shall also cover on a flat rate basis, the cost of supply of splices to the extent required.</p>
<p>Item No-7(c) :</p>	<p>Supply and erection of earth wire</p> <p>The price shall cover supply and erection of earth wire made of 7/4.09 mm steel reinforced aluminium conductor (RACCOON) excluding termination which will be paid for under item 8 and shall include cost of fittings on structures for supporting the earthwire including bonding of the earth wire to the structure and the structure to earth electrodes or a non-track circuited running rail or impedance bond which will be provided by the Engineer. The price shall include disc insulators, cut-in-insulator to isolate sections of earth wire which will be paid for under item 11(c) and the cost of small part steel works complete with bolts and nuts to attach the earth wire mast clamp to masts/structures, if any.</p> <p>Note for Measurement:</p> <ol style="list-style-type: none"> 1. The prices under items 7(a) and (b) shall not include. Termination which will be paid for under item 8. The connection (a) between feeders, or return conductors and (b) of feeders, or return conductors to a bus bar, overhead equipment or isolator switch which will be paid for under item 15, & cut-in-insulators and suspension insulators which shall be paid for under item 11. 2. For the purpose of payment against item 7 (a) and (b) the length of feeders, return conductors or earth wire shall be measured from the center lines of the mast/structure at which the two ends of each length of feeder or conductor run are anchored, by adding actual spans. In case of feeders/return conductors crossing a track, the length shall be measured between the faces of traction masts/structures at which the two ends of the cross feeder or return conductors are anchored, as indicated in the as erected structure erection drawings for traction masts/structures. No payment will be made for the extra length of the conductor/s on account of sag or scrap. 3. For purposes of progress payment reference to "As Approved" drawings shall be made. However, the price under this item shall be adjusted according to the final length of OHE indicated in the "As Erected" layout plan/drawings
<p>Item No.7(d):</p>	<p>Supply and Manual Erection of All Aluminium 25 kV Feeder/Return (Single Spider).</p>

	Same as item 7 (a) but the work is to be executed manually instead of with wiring train.
Item No: 7(e) :	<p>Supply and Erection of Copper cross feeder wires (37/2.25 mm HDBC) across the track at SP/SSP/FP/BT locations.</p> <p>The price shall cover the supply and erection of 25KV feeder wire across/ along the track at the location of SP/SSP/FP/BT/Gantries stations. Feeder wire shall be made of hard drawn bare copper conductor of size 37/2.25 mm. The price shall be inclusive of cost of feeder wire but exclusive of termination (which will be paid under item 8(b)(ix)) and small parts steel work complete with bolts, nuts etc if any.</p>
Item No- 8(a)(v) :	<p>Supply and erection of regulating equipment (3 pulley type) with Counter weight assembly for conventional/composite OHE.</p> <p>The price shall cover supply and erection of counter weight assembly (for both conventional and High Rise OHE) including 5 ton adjuster with double strap assembly and normal/anti-theft guide tube assembly, the supply of regulating equipment and stainless steel wire rope (of various length as required) required for the regulating equipment and small part steel work, if any. The price shall also cover adjustment of the entire regulating equipment. The price shall not include supply and erection of termination, which will be paid for under Item No-8(b).</p>
Item No- 8(a)(vi) :	<p>Supply and erection of a regulating equipment (3 Pulley type) with counter weight assembly for Tram Way Type OHE (Regulated)</p> <p>Same as 8(a)(v) above but with counter weight assembly conforming to style – 01 of the relevant termination arrangement drawing No.: ETI/OHE/G/04212, with latest mod.</p>
Item No- 8(a)(x)	<p>Supply and erection of a regulating equipment (3 Pulley type) with counter weight assembly for conventional/ composite OHE</p> <p>Same as item 8(a)(v) but excluding stainless steel wire rope required for the regulating equipment. For shorter tension lengths OHE (like Emergency x-overs) GI Sleeve of 20 mm dia to be inserted in the hexagonal tie rod of ATD of cross-over OHE in accordance with RDSO's SMI No.TI/MI/0035 (Rev-O).</p>
Item No. 8(a)(xi)	<p>Supply and erection of a regulating equipment (3 pulley type) with counter weight assembly for tramway type OHE (Regulated)Same as item 8(a)(vi) but excluding stainless steel wire rope required for the regulating equipment.</p> <p>Same as item 8(a)(vi) but excluding stainless steel wire rope required for the regulating equipment. For shorter tension lengths OHE (like Emergency x-overs) GI</p>

	Sleeve of 20 mm dia to be inserted in the hexagonal tie rod of ATD of cross-over OHE in accordance with RDSO's SMI No. TI/MI/0035 (Rev-O).
Item No. 8(a)(xii)	<p align="center">Marking of 'Y' measurement at BWA locations</p> <p>The price shall cover marking/ painting of temperature and 'Y' measurement on OHE masts at BWA locations including cost of paint.</p>
Item No. 8(b)(i)	<p>Supply without Insulator and erection of materials for termination of single conductor of overhead equipment or a terminating wire.</p> <p>The price shall cover supply of all material necessary for the termination of single conductor of overhead equipment or terminating wire on a traction mast or structure, including appropriate mast anchor fittings, clevis assembly, adjuster, anchor double straps, ending clamp for the catenary or contact wire or terminating wire and fittings including 9 ton insulator (Cost of insulator will be paid in Schedule-1, Section-5), assembly and terminating wire, if any. The price shall cover erection of all materials including the 9 ton insulator assembly and terminating wire, if any.</p> <p>NOTE : In case of "V" type anchorage is adopted for terminating a single conductor such an arrangement would be counted as two off under item 8(b)(i), for the purpose of payment.</p>
Item No- 8(b)(ii) :	<p>Supply without Insulator and erection of materials for termination of double conductors.</p> <p>The price shall cover supply of all materials necessary for the yoked termination of two overhead equipment conductors on a traction mast or structure, including appropriate mast anchoring, clavis assembly, two adjusters, ending clamps for catenary and contact wires, anchor double strap assembly, equalising/ compensating plate and fittings including 9 ton insulator (Cost of insulator will be paid in Schedule-1, Section-5), assembly and terminating wire, if any. However, the price shall cover erection of all materials including the 9 ton insulator assembly.</p>
Item No- 8(b) (iii):	<p>Supply without Insulator and erection of materials for termination of all Aluminum 25 KV feeder/return conductors (single SPIDER).</p> <p>The price shall cover supply of all materials required for the termination of an All Aluminium 25 KV feeder/return conductor (SPIDER), including appropriate mast anchor fittings adjuster, strain clamp end fitting including 3 KV cut-in-insulator and 9 ton insulator assembly. However, the price shall cover erection of all materials including the 9 ton insulator (Cost of insulator will be paid in Schedule-1, Section-5) assembly and 3 KV cut-in-insulator (Cost of insulator will be paid in Schedule-1, Section-5).The price shall be include the cost of 9 ton insulator assembly and erection</p>

	cost thereof.
Item No-8(b)(v) :	<p>Supply without Insulator and erection of materials for termination of an earth wire.</p> <p>The price shall cover supply and erection of all materials required for the termination of an earth wire including appropriate mast anchor fittings, adjuster, terminal clamp and fittings.</p>
Item No-8(b)(vi) :	<p>Supply without Insulator and erection of materials for termination of tramway type OHE (Regulated).</p> <p>The price shall cover supply and erection of all materials required for the termination of a single contact wire (regulated) and will exclude the parts covered under item 8(a)(iii)/(vi).</p>
Item No-8(b)(vii) :	<p>Supply without insulator and erection of materials for termination of double conductors for composite OHE.</p> <p>The price shall cover supply of all materials necessary for the yoked termination of two overhead equipment conductors on a traction mast or structure including appropriate mast anchor fittings clevis assembly three adjuster, ending clamps for aluminium Alloy catenary and copper contact wires, anchor double strap assembly, unequal tension compensatory plate and fittings excluding the 9 ton insulator (Cost of insulator will be paid in Schedule-1, Section-5), assembly and terminating wire, if any. The price shall cover erection of all materials including the 9 ton insulator assembly.</p>
Item No-8(b)(viii) :	<p>Supply without insulator and erection of materials for termination of an aluminium conductor of the composite overhead equipment.</p> <p>The price shall cover supply of all materials necessary for the termination of single Aluminium conductor of composite OHE or terminating wire on a traction mast or structure, including appropriate mast anchor fittings, clavis assembly, adjuster, anchor double straps, ending clamps for the aluminium catenary or terminating wire and fittings including 9 ton insulator(Cost of insulator will be paid in Schedule-1, Section-5), assembly and termination wire, if any. The price shall cover erection of all materials including the 9 ton insulator assembly and termination wire, if any.</p>
Item : 8(b)(ix)	<p>:Supply without insulators and erection of materials for termination of copper cross feeder with gantries.</p> <p>The price shall cover the supply of all materials required for termination of copper cross feeder wire (37/2.25 mm HDBC) including appropriate mast anchor fitting</p>

	<p>(3231), 18 mm Single clevis (5040), 9-Tone adjuster (5020-2), Feeder ending clamp (1130), double clevis (3010) and other components as necessary excluding 9-Ton insulator (Cost of insulator will be paid in Schedule-1, Section-5), assembly. The price shall also cover the erection of all materials including 9-Ton insulator assembly and termination of cross feeder at either ends. Fittings/components required for termination of one cross feeder at both ends constitute one set.</p> <p>Notes to item 8 :</p> <p>(1) Small parts steel work complete with bolts and nuts wherever required, will be paid under item 3(a) or 3(b) and 3(c) as applicable and shall not be including in this item.</p> <p>(2) The prices under item 8(b)(iii) shall not include the cost of jumper connection (i) between feeders or return conductors and (ii) or feeders or return conductors to a busbar, overhead equipment or isolator switch which will be paid for under item 15.</p> <p>(3) The prices under items 8(b)(i) to 8(b)(viii) shall also include the cost of double eye distance rod (ID no. 5183), if provided for any type of terminations.</p> <p>(4) Supply and erection of materials for termination of catenary wire on either side of the portals at anticreep locations, will also be paid for under this item.</p>								
<p>Item No- 8 (bx)</p>	<p>Supply of 9-T Insulators for item 8(b)(i), (ii), (iii), (vi), (vii), (viii) & (ix)</p> <p>The price shall cover only supply of following 9 tonne insulator assembly required for termination of OHE covered under item 8(b)(i), 8(b)(ii), 8(b)(iii), 8(b)(vi), 8(b)(vii), 8(b)(viii) & 8(b)(ix). Erection cost of insulators are inclusive in items 8(b)(i), 8(b)(ii), 8(b)(iii), 8(b)(vi), 8(b)(vii), 8(b)(viii) & 8(b)(ix) respectively.</p> <table border="1" data-bbox="412 1381 1382 1535"> <thead> <tr> <th>Item No.</th> <th>Insulator</th> </tr> </thead> <tbody> <tr> <td>8(bx)(i)</td> <td>Porcelain 9 Tonne (CD-1050 mm)</td> </tr> <tr> <td>8(bx)(ii)</td> <td>Composite 9 Tonne (CD-1050 mm)</td> </tr> <tr> <td>8(bx)(iii)</td> <td>Composite 9 Tonne (CD-1600 mm)</td> </tr> </tbody> </table>	Item No.	Insulator	8(bx)(i)	Porcelain 9 Tonne (CD-1050 mm)	8(bx)(ii)	Composite 9 Tonne (CD-1050 mm)	8(bx)(iii)	Composite 9 Tonne (CD-1600 mm)
Item No.	Insulator								
8(bx)(i)	Porcelain 9 Tonne (CD-1050 mm)								
8(bx)(ii)	Composite 9 Tonne (CD-1050 mm)								
8(bx)(iii)	Composite 9 Tonne (CD-1600 mm)								
<p>Item No- 9(a)</p>	<p>Supply without Insulator and erection of anti creep with Galvanised steel wire.</p> <p>The price shall cover supply of all materials for anti-creep including adjusters, galvanised steel wire, mast anchor fittings at its terminations on either side on structures, ending clamps and fittings excluding 9 ton insulator assembly (Cost of insulator will be paid in Schedule-1, Section-5) and small parts steel work, if any. Cost of SPS will be paid under item 3(c) of Schedule-1,Section-3. The price shall cover erection of all materials including 9 ton insulator assembly and small parts steel work, if any.</p>								

	RLY.IDENT No.	DESCRIPTION OF COMPONENTS	QTY. PER UNIT																								
	-	Galvanised steel wire (19/2.50 mm)	As required																								
	6020	9 ton insulator assembly.	As required																								
	1360	Steel wire ending clamp	2 off																								
	5020-1/5020-2	9 ton adjuster (Forged)	2 off																								
	5030	Anchor double strap assembly	As required																								
	3010/5040	Clevis assembly	2 off																								
	3231	Mast anchor fitting with bolts, nuts etc.	2 sets.																								
	1170	Double suspension clamp	1 off																								
	Less 1160	Suspension clamp	(-)1 off																								
	5183	Double eye distance rod	As required.																								
Item No-9(b)	<p>Supply without insulator and erection of anti-creep with galvanized Steel wire suitable for tramway type overhead equipment (Regulated)</p> <p>The price shall cover supply and erection of all materials (Cost of insulator will be paid in Schedule-1, Section-5) for anti-creep for the tramway type equipment (Regulated) similar to the fittings catered for an item 9(a).</p> <p>NOTE for 9(a) & 9(b) :</p> <p>1. The price shall include the cost of any additional cut-in or suspension insulator which will be paid for under item 11(a) (i) or 11(a) (ii) as applicable.</p> <p>2. In case the anti-creep extends beyond one span on either side of anti-creep centre, payment for the supply and erection of extra length shall be paid additionally at the rate of 20% of the rate for 9(a) for each extra span.</p>																										
Item No-9(d)	<p>Supply without Insulator and erection of anti-creep with cadmium wire in polluted area.</p> <p>The price shall cover the supply of all materials for anti-creep including adjusters, mast anchor fittings at its terminations on either side, structure ending clamps, fittings and cadmium copper catenary wire but excluding 9-ton insulator assembly and small parts steel work, if any. The price shall cover erection of all materials including cadmium copper catenary wire, 9- ton insulator assembly and small parts steel work, if any.</p> <table border="1"> <thead> <tr> <th>RLY. Ident No.</th> <th>Description of components</th> <th>Qty. per unit</th> </tr> </thead> <tbody> <tr> <td>-</td> <td>Cadmium copper catenary wire (65 sq.mm)</td> <td>As required</td> </tr> <tr> <td>6020-1</td> <td>9 ton insulator assembly</td> <td>As required</td> </tr> <tr> <td>1120 or 1122or1123</td> <td>Catenary ending clamp (65)</td> <td>2 off</td> </tr> <tr> <td>5020-1/5020-2</td> <td>9 ton adjusters (Forged)</td> <td>2 off</td> </tr> <tr> <td>5030</td> <td>Anchor double strap assembly</td> <td>As required</td> </tr> <tr> <td>3010/5040</td> <td>Clevis assembly</td> <td>2 off</td> </tr> <tr> <td>3231</td> <td>Mast anchor fitting with bolts,</td> <td>2 sets</td> </tr> </tbody> </table>			RLY. Ident No.	Description of components	Qty. per unit	-	Cadmium copper catenary wire (65 sq.mm)	As required	6020-1	9 ton insulator assembly	As required	1120 or 1122or1123	Catenary ending clamp (65)	2 off	5020-1/5020-2	9 ton adjusters (Forged)	2 off	5030	Anchor double strap assembly	As required	3010/5040	Clevis assembly	2 off	3231	Mast anchor fitting with bolts,	2 sets
RLY. Ident No.	Description of components	Qty. per unit																									
-	Cadmium copper catenary wire (65 sq.mm)	As required																									
6020-1	9 ton insulator assembly	As required																									
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5020-1/5020-2	9 ton adjusters (Forged)	2 off																									
5030	Anchor double strap assembly	As required																									
3010/5040	Clevis assembly	2 off																									
3231	Mast anchor fitting with bolts,	2 sets																									

		nuts etc.									
	1170	Double suspension clamp	1 off								
	Less 1160	Suspension clamp	(-) 1 off								
	5183	Double eye distance rod.	As required								
Item No-9(dz)	Supply without Insulator and erection of anti-creep with cadmium copper catenary wire in polluted area.										
	Same as item 9(d) but excluding supply of Catenary wire.										
Item No-9(e) :	Supply without Insulator AND Erection of anti-creep with cadmium copper catenary wire suitable for tramway type OHE (Regulated) in polluted area.										
	Same as ITEM 9(d) (Cost of insulator will be paid in Schedule-1, Section-5) with the following changes: - Id No. 2140, large catenary contact clamp to be used in place of Id. No. 1170.										
Item No-9(ez) :	Supply without Insulator AND Erection of anti-creep with cadmium copper catenary wire suitable for tramway type OHE (Regulated) in polluted area.										
	Same as item 9(e) but excluding supply of Catenary wire.										
	NOTE :- Note 1&2 given under item 9(a) shall also be applicable for item 9(b) to 9 (ez).										
Item No No.9(ax) :	Supply of 9-T Insulators for Items 9(a), 9(b), 9(c), 9(d) and 9(e)										
	The price shall cover only supply of any of the following 9 tonne insulator assembly to be supplied at site for execution of work under items 9(a), 9(b), 9(c), 9(d) and 9(e). Erection cost of insulators are inclusive in items 9(a), 9(b), 9(c), 9(d) and 9(e) respectively.										
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<p>Item No- 10 (a), (b) & (c) :</p>	<p>Extra on item 6(a), 6(b) & 6(c).</p> <p>(i) For supply and erection of additional fittings. & (ii) Required at a turnout, diamond crossing or over-lap.</p> <p>The price shall cover on flat rate basis supply of additional components and fittings required at turnouts, crossings or over-laps (insulated or un-insulated) including overlaps, knuckle or crossing equipment at a turnout, or a diamond crossing and parallel clamps/bimetallic parallel clamp for jumper connections between two sets of overhead equipment conductor at a turnout, diamond crossings, overlaps or neutral section. The price shall cover supply of required copper conductors & jumper wires and erection of all materials including jumper wire, and all adjustments required at turnouts, crossings, overlaps and neutral sections.</p> <p>The price shall also cover erection of potential equaliser jumpers at insulated overlaps and neutral sections.</p> <p>The price shall not include extra bracket assemblies, overhead equipments, termination of overhead equipment and cut-in-insulators in the case of insulated overlaps and neutral section which will be paid for under items 4, 6, 8, and 11 respectively.</p>
<p>Item No- 10 (az), (bz) & (cz) :</p>	<p>Extra on item 6(az), 6(bz) & 6(cz).</p> <p>Same as item 10(a), (b) & (c) but excluding supply of Contact and Catenary wire.</p> <p>NOTE : A cross-over shall be paid for as 2 off of Item 10, special configuration of OHE commonly known as half overlap shall be paid for as 1 off under this item. This shall apply in case of half overlap used in changing over from regulated to unregulated equipment or unregulated to regulated equipment.</p>
<p>Item No. 11(a)(i) :</p>	<p>Supply without insulator and Erection of a cut-in (9 Tonne) insulator</p> <p>The price is applicable to the provision of the an additional 9 Tonne cut-in-insulator on a flat rate basis such as in a head-span, cross span or in span wire or an overhead equipment conductor at an insulated overlap, anti-creep not provided for in other items.</p> <p>The price shall cover supply of all components required for the cut-in-insulators assembly, including appropriate terminal fittings for the conductor but excluding the cost of 9 ton insulator assembly. This price shall cover erection of all components, including the 9 ton insulator. This price shall also be applicable as an adjustment price for non-provision of insulators under items 8(b)(i) to 8(b)(viii).</p>
<p>Item No- 11(a)(ii) :</p>	<p>Supply without insulator and Erection of a suspension insulator.</p> <p>The price is applicable to the provision of 9 ton suspension insulator assembly for suspension of an All Aluminium 25 kV feeder (single or double SPIDER), 130 sq.mm or 65 sq.mm overhead equipment conductor or any other similar type of suspension.</p>

	<p>The price shall cover supply of all components, required for the suspension assembly including the appropriate suspension clamp but excluding 9 ton insulator assembly and small parts steel work with bolts nuts etc., if any. The price shall cover erection of all components, including the 9 ton insulator assembly but excluding small parts steel work, with bolts and nuts etc. if any.</p> <p>The price shall include the cost of provision of a flat armour tape only to be used in connection with suspension of 'SPIDER' conductor.</p>								
Item No-11(ax) :	<p>Supply of 9-Tonne Insulators for Item 11(a)(i) & 11(a)(ii)</p> <p>The price shall cover only supply of any of the following 9 tonne insulator assembly to be supplied at site for execution of work under items 11(a)(i) & 11(a)(ii) respectively. Erection cost of insulators are inclusive in items 11(a)(i) & 11(a)(ii) respectively.</p> <table border="1"> <thead> <tr> <th>Item No.</th> <th>Insulator</th> </tr> </thead> <tbody> <tr> <td>11(ax)(i)</td> <td>Porcelain 9 Tonne (CD-1050 mm)</td> </tr> <tr> <td>11(ax)(ii)</td> <td>Composite 9 Tonne (CD-1050 mm)</td> </tr> <tr> <td>11(ax) (iii)</td> <td>Composite 9 Tonne (CD-1600 mm)</td> </tr> </tbody> </table>	Item No.	Insulator	11(ax)(i)	Porcelain 9 Tonne (CD-1050 mm)	11(ax)(ii)	Composite 9 Tonne (CD-1050 mm)	11(ax) (iii)	Composite 9 Tonne (CD-1600 mm)
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Item No-11(b):	<p>Supply without Insulator and Erection of a 25 kV Post Insulator.</p> <p>The price is applicable to the provision of a 25 kV Post Insulator to support copper or aluminium jumper/busbars. The price shall cover supply of all components and fittings/angle iron (outrigger) to support the jumpers but excluding post insulator and small parts steel works with bolts and nuts etc., if any. The price shall cover erection of all components required for the assembly, including post insulator, but excluding small parts steel work with bolts and nuts etc. if any.</p>								
Item No-11(bx):	<p>Supply of a 25 kV Post Insulator for Item 11(b)</p> <p>The price shall cover only supply of 25 kV Post insulator to be supplied at site for execution of work under items 11(b). Erection cost of insulators is inclusive in items 11(b).</p>								
Item No-11(c):	<p>Supply without insulator and Erection of a 3 kV Disc Insulator.</p> <p>The price is applicable to the provision of a 3 kV Disc Insulator for suspension of an All Aluminium return conductor or any other similar type of suspension. The price is also applicable to a 3 kV cut-in-insulator for earthwire.</p> <p>The price shall cover supply and erection of all components required for the assembly, including appropriate suspension clamp, ending clamp for cut-in-insulator on earth wire, but excluding 3 kv Disc Insulator and small parts steel work, with bolts and nuts etc., if any. The price shall include the cost of provision of a flat armour tape to be used in connection with the suspension of SPIDER/RACCOON conductor.</p>								

<p>Item No-11(cx) :</p>	<p>Supply of 3 kV Disc Insulator for Item 11(c). The price shall cover only supply of 3 kv Disc Insulator to be supplied at site for execution of work under items 11(c). Erection costs of insulators are inclusive in items 11(c).</p>																					
<p>Item No-11(d) :</p>	<p>Supply without insulator and Erection of a 11 kV Post Insulator. The price shall cover, on a flat rate basis for supply of all necessary fittings for erection of 11 KV post insulator to support return conductor, Aluminium or copper busbars or return conductor jumper connections but excluding 11 KV post insulator and small parts steel work with bolts and nuts etc. if any. The price includes the erection of all the fittings including 11 kV Post Insulator.</p>																					
<p>Item No-11(dx) :</p>	<p>Supply of 11 kV Post Insulator for Item 11(d). The price shall cover only supply of 11 kV Post Insulator to be supplied at site for execution of work under items 11(d). Erection cost of insulator is inclusive in item 11(d).</p>																					
<p>Item No. 12(az) :</p>	<p>Supply without Insulator and erection of a Section Insulator Assembly. The price shall cover supply of all components required for a standard section insulator assembly (serving both the overhead equipment conductors) including supply of copper conductors, dropper wires for special droppers for supporting the equipment and all terminal fittings for conductors and the section insulator assembly including 9 ton Insulator (RI No.6020) (Cost of insulator will be paid in Schedule-1, Section-5) on the catenary and Sectioning insulator (RI No.6110). The price shall cover erection and adjustment of all components including section insulator assembly, 9 ton insulator on the catenary, Sectioning Insulator and droppers.</p> <table border="1" data-bbox="342 1394 1474 1919"> <thead> <tr> <th data-bbox="342 1394 657 1467">Rly. Ident. No.</th> <th data-bbox="657 1394 1127 1467">Description of components</th> <th data-bbox="1127 1394 1474 1467">Qty. per Unit</th> </tr> </thead> <tbody> <tr> <td data-bbox="342 1467 657 1541">1120/or SK/ or 1122 & 1123</td> <td data-bbox="657 1467 1127 1541">Catenary ending clamp</td> <td data-bbox="1127 1467 1474 1541">2 off</td> </tr> <tr> <td data-bbox="342 1541 657 1617">1192/ETI/OHE/SK/33 3.</td> <td data-bbox="657 1541 1127 1617">Catenary dropper clip assembly.</td> <td data-bbox="1127 1541 1474 1617">As required</td> </tr> <tr> <td data-bbox="342 1617 657 1692">6170</td> <td data-bbox="657 1617 1127 1692">Parallel clamp for double contact wire</td> <td data-bbox="1127 1617 1474 1692">12 off</td> </tr> <tr> <td data-bbox="342 1692 657 1768">6180</td> <td data-bbox="657 1692 1127 1768">Section insulator dropper assembly.</td> <td data-bbox="1127 1692 1474 1768">3 sets</td> </tr> <tr> <td data-bbox="342 1768 657 1843">6100</td> <td data-bbox="657 1768 1127 1843">Section insulator assembly</td> <td data-bbox="1127 1768 1474 1843">To be supplied by the Contractor.</td> </tr> <tr> <td data-bbox="342 1843 657 1919">6020</td> <td data-bbox="657 1843 1127 1919">9 ton insulator assembly</td> <td data-bbox="1127 1843 1474 1919">To be supplied by the Contractor.</td> </tr> </tbody> </table>	Rly. Ident. No.	Description of components	Qty. per Unit	1120/or SK/ or 1122 & 1123	Catenary ending clamp	2 off	1192/ETI/OHE/SK/33 3.	Catenary dropper clip assembly.	As required	6170	Parallel clamp for double contact wire	12 off	6180	Section insulator dropper assembly.	3 sets	6100	Section insulator assembly	To be supplied by the Contractor.	6020	9 ton insulator assembly	To be supplied by the Contractor.
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<p>Item No. 12(az)</p>	<p>Supply without Insulator and erection of a Section Insulator Assembly. Same as item 12(a) but excluding supply of Contact and and dropper wires.</p>								
<p>Item No.12(ax))</p>	<p>Supply of 9 Tonne and Sectioning Insulators for Item 12(a) & 12(az) The price shall cover only supply of Sectioning Insulator with any of the following 9 Tonne Insulator for execution of work under item 12(a). Erection cost of insulators is inclusive in items 12(a).</p> <table border="1" data-bbox="414 646 1404 913"> <thead> <tr> <th>Item No.</th> <th>Insulator</th> </tr> </thead> <tbody> <tr> <td>12(ax)(i)</td> <td>Porcelain 9 Tonne (CD-1050 mm) & Sectioning Insulator</td> </tr> <tr> <td>12(ax)(ii)</td> <td>Composite 9 Tonne (CD-1050 mm) & Sectioning Insulator</td> </tr> <tr> <td>12(ax)(iii)</td> <td>Composite 9 Tonne (CD-1600 mm) & Sectioning Insulator</td> </tr> </tbody> </table>	Item No.	Insulator	12(ax)(i)	Porcelain 9 Tonne (CD-1050 mm) & Sectioning Insulator	12(ax)(ii)	Composite 9 Tonne (CD-1050 mm) & Sectioning Insulator	12(ax)(iii)	Composite 9 Tonne (CD-1600 mm) & Sectioning Insulator
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<p>Item No. 12(b)</p>	<p>Supply without Insulator and erection of a double wire section insulator assembly. The price shall cover supply of all components required for a double wire section insulator assembly (to serve both wires of two overhead equipments and special droppers, including supply of dropper wires, for supporting this equipment) at any location, including terminal fittings for the conductors and the double wire section insulator assembly including 9 ton insulator (Cost of insulator will be paid in Schedule-1, Section-5). The price shall include erection and adjustment of the entire assembly including double wire section insulator assembly, droppers and the 9 ton insulators.</p>								
<p>Item No.12(bx))</p>	<p>Supply of 9 Tonne and Sectioning Insulators for Item 12(b) The price shall cover supply of 2 Nos Sectioning Insulators and any of the following 9Tonne Insulator only for execution of work under item 12(b). Erection cost of insulators is inclusive in items 12(b).</p> <table border="1" data-bbox="414 1564 1442 1831"> <thead> <tr> <th>Item No.</th> <th>Insulator</th> </tr> </thead> <tbody> <tr> <td>12(bx) (i)</td> <td>Porcelain 9 Tonne (CD-1050 mm) & Sectioning Insulator</td> </tr> <tr> <td>12(bx)(ii)</td> <td>Composite 9 Tonne (CD-1050 mm) & Sectioning Insulator</td> </tr> <tr> <td>12(bx)(iii)</td> <td>Composite 9 Tonne (CD-1600 mm) & Sectioning Insulator</td> </tr> </tbody> </table>	Item No.	Insulator	12(bx) (i)	Porcelain 9 Tonne (CD-1050 mm) & Sectioning Insulator	12(bx)(ii)	Composite 9 Tonne (CD-1050 mm) & Sectioning Insulator	12(bx)(iii)	Composite 9 Tonne (CD-1600 mm) & Sectioning Insulator
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<p>Item No-12(c)</p>	<p>Supply without Insulator and erection of a Section Insulator Assembly suitable for tramway type OHE (Regulated)</p> <p>The price shall cover supply of all components required for a standard Section Insulator Assembly including special arrangements for supporting the equipment and terminal fittings for conductors and the section insulators assembly as required with Sectioning Insulator (RI No.6110) (Cost of insulator will be paid in Schedule-1, Section-5). The price shall cover the supply of required copper conductors, erection and adjustment of all components including sectioning insulator.</p>
<p>Item No-12(cz)</p>	<p>Supply without Insulator and erection of a Section Insulator Assembly suitable for tramway type OHE (Regulated)</p> <p>Same as item 12(c) but excluding supply of Contact and Catenary wires.</p> <p>NOTE : (1) The same price will apply if the section insulator is provided in the tramway type equipment (contact wire only).</p> <p>(2) The supply and erection of a bracket assembly shall be paid under item 4(a) (iii). No adjustment of price due to non-provision of steady arm, in this case, shall be made.</p>
<p>Item No.12(cx)</p>	<p>Supply of Sectioning Insulators for Item 12(c) and 12 (cz)</p> <p>The price shall cover only supply of Sectioning insulator for execution of work covered under item 12(c) and 12 (cz). Erection cost of insulators are inclusive in items 12(c).</p>
<p>Item No-12(d)</p>	<p>Supply and erection of Ceramic/ beaded Glass fibre type (PTFE) short neutral section assembly.</p> <p>The price shall cover Supply of Ceramic/Glass fibre or PTFE type short neutral section assembly and erection and adjustment of Glass Fibre or PTFE type short neutral sections, which will be supplied by the Contractor. The price would cover fittings for contact and catenary wire as necessary including supply of required dropper wire.</p>
<p>Item No-13(a) & (b)</p>	<p>: Supply without Insulator and erection of 25 KV SP Isolators without earth contact assembly.</p> <p>The prices under sub-items (a) and (b) shall cover supply and erection of Isolator switches of approved make, complete with arcing horns, operating rods, operating rod guides, mounting base including cost of 25 KV Solid Core Post and Operating rod insulator (Cost of insulator will be paid in Schedule-1, Section-5).The price shall also cover supply and erection of a number plate of approved design for each isolator. The</p>

	price shall not include supply and erection of small parts steel work complete with bolts and nuts etc. for support of isolators and for support of operating rods on gantries/ masts, and insulator to support jumper and jumper connectors.
Item No- 13(c)	<p>Supply without Insulator and erection of 25 KV Double Pole Isolator.</p> <p>The price shall cover supply and erection of a Double Pole Isolator complete with mounting base, operating rod and operating rod guides including the cost of Operating Rod Insulator and 25KV Solid Core Post Insulator required for the operation of the isolator (Cost of insulator will be paid in Schedule-1, Section-5). The price shall also cover supply and erection of Al-Cu strips, a padlock and a number plate of approved design for each isolator. The price shall not include supply and erection of small parts steel work for support of isolators and for support of operating rods on gantries masts.</p>
Item No. 13(d)	<p>: Extra for supply and erection of an earth contact assembly in an isolator.</p> <p>The price shall be payable as extra for erection of an earth contact assembly in any isolator</p> <p>The price shall cover the cost of supply and erection of 3x25 mm copper connections between the earth contact assembly and the structures.</p>
Item No- 13(e)	<p>Extra on item 13(a), (b) or (c) for an interlocking device.</p> <p>The price shall cover supply and erection of an inter locking mechanism on an isolator to permit working of two or more isolators or an isolator and an interrupter in a desired sequence. This item shall be applicable individually for each isolator or interrupter.</p> <p>NOTE: Prices under item 13 do not include the cost of supply and erection of (i) any post insulator to support jumpers/busbars which shall be paid for under item 11(b), (ii) flexible jumper connection which will be paid for under item 15 and (iii) busbar/bus-rod terminals which will be paid for under item 26(b) or (c). The price does not include also the cost of supply and erection of an aluminium/copper busbar or a copper bus rod the cost of which will be paid for under item 26(a)(i) or 26(a) (ii), as applicable.</p>
Item No- 13(ax), 13(bx) and 13(cx)	<p>Supply of Post and Operating Rod Insulators for Single and Double Pole Isolator for Item 13(a), 13(b) & 13(c)</p> <p>The price shall cover only supply of 25 kV Solid Core Post and Operating Rod Insulators for execution of work covered under item 13(a), 13(b) & 13(c) respectively. Erection cost of insulators are inclusive in items 13(a), 13(b) & 13(c).</p>
Item No- 14:	Supply and erection of connection between return conductor and the rail.

	<p>The price shall cover fabrication and erection of connections between all aluminium return conductor to cross rail/impedance bond (both of which as required will be supplied by the Engineer free of cost at the Contractor's Depot) excluding the aluminium jumper connections from the return conductor to the steel flat which will be paid for under item 15(b) and any 11 KV post insulator for supporting the jumper which will be paid under item 11(d).</p> <p>The price shall include the cost of necessary supports on the traction structure, terminal connections and covering the mild steel flats with two coats of red oxide zinc chromate primer to IS:2074, CNSL based and finished with 2 coats of Bitumen 85/25 blown grade.</p>
<p>Item No-15(a)(i):</p>	<p>Supply and erection of 105 Sq. mm (19/7/1.02 mm) Large copper jumpers.</p> <p>The price shall cover the supply of Large jumper wire size 105 Sq.mm(19/7/1.02mm) made of annealed stranded 100% pure copper conductor as per RDSO's specification No.ETI/OHE/3(2/94) with A&C Slip No 1(latest spec.), and on a flat rate basis, the supply of all components and fittings required for providing a flexible copper large jumper connection, including supply of parallel clamps, bi-metallic and Aluminium Copper Al-Cu strips, wherever required, and bolted type terminal connectors where ever required.</p> <p>The price shall also cover the erection of the complete jumper assembly including jumper wire. The price shall not, however, be applicable for jumper connections already including under item 6(a) and 10, but shall be applicable for any jumper of 105 Sq.mm (19/7/1.02mm) connections in any combination between feeders, lightning arrestors, isolators and boosters stations. Continuity jumper at Boom anchor anti-creep will be payable under this item.</p>
<p>Item No-15(a)(ii)</p>	<p>Supply and erection of 50 Sq.mm(19/1.8 mm) small copper jumpers.</p> <p>The price shall cover supply of Small jumper wire size 50 Sq.mm(19/1.80 mm) made of annealed stranded 100% pure copper conductor, and on a flat rate basis, the supply of all components and fittings required for providing a flexible small copper jumper connection, including supply of parallel clamps, bi-metallic and Aluminium Copper Al-Cu strips, wherever required, and bolted type terminal connector where ever required.</p> <p>The price shall also cover the erection of the complete jumper assembly including jumper wire. The price shall not, however, be applicable for jumper connections already including under item 6(a) and 10, but shall be applicable for any small jumper connection in any combination required for lightning arresters and isolators etc. Anti-theft jumper as per drawing No. ETI/OHE/G/ 05107, with latest mod. for connecting out-of-run OHE with the in running OHE at insulated/un-insulated over-lap locations and also anticreep locations at polluted zone wherever considered necessary will be payable under this item.</p>

<p>Item No-15(a)(iii)</p>	<p>Supply and erection of a copper jumpers (65 Sq mm catenary)</p> <p>The price shall cover the supply of 65 sq mm catenary wire & 50 sq mm Small Jumper and on a flat rate basis, the supply of all components and fittings required for providing a flexible copper jumper connection, including supply of parallel clamps, bi-metallic and Aluminium Copper Al-Cu strips, wherever required and bolted type terminal connector where ever required.</p> <p>The price shall also cover the erection of the complete jumper assembly including jumper wire. The price shall be applicable for jumper connections using 65-Sqmm catenary wire in any combination required for lightening arresters and isolators etc., not included under item 6(a), 10, 15(a)(i), and 15(a)(ii). The supply of all components and fittings including catenary wire and the erection of all the components and fittings including the catenary wire for providing double catenary contact wire in place of catenary under overline structures as per DRG. No. ETI/OHE/SK/446 and ETI/OHE/SK-529, with latest mod. respectively will also be payable under this item, treating the double catenary as one jumper irrespective of its length including the catenary/contact wire ending clamp.</p>
<p>Item No-15(az)(iii))</p>	<p>Supply and erection of a copper jumpers (65 Sq mm catenary)</p> <p>Same as item 15(a)(iii) but excluding supply of Catenary wire.</p>
<p>Item No-15(a)(iv)</p>	<p>Supply and erection of copper jumpers (5 mm dia dropper wire).</p> <p>The price shall cover supply of conductors/ jumper wires, and on a flat rate basis, the supply of all components and fittings required for providing a single strand / flexible copper jumper connections not included under items 6(a), 10, 15(a)(i), 15(a)(ii) & 15(a)(iii), including supply of parallel clamps, bi-metallic and Aluminium Copper Al-Cu strips, wherever required, including supply of bolted type terminal connector where ever required.</p> <p>The price shall also cover the erection of the complete jumper assembly including jumper wire, to be provided between the Over head equipment and L.T. Transformers, drop out switch.</p> <p>NOTE for items 15(a)(i), 15(a)(ii) & 15(iii): Please see the note under item 15(e).</p>
<p>Item No.15 (b) :</p>	<p>Supply and erection of an aluminium jumper.</p> <p>The price shall cover on a flat rate basis the supply and erection of an aluminium jumper complete with all components and fittings required for providing jumper connection, including parallel clamps, bimetallic ALCU strips wherever required, and terminal or tee clamps at either end. The price shall be applicable for any aluminium jumper/connections in any combination between feeders, return conductors, overhead equipment, isolators and out going busbars or switching stations and booster stations. Jumper connections for 25 KV feeders at angle tower traction sub-station or at feeding stations will also be paid under this item.</p>

<p>Item No.15 (c) :</p>	<p>Supply and Erection of Insulated Catenary cable in the span under Over-Line Structure.</p> <p>The price shall cover supply of insulated catenary wire, catenary splice (1090) for each location and required dropper clip and erection of the same for each location. The prices shall also cover erection and adjustment of special droppers wherever required. The insulated catenary wire to be supplied shall be as per RDSO's specification No.ETI/OHE/75(04/95) with A&C slip Nos.1&2(with latest spec.). The work shall be executed in accordance with drawing No.ETI/OHE/ SK/570, with latest mod. The price shall also cover the cutting of existing Catenary wire, supply and erection of all materials and components including adjustment of dropper wires.</p>
<p>Item No : 15 (d) :</p>	<p>Supply of materials and erection of a large copper jumper 160 Sq. mm between Aluminium bus and cross feeder.</p> <p>This jumper shall be provided between 36 mm Aluminium bus and the copper cross feeder at SP/SSP/FP/BT locations. The price shall cover the supply of 160sqmm flexible copper jumper wire, made of annealed stranded 100% pure copper conductor as per RDSO's specification ETI/OHE/3(2/94) with A&C Slip No 1 (latest spec.), all components and fittings required for providing a flexible copper jumper (160 Sq. mm) and connection between 36 mm Aluminium bus and cross feeder including Terminal connector 19mm multiple hole bolted type (1009), parallel clamps (1050-3), Al-Cu bimetallic strips, fasteners. The price shall also cover the erection of the complete jumper assembly including jumper wire.</p>
	<p>Item : 15 (e) : Supply of materials and erection of a large copper jumper 160 Sq. mm between cross feeder and OHE.</p> <p>This jumper shall be provided between copper cross feeders and OHE. The price shall cover supply of 160 sqmm flexible copper jumper wire, made of annealed standard 100% pure copper conductor as per RDSO's specification ETI/OHE/3(2/94) with A&C Slip No 1(latest spec.), and all components and fittings required for providing a flexible copper jumper (160 Sq. mm) between copper cross feeder and existing OHE, including Parallel clamps (1030-3 & 1050-3) complete with fasteners etc as required. The price shall also cover the erection of the complete jumper assembly including jumper wire.</p>
<p>Item No.16 (a)(i) :</p>	<p>Supply and erection of a structure bond</p> <p>The price shall cover supply of all materials including mild steel flat required to provide a structure bond connecting a traction mast or structures to the nearest non-track circuited rail, or earth electrode, including all fasteners at both ends. The price shall include shaping and drilling of the bond and erection of all materials including the bond. The price shall also include provision of heat shrinkable PVC tube for structure bond under track circuited rail. This would also cover connection or earthing terminals of equipments</p>

	<p>like L.T. Transformers with structure and then to rails as per relevant drawings. The price shall cover provision of buried rail to running rail as per RDSO drawing No.ETI/OHE/G/05306, with latest mod and shall include supply, fabrication and erection of all connections (including drilling at both ends) and refilling of buried rail pit. The digging up of 1 m deep pit for the purpose of buried rail shall be done by the Contractor.</p>
<p>Item No.16 (a)(ii)</p>	<p>Supply and erection of a Galvanised steel stranded Wire structure bond</p> <p>The price shall cover supply of all materials including Galvanised steel stranded wire required to provide a structure bond connecting a traction mast or structures to the nearest non-track circuited rail including all fasteners at both ends as per RDSO's drawing No. TI/DRG/OHE/GTBLUG/ RDSO/0001/04/0. The price shall include fixing of lugs and drilling of the rails and erection of all materials including the bond. The price shall also include provision of heat shrinkable PVC tube for structure bond under track circuited rail. This would also cover connection or earthing terminals of equipments like L.T. Transformers with structure and then to rails as per relevant drawings.</p>
<p>Item No- 16(b):</p>	<p>Supply and erection of longitudinal bond</p> <p>The price shall cover the supply of all materials including mild steel flats, fasteners etc. required to provide longitudinal bond connecting two rails at the rail joint at the locations to be specified by the Engineer. The price shall include shaping and drilling of the bond and erection of all materials including the bonds.</p>
<p>ITEM No. 16(c) :</p>	<p>Supply and erection of transverse and special bond</p> <p>The price shall cover supply of all materials including mild steel Flats, fasteners etc. required to provide transverse bond connecting rails of the same/ adjacent tracks at the locations to be specified by the Engineer. The price shall also cover the supply of all materials including mild steel flat to provide special bonds at a level crossing, foot over/road over bridge/protective screen etc. for which the location will be specified by the Engineer. The price shall include shaping and drilling of the bond and erection of all materials including the bond.</p>
<p>Item No- 17(a) :</p>	<p>Supply and erection of single earth electrode</p> <p>The price shall cover supply and erection of an earthing station with a single pipe embedded into the ground by driving or otherwise complete with protective concrete box and lugs suitable for directly connecting two mild steel flats of minimum size 50 mm x 6 mm.</p>
<p>Item No-</p>	<p>Extra for special embodiment of earth electrode.</p>

<p>17(b) :</p>	<p>The price shall be payable as extra on item 17 (a) where an earth electrode is embedded by driving or otherwise in an earth pit filled with charcoal and salt. The price shall cover supply and erection of all additional materials required for embedding the earth pipe.</p>
<p>Item No- 17(c) :</p>	<p>Supply and erection of earth bus. The price shall cover the supply of all materials including 50 mm x 6 mm mild steel flats for providing earth bus. The price shall also cover erection of earth bus either buried at a depth of 300 mm below ground level painted with 2 coats of red oxide zinc chromate primer and 2 finishing coats of bitumen as per the particulars specified in para 2.1.49 or fixed on wooden gutties on walls. It shall include connecting the earth bus to earth electrodes and to various floor-or-wall-mounted equipments or structures to be earthed and also connections to non-track-circuited rails, wherever required it shall also cover the cost of making recesses in concrete foundation blocks or floor or cubicles and covering them up. The connection of earth strips to each other shall be made either by riveting or by welding. The connection of earth strips to various equipment, structures or fencing post shall be made with G.I. bolts and nuts and spring washer/ lock-nuts.</p>
<p>Item No. 17(d) :</p>	<p>Supply and erection of copper strips for equipment earthing. The price shall cover supply and erection of 25mmx3mm copper strips to connect the earth terminals of equipments like potential transformers, lightning arrestors, L.T. supply transformers and booster transformer to the main masts of the gantries on which they are mounted. The price shall cover all fastenings required for fixing the copper strips along any structure member of the gantry.</p>
<p>Item No. 17(e) :</p>	<p>Supply and erection of 8 SWG G.I WIRE for earthing. The price shall cover supply and erection of 8 SWG G.I wire per Meter, used for earthing at remote control cubicles and fencing panels.</p>
<p>Item No- 17(h)</p>	<p>Supply and Erection of Earthing station at Switching Posts (SSP & SP) with Conventional earthing system. The rate covers cost of supply & erection of one set of earthing station for single line / single track .The earthing station using 13 meter long Buried Rail, shall be as per RDSO SMI No. TI/SMI/0032 with the latest amendments thereof. The released Rail shall be made available by the Engineer to the contractor at any location on “as is where is” basis. Contractor shall transport the rail upto site of installation. The price covers transportation of rail, excavation of trench 0.6X15mX1m</p>

	<p>from the ground level, lowering of Rail duly prepared into the trench and refilling the soil including compaction and making the surface good after connection to earth electrodes and Running Rails.</p> <p>The price shall cover the cost of supply of 75X8 mm Galvanized flats for connection between Buried Rail and Earth electrode /Running Rail and erection of 75X8 mm Galvanized flats for connection between Buried Rail and Running Rail. Price shall also cover cost of required Nut Bolts, Copper rivets, Plain/Spring Washers etc. including shaping and drilling of 75X8 mm galvanized flats.</p> <p>Price does not cover:-</p> <ul style="list-style-type: none"> (i) Cost of supply and erection of 2 nos earth electrodes which is payable under item 17(a) in schedule-1 section 3. (ii) Connection between Buried Rail and these earth electrodes, which is <u>payable under Erection portion</u> of item 16(a)(i) in schedule-1 section 3.
<p>Item No-18(a) :</p>	<p>Supply and Erection of 25 kV, SF-6 gas filled Interrupters.</p> <p>The price shall cover supply of 25 KV, AC, 50 Hz, Single Pole, outdoor type, SF-6 Gas Interrupters complete with all accessories and components as per RDSO's specification No.ETI/PSI/167(09/97), with latest spec. at site and erection of the same complete with supporting frame-work and terminal connectors. The price for erection shall include alignment and grouting of the Interrupter on its foundation block and mounting of accessories, if any, in their respective positions. The required SF-6 gas will be supplied by the Contractor and make his own arrangements for filling of the same. The price shall also cover supply and erection of enameled number plates. All necessary tools, equipments instruments, including power supply required for carrying out necessary checks, tests and commissioning shall be arranged by the Contractor.</p> <p>NOTE: The replenishment of SF6 gas required due to leakages during the warranty period shall be done by the Contractor at his own cost.</p>
<p>Item No-18(b) :</p>	<p>Supply and Erection of 25 kV, vacuum type Interrupters.</p> <p>The price shall cover supply of 25 kV, AC, 50 Hz, Single Pole, outdoor type, vacuum Interrupters complete with all accessories and components as per RDSO's specification No.ETI/PSI/167(09/97), with latest spec. at site and erection of the same complete with supporting frame work and terminal connectors. The price for erection shall include alignment and grouting of the Interrupter on its foundation block and mounting of accessories, if any, in their respective positions. The price shall also cover supply and erection of enameled number plates. All necessary tools, equipments, instruments including power supply required for carrying out necessary checks, tests and commissioning shall be arranged by the contractor.</p>

<p>Item No-19 :</p>	<p>Supply and erection of 25 KV Potential Transformers (Type-I).</p> <p>The price shall cover supply and erection of a 25 kV potential transformer type-I complete with all fittings and accessories as per relevant specifications, including terminal connectors and fixing bolts. The price for supply and erection shall include proper alignment of the transformer in position. The price shall also cover the supply and erection of an enameled number plate and fixing bolts. The price shall not include the cost of any small parts steel work.</p>
<p>Item No-20(a)</p>	<p>: Supply and erection of 42 kV lightning arrestors.</p> <p>The price shall cover supply and erection of 42 kV lightning arrestors complete with all fittings and accessories as per relevant specifications including terminal connectors. The cost of supply and erection shall include proper alignment of the lightning arrestor in position. The price shall not cover supply and erection of cadmium copper jumper (65) which will be paid under ITEM No 15. The price shall not include the cost of any small parts steel work.</p>
<p>Item No-20(b) :</p>	<p>Supply and erection of lightning arrestors 7.5 kV.</p> <p>The price shall cover supply and erection of 7.5 kV lightning arrestor complete with all fittings and accessories. The cost of supply and erection shall include proper alignment of the lightning arrestor in position. The price shall not include the cost of any small parts steel work.</p>
<p>Item No. 21 :</p>	<p>Supply and erection of terminal boards in control cubicles.</p> <p>The price shall cover supply and erection of a wall mounted terminal board with six numbers of two-way terminal blocks for connecting the cables from the outdoor equipment of a switching station as per specification.</p>
<p>Item No-22(a)</p>	<p>Supply and erection of an iron clad 110 V D.C. fuse box.</p> <p>The price shall cover supply and erection of a 15A, 110V iron clad two way fuse box on the wall inside the remote control cubicles. The fuse box shall be complete with two fuse carriers and bases.</p>
<p>Item No. 22(b) :</p>	<p>Supply and erection of iron clad 230 V A.C. fuse box.</p> <p>The price shall cover supply and erection of a 15A, 230V,A.C. iron clad 4-way fuse box on the wall inside the remote control cubicle, for heater supply of interrupters. The fuse box shall contain four fuse carriers and bases.</p>
<p>Item No-23</p>	<p>Supply and erection of lead acid batteries.</p>

	<p>The price shall cover supply and erection of 110V, 40AH lead acid battery complete with stand, accessories and a tool board. The price for erection shall include installation and connecting up of the battery, but exclude the cost of connecting cables, erection of which will be paid for under item 25. Price shall include supply of 110V, 40AH lead acid battery complete with accessories and connectors as per relevant RDSO's specification. Price shall also cover supply of Mild Steel stand, electrolyte and Tool Board with thermometer, hydrometer & wrench.</p>
<p>Item No-24 :</p>	<p>Supply and erection of battery chargers.</p> <p>The price shall cover supply and erection of battery charger for a 110 V, 40 AH lead acid battery complete with connecting lead and plug for connection to 230 V A.C. supply. The price for erection shall include mounting of the charger in position and connecting it up to the 230 V A.C. distribution boards, which will be provided by the Engineer in the control cubicles. The price shall not include supply and erection of any cable for connecting the charger to the 110 V batteries which shall be paid for under item 25.</p>
<p>Item No. 27(a) :</p>	<p>Supply, Erection, oil filtration, testing and commissioning of 25 kV/240 V 10 kVA L.T. supply transformers.</p> <p>The price shall cover Supply of 25 kV/240V 10 kVA LT supply transformers, at site, as per the RDSO's specification indicated in tender paper, and erection of the same complete with terminal connectors on a mast or gantry. The price shall be applicable for transformers mounted on steel pedestals at switching stations also. The price shall also cover supply and erection of an enameled number plate of approved design. The price shall also cover oil filtration and pre- commissioning tests as approved by the railways/HRIDC.. The contractor shall make his own arrangement for oil filtration equipments, as well as power supply required for the same. All necessary tools, equipments, instruments required for carrying out oil filtration/ checks/tests and commissioning shall be arranged by the contractor.</p>
<p>Item No. 27(b) :</p>	<p>Supply, Erection, oil filtration, testing and commissioning of 25 kV/240 V, 5 kVA L.T. supply transformers.</p> <p>The price shall cover supply of 25 kV/240 V, 5 kVA LT supply transformers, at site, as per the RDSO's specification indicated in this tender paper, and erection of the same complete with terminal connectors on a mast or gantry. The price shall be applicable for transformers mounted on steel pedestals at switching stations also. The price shall also cover supply and erection of an enameled number plate of approved design. The price shall also cover oil filtration and pre- commissioning tests as approved by the HRIDC. The contractor shall make his own arrangement for oil filtration equipments, as well as power supply required for the same. All necessary tools, equipments, instruments required for carrying out oil filtration/ checks/tests and commissioning shall be arranged by the contractor.</p>

<p>Item No. 27(c) :</p>	<p>Supply, Erection, oil filtration, testing and commissioning of 25 kV/240 V, 25 kVA L.T. supply transformers.</p> <p>The price shall cover Supply of 25kV/240V 25 kVA LT supply transformers, at site, as per the RDSO's specification indicated in this tender paper, and erection of the same complete with terminal connectors on a mast or gantry. The price shall be applicable for transformers mounted on steel pedestals at switching stations also. The price shall also cover supply and erection of an enameled number plate of approved design. The price shall also cover oil filtration and pre- commissioning tests as approved by the HRIDC. The contractor shall make his own arrangement for oil filtration equipments, as well as power supply required for the same. All necessary tools, equipments, instruments required for carrying out oil filtration/checks/tests and commissioning shall be arranged by the contractor.</p>
<p>Item No. 27(d)</p>	<p>Supply, Erection, oil filtration, testing and commissioning of 25 kV/240 V,50 kVA L.T. supply transformers.</p> <p>The price shall cover supply of 25kV/240V, 50 kVA LT supply transformers, at site, as per the RDSO's specification indicated in this tender paper, and erection of the same complete with terminal connectors on a mast or gantry. The price shall be applicable for transformers mounted on steel pedestals at switching stations also. The price shall also cover supply and erection of an enameled number plate of approved design. The price shall also cover oil filtration and pre- commissioning tests as approved by the HRIDC. The contractor shall make his own arrangement for oil filtration equipments, as well as power supply required for the same. All necessary tools, equipments, instruments required for carrying out oil filtration/checks/tests and commissioning shall be arranged by the contractor.</p> <p>NOTE for item 27(a), 27(b), 27(c) & 27(d): The replenishment of the transformer oil on account of testing and leakages during the warranty period shall be done by the Contractor at his own cost.</p>
<p>Item No-28</p>	<p>Supply without Insulator and Erection of 25 kV D.O. Fuse Switch</p> <p>The price shall cover supply and erection of 25 kV drop out fuse switch complete with all mounting accessories and terminal connectors as required but without the cost of the supply of 25 kV solid core insulator. The price shall not include erection of small parts steel work.</p>
<p>Item No.28(x)</p>	<p>Supply of Post Insulators for Item 28</p> <p>The price shall cover only supply of 25 kV Solid Core Insulators (Post Insulators) for execution of work covered under item 28. Erection cost of insulators are inclusive in item 28.</p>
<p>Item No. 30(a)(i)</p>	<p>Supply and erection of fencing panels at Switching Stations</p> <p>The price shall include supply and erection of fencing panels painted with two coats</p>

	<p>of red oxide zinc chromate primer to IS:2074:1979 and finished with two coats of aluminium paint. The prices shall not include supply and erection of fencing up-rights, anti-climbing devices but shall include the cost of fasteners and the price shall be for a metre length of the panels, 2.4 meter height measured in the plan view of the appropriate approved drawings.</p>
	<p>(ii) Supply and erection of fencing uprights</p> <p>The price shall cover supply and erection of fencing uprights panels painted with two coats of red oxide zinc chromate primer to IS:2074:1992 and finished with two coats of aluminium paint. The price shall be on the basis of black weight of the steel with no deduction for holes or skew cut or no increase for weld materials. The cost of foundation of uprights will be paid under item-2.</p>
<p>Item No. 30(b)</p>	<p>(i) Supply and erection of anti-climbing device at Switching Stations</p> <p>The price shall cover supply and erection of an anti-climbing device consisting of galvanised steel fixtures mounted on the fencing panels as per approved design. The price shall be per metre length of the panel.</p> <p>(ii) Supply and erection of anti-climbing device for B.T. Stations</p> <p>The price shall cover on a lump sum basis the supply and erection of anti-climbing device consisting of galvanised steel fixtures mounted on the masts, of the gantry below the transformer. The price shall be for each B.T. Station provided with the device.</p> <p>(iii) Supply and erection of anti-climbing devices for L.T. Supply Transformer Stations.</p> <p>The price shall cover on a lump sum basis the supply and erection of anti-climbing device consisting of galvanised steel fixtures mounted on the masts below the transformer. The price shall be for each mast provided with the devices.</p> <p>(iv) Supply and erection of Anti Monkey Menace.</p> <p>The price shall cover supply and erection of anti monkey menace consisting of Hot dip galvanized fixtures (MS angle 60mm x 60mm x 8mm) including all bolts, nuts, MS Flat and barbed wire as per requirement, mounted on masts as RDSO's drawing Nos. TI/SK/OHE/ANTIMON/RDSO/00001/08/0 & TI/SK/OHE/ANTIMON/RDSO/00001/09/0. The location for provision of "Anti Monkey Menace" if any shall be advised by the concerned project after award of the contract. All components shall be hot dip galvanized after fabrication and take approval from the project with the type of mast also.</p>
<p>Item No.31</p>	<p>Modifications to erected equipment</p> <p>The price under this item shall cover various modifications required to be carried out, in</p>

	<p>a section of completely erected overhead equipment energised or fit to be energized, certified as such by the Engineer provided such modifications are not on account of non-compliance of specifications, approved drawings and instructions given by the Engineer for the execution of the work from time to time, during the progress of the work. All the prices are on a flat basis and cover only the important and most frequent type of modifications required to compensate the contractor for additional work involved. No payments shall be admissible for other minor modifications which may be necessary in the course of work. All work originally done shall be paid for at normal rates for items 1 to 30 of schedule 1 as applicable. Dismantling of foundations and masts/structures shall be done by the Engineer at his own cost.</p> <p>In all the following cases, the dismantled equipment shall be handed over by the contractor to the Engineer's Engineer at the spot of dismantlement or at the contractor's Depot, as required by Engineer's Engineer. Where prices under this item are applicable, the Contractor shall finalise the quantities of work jointly with the Engineer's Engineer before taking the work in hand.</p>
Item No-31(a)	<p>Transfer of equipment from one mast or support to another</p> <p>The price shall cover transfer of overhead equipment to a bracket assembly on a new mast or support and dismantling of the erected bracket assembly from the old mast of support and consequent adjustment to overhead equipment required such as re-spacing of droppers (including cost of dropper wire), leveling etc. the foundation and steel work and bracket assembly for the new mast or structure will be paid for under appropriate items 2,3 and 4 respectively.</p>
Item No . 31(b) :	<p>Provision of an additional bracket assembly/assemblies on mast or support</p> <p>The price shall cover dismantling of an existing bracket assembly/assemblies and provision of a multiple cantilever cross arm wherever required, supplied free of cost by the Engineer and erection of bracket assemblies on the multiple cantilever cross arm. The price shall include any consequential adjustment to traction overhead equipment such as re-spacing of droppers, leveling, etc. These prices shall not include the price for supply and erection of any additional bracket assemblies, which will be paid for under item 4.</p>
Item No-31(c):	<p>Re-adjustment of a head-span</p> <p>The price shall cover the re-adjustment of the head span polygon to enable the additional equipment/s to be suspended from the head span. Payment for the suspension of additional overhead equipment shall be made for under item 5 as extra to item 31(c).</p>
Item No-31(d):	<p>Dismantling of overhead equipment</p> <p>The price shall cover cost of dismantling of equipment including Terminations, tensioning devices, guy rod assemblies, bracket assemblies and associated small parts steel work(excluding components embedded in concrete).</p>

Item No-31(e):	<p>Dismantling of feeder/return conductor</p> <p>The price shall cover dismantling of feeder, or return conductor including guy rods, terminations, suspension assemblies, super masts and associated small parts steel work.</p>
Item No-31(f):	<p>Splicing and extension of anchored overhead equipment</p> <p>The price shall cover splicing of terminated overhead equipment for extension and consequent adjustment of the affected equipment. The dismantled equipment (excluding portions embedded in concrete) shall be returned to the Engineer's. The cost of dismantling of overhead equipment would be paid for under item 31(d) for the whole length of the anchoring span irrespective of the physical position of the splices. The extended overhead equipment shall be deemed as starting from the center line of the structure preceding the old terminating structure and the extended overhead equipment shall be paid for under item 6(a) or 6(b) or 6(c) as applicable.</p>
Item No-31(g):	<p>Dismantling of a section insulator</p> <p>The price shall cover cost of 107 sq mm contact wire, 65 sq mm catenary wire, dropper wire and dismantling of an section insulator, splicing of catenary and contact wires and the necessary adjustments to droppers. The price shall include the supply of required copper conductors for the adjustment. The dismantled equipment shall be handed over to the Engineer at the spot of dismantling or at the contractor's Depot/s.</p>
Item No-31(gz):	<p>Dismantling of a section insulator</p> <p>Same as item 31 (g) but excluding supply of Contact and Catenary wires.</p>
Item No-31(h):	<p>Slewing and putting back of OHE in original shape</p> <p>The price shall cover for temporary slewing or lowering of erected OHE adjusted and /or unadjusted to ground for special works, at the request of the Engineer and restoration and re-adjustment of the equipment after completion of special works. The price shall be per span or part thereof, including anchoring spans.</p> <p>Additional components or materials used during such restoration or re-adjustment will be paid for at rates included in schedule 3 plus handling charges of 10% provided such use has, in the opinion of the Engineer, become necessary due to reasons beyond the control of the Contractor.</p>
Item No-31(i)	<p>Dismantling of an isolator</p> <p>The price shall cover cost of dismantling of an isolator, single or gang-operated, including dismantling of connections to the overhead equipment and associated small parts steel work.</p>

<p>Item No-31(j)</p>	<p>Dismantling of a post/pin insulator</p> <p>The price shall cover cost of dismantling of a pedestal pin insulator including dismantling of jumper connections, if any and associated small parts steel work.</p> <p>NOTES FOR Item No-31 : All claims under this item have to be supported by the following certificate to be furnished by the Contractor on the connected bill.</p> <p>(a) The modifications are not on account of non-compliance of specifications approved and instructions given by the HRIDC for execution of works.</p> <p>(b) The quantities of work involved for modification have been finalised jointly with the HRIDC Engineers before taking the work in hand.</p> <p>(c) The dismantled material have been handed over to the Engineer's representative.</p>
<p>Item No-31 (m)(i) & 31(m)(ii)</p>	<p>Manning of Switching Stations/Traction Sub-stations</p> <p>The prices shall cover the payment/wages to the staff to be deployed at each switching station and traction sub-station as directed by Engineer. Manning shall be done round the clock. The staff to be deployed must be skilled and fully conversant with operation of various equipments installed in switching station and traction sub-stations. The staff shall be deployed after test and trial by Engineer and on issue of competency certificate. The staff deployed shall act in accordance with instructions/ directions given by Traction Power Controller/representative of Engineer. The staff shall not leave the working place (Switching station and Traction Sub-station) in any case without prior permission of Engineer's representative. The price shall cover conveyance charges to the staff for going and coming to the working place. The period of manning shall be decided by the Engineer during execution of contract and manning shall commence on receipt of intimation in writing from the Engineer one month in advance.</p> <p>Note: In case Feeding Post is situated in adjacent to TSS same will also be included for manning alongwith TSS.</p>
<p>Item No-32:</p>	<p>Extra on erection rate for work under a power block</p> <p>The price under this item cover extra charges over and above erection rates of item 3 to 15 and 18 to 31 of Schedule 1 for erection of equipment in the vicinity of energized overhead equipment and feeders or erection of equipment with joints equipment already energized or on energized equipment which calls for a power block (shut off of traction power).The price payable under this item shall be 100% extra over the erection rates of the item referred to above, provided such work is not called for on account of non-compliance with specifications, approved drawings and instructions given by the Engineer from time to time.</p> <p>The extra erection rate under this item will not be payable, if power block is given for</p>

	<p>a total duration of a 4 hour or more in a day. Where the prices under this item are applicable, the Contractor shall finalise the quantities of various items of work to be done under a power block, jointly with the Engineer prior to taking the work in hand.</p>
Item No-33(a):	<p>Extra on erection rates for stringing work manually under Item No-6(a) to 7(c) The price under this item covers extra charges over and above the erection rates of item 6(a) to 7(c) of Schedule -1 without use of Wiring Train/Tower Wagon. The price payable under this item shall be 50% extra over the erection rates of the items referred to above, provided such work is not called for on account of non-compliance with specifications, approved drawings and instructions given by the Engineer from time to time.</p>
Item No. 33(b)	<p>Extra on erection rates for steel work manually under Item 3(a)(i), 3(a)(ii), 3(b)(i), 3(b)(ii) & 3(b)(iii)</p> <p>The price under this item covers extra charges over and above erection rates of Item No-3 (a) (i), 3 (a)(ii), 3 (b)(i), 3 (b)(ii) & 3 (b)(iii) of Schedule-1 without use of rail crane. The price payable under this item shall be 50% extra over the erection rates of items referred to above, provided such work is not called for on account of non-compliance with specifications, approved drawings and instructions given by the Engineer from time to time.</p> <p>Note : Where the works under these item 33(a) i.e "Manual Stringing" and 33(b) i.e "Manual Erection of Masts" are feasible, the Contractor shall finalise the quantities of various items of work jointly with the Engineer prior to taking up the work in hand, subject to a maximum of two percent each for item 6(a) to 7(c) and 3 (a) (i), 3 (a)(ii), 3 (b)(i), 3 (b)(ii) & 3 (b)(iii) of Schedule-1.</p>
Item No.34(a):	<p>Supply of materials and construction of Super-structure of SP/SSP building</p> <p>The price shall cover the construction of Control room of SP/SSP building above plinth and will include labour and material cost for the following works:-</p> <ol style="list-style-type: none"> i) RCC work in plinth, lintels, chajja, Roof slab. ii) Pre-cast RCC slab, RCC jali. iii) Cement concrete in flooring and cable trench. iv) Brick masonry in walls. v) Plastering works. vi) Provision of Doors, windows grills, Rolling shutters, water pipe line ventilators and painting thereof. vii) White washing and colour washing. viii) Acid proof or painting of floor and wall in battery room. ix) Spreading of stone metal. x) Provision of RCC pipe etc. xi) Any other item of work required to complete the work which has not been mentioned/included above shall also be done by the contractor and nothing

	<p>extra shall be paid the same.</p> <p>Construction of switching station shall be done strictly as per RDSO's drawing No.ETI/C/0067. The price shall cover the provision of all shuttering, frame works, arrangement of water, all tools and plants required for the work, consumable materials etc.</p> <p>The materials used for the work such as brick, sand, stone aggregates, steel for door frame, grill/Rolling shutters, RCC pipe shall be of best quality in accordance with Railways/HRIDC specification.</p> <p>The price shall also cover the provision of suitably sized of opening on the wall, for installation of Exhaust fan in the battery room.</p>
Item No.34 (b) :	<p>Cement concrete for foundation with stone ballast 40 mm nominal size rammed in layers not exceeding 15 cm thick in cement and sand, ratio 1:3:6 :-</p> <p>The price covers the supply of all necessary materials for casting cement concrete including cement, sand, ballast, arrangement of water and labour. The price shall cover the arrangement of all tools and plants such as mixer, vibrator (mechanical/electrical). The price shall cover provision of shuttering and dismantling thereof. The price shall cover cost of screening and washing of aggregate mixing as well grinding of mortar, preparation, deposition and curing of concrete and rendering or finishing the exposed surface were required. The price shall cover the cost of transportation of all materials, tools and plants to the site or from the site.</p>
Item No-34 (c)	<p>: RCC work of foundation</p> <p>The price shall cover the price of reinforcement concrete work for construction of column including supply of cement, concrete, structuring arrangements and dismantling thereto but excluding cost of steel required for reinforcement which has been covered under item 3(g). The concrete mixture shall also be before casting in accordance with IS:456/2000.</p>
Item No-34(d) :	<p>Brick work in foundation, plinth ,Retaining walls and drainage</p> <p>The price shall cover all labour and materials including cement and brick. The price covers supply, fixing, erecting, and removal of scaffolding, timber or steel frame work, shuttering, centering etc. The price covers arrangement of water at site, mixing of mortar, soaking bricks and all watering during the work and prescribed period of curing afterwards. The price shall cover the arrangement of all tools and plants required for work. The price shall cover all consumable materials e.g. fuel, oil, string, rope, wedges etc.</p>
Item No-34(e)(i):	<p>Construction of retaining wall with Random rubble masonry in cement & sand 1:6</p>

	<p>The price shall cover all labour and materials including cement. The price shall cover supplying, fixing, erecting, and removal of scaffolding, timber or steel frame work, Shuttering, centering etc. The price shall cover watering during the work. The price covers the arrangement of water at site.</p> <p>NOTE:- In case the stone rubbles are not available nearby the work site then the Retaining wall shall be constructed by Brick Masonary work and the payment should be made to the contractor under item 34 (d).</p>
<p>Item No-34(e)(ii) :</p>	<p>Construction of retaining/baffle wall with RCC M-20</p> <p>The price covers the supply of all necessary materials for casting cement concrete (RCC) including cement, sand, ballast, arrangement of water and labour. The price shall cover the arrangement of all tools and plants such as mixer, vibrator (mechanical/electrical).</p> <p>The price shall cover provision of shuttering and dismantling thereof. The price shall cover cost of screening and washing of aggregate mixing as well grinding of mortar, preparation, deposition and curing of concrete and rendering or finishing the exposed surface where required. The price shall cover the cost of transportation of all materials, tools and plants to the site or from the site. The price shall be exclusive of the cost of Steel required for Reinforcement which shall be paid under Item 3(g). The price shall also include dismantling of all connected temporary arrangements, back filling as required and removal of spoil.</p> <p>Note: Normally construction of retaining/Baffle wall requires digging for base preparation. Erection charges up to ground level will be paid as per erection rate of item 2(b)/2(bz) for soil other than hard soil & rock. For hard soil & rock, erection rate for base preparation up to ground level shall be paid as per erection rate of Item 2(a)(i)/2(az)(i) & item 2(a)(ii)/2(az)(ii) respectively.</p>
<p>Item No-34(f) :</p>	<p>Earth work in excavation and filling</p> <p>The price shall cover the earth filling at the site of SP/SSP control room at specified area upto required level. The price covers all labour and materials required including arrangement of necessary tools and plants required for the work. This price also includes the transportation cost of earth in case, earth is not available for filling up the nearby area. The price covers the watering and ramming of levelled/ filled earth either manually or by mechanical means. The price shall cover arrangement of necessary water required for the work.</p>
<p>Item No-34(g) :</p>	<p>Earth work in excavation for foundation</p> <p>Same as for above, item No.34(f) except that no watering and ramming of earth is required in this case, but includes the disposal of excavated earth /leveling etc. for foundations, drainage etc.</p>

<p>Item No-34(h)</p>	<p>Excavation of pile 100 to 200 mm dia with Single under ream up to 3.5 m deep</p> <p>The price shall cover the cost of all labour tools and plants required at site during making of a 100 to 200 mm dia bare hold along-with single under ream upto a depth of 3.50 metre. The excavated earth from the bare hole shall be disposed off and leveled all around. The price shall also cover the cost of all consumable materials and water required at site during execution of work.</p>
<p>Item No-34(i) :</p>	<p>Plastering of Retaining wall</p> <p>The price shall cover the supply of all materials and labour cost including cement for plastering of Retaining wall either constructed by Ruble masonry work or by Brick work. Plastering work shall be done by cement mortar in 1:4 (1cement and 4 sand). The price shall also cover the cost of arrangement of necessary water required for the work. The price shall cover the cost of necessary tools and plants required for the work and necessary consumable items. Nothing extra shall be paid to the contractor for any rehandling of materials from the place of delivery to place of work. The price shall cover the cost of cleaning and wetting the surface of the work. The price shall also cover the cost of curing of the plastered surface as per extent practice.</p>
<p>Item No 34 (j) :-</p>	<p>the price shall cover Supply & Spreading of standard size of Ballast/Gravel in the Switch Yard.</p>
<p>Item No-35 :</p>	<p>Supply & Erection of materials for Internal and External Lighting of Switching Station Building (SP/SSP).</p> <p>The price shall cover all cost of labour and materials required for the work. Wiring work shall be done in accordance with IE rules, IS-732 and as per specifications .The price shall also cover the cost of testing and commissioning of the installations.The various activities involved in the work are as follows:-</p> <p>Fixing of MS conduits on wall and drawing of wires for circuit and point wiring. Provision of C.I. Switch boxes of appropriate size concealed in wall at appropriate height with phenolic laminated (Hylum) sheet for fixing of switches, plugs etc. Provision of Main Board and Distribution Boards and connection thereof. Provision of light fittings, Exhaust fan, Outdoor luminaries complete with tubes and bulbs. Provision of Earthing station and connection between earthing station to Main Board with the help of 8 SWG GI wire. Earthing work shall be done in accordance with IS:3043/1987. Materials such as light fittings, Exhaust fan, switches sockets, Ceiling Rose, Socket outlets all shall be with ISI mark and shall be one of the make mentioned in technical specification. Provision of Switches, sockets out lets, Ceiling Roses on respective switch boards and points in appropriate numbers and connection thereof.</p>

	<p>Provision of 150 Watt HPSV street light fitting complete in all respect including lamp on the wall of the building.</p> <p>After completion of wiring work necessary testing of wiring and Earthing station shall be done and results submitted to the site-in-charge duly signed by representatives of both the contractor and Engineer.</p>
Item 36 (a) :	<p>Unloading of all type of Steel Structures :</p> <p>The price shall cover unloading charges for all type of steel structures (BFB/ RSJ, B-Series, Spl structures, N,O, R type structures etc) from BFR/ trailer/ truck over and above the requirement given by the contactor for the completion of the present work or actual qty utilised in the completion of work; whichever is higher.</p>
Item 36(b):	<p>Loading of all type of Steel Structures:</p> <p>The price shall cover loading charges for all type of steel structures (BFB/ RSJ, B-series, Spl structures, N,O & R type structures etc) into BFR/ trailer/ truck over and above the requirement given by the contactor for the completion of the present work or actual qty utilised in the completion of work; whichever is higher.</p>
Item 37 (a) :	<p>Unloading of all type of Copper & Aluminium conductors :</p> <p>The price shall cover unloading charges for all type of copper conductors (contact wire, catenary wire, Dropper, Bridle wire, Jumpers etc) and Aluminium conductors (spider conductor etc) into BFR/ Tower wagon/ trailer/ truck over and above the requirement given by the contactor for the completion of the present work or actual qty utilised in the completion of work; whichever is higher.</p>
Item 37 (b) :	<p>Loading of all type of Copper & Aluminium conductors :</p> <p>The price shall cover loading charges for all type of copper conductors (contact wire, catenary wire, Dropper, Bridle wire, Jumpers etc) and Aluminium conductors (spider conductor etc) into BRF/ Tower wagon/ trailer/ truck over and above the requirement given by the contactor for the completion of the present work or actual qty utilised in the completion of work; whichever is higher.</p>

<u>EXPLANATORY NOTES TO NON SCHEDULE ITEMS</u>	
Item No NS- 1a:-	<p>Supply and erection of OHE caution board with supply of fixing material (Clamp,back flat strip & fastner) for "caution clearance to OHE nearby rectified" Board Size 400mmx270mmx2mm.</p> <p>The price shall cover all cost of labour and materials required for OHE caution board with all accessories of size 400x270x2mm as per requirement and satisfaction of Engineer.</p>
Item No NS- 1b:-	<p>Supply and erection of OHE caution board with supply of fixing material (Clamp,back flat strip & fastner) for "Power Block working Limit " Board Size 450mmx450mmx2mm.</p> <p>The price shall cover all cost of labour and materials required for “Power Block working limit” with all accessories of size 450x450x2mm as per requirement and satisfaction of Engineer.</p>
Item No NS- 1c:-	<p>Supply and erection of OHE caution board with supply of fixing material (Clamp,back flat strip & fastner) for " caution unwired turnout " Board Size 900mmx600mmx2mm.</p> <p>The price shall cover all cost of labour and materials required for “caution unwired turnout" Board Size 900mmx600mmx2mm” with all accessories as per requirement and satisfaction of Engineer.</p>
Item- No NS- 1d:-	<p>Supply and erection of OHE caution board with supply of fixing material (Clamp,back flat strip & fastner) for " Electric Engine Stop Board" Board Size 900mmx600mmx2mm.</p> <p>The price shall cover all cost of labour and materials required for “Electric Engine Stop Board" Board Size 900mmx600mmx2mm with all accessories as per requirement and satisfaction of Engineer.</p>
Item No NS- 1e:-	<p>Supply and erection of OHE caution board with supply of fixing material (Clamp, back flat strip & fastner) for " Caution live wire" Board Size 400mmx270mmx2mm"</p> <p>The price shall cover all cost of labour and materials required for “Caution live wire" Board Size 400mmx270mmx2mm" with all accessories as per requirement and satisfaction of Engineer.</p>
Item No NS-2 -	<p>Design, Manufacturing supply of retro reflective type sigma board as per RDSO drawing no. T1/DRG/OHE/PLTBRD/RDSO/00036/12/0 (Sixe-450mmx60mm) and RDSO Specification No. ETI/OHE33A (12/97) Rev.8.</p>

	<p>The price shall cover all cost of labour and materials required for Design, Manufacturing supply of retro reflective type sigma board as per RDSO drawing no. T1/DRG/OHE/PLTBRD/RDSO/00036/12/0 (Sixe-450mmx60mm) And RDSO Specification No. ETI/OHE/33A (12/97) Rev.8. for identification of all signals shall be provided two masts prior to all signal locations for easy identification during foggy weather as per requirement and satisfaction of Engineer.</p>
<p>Item No NS-3a -.</p>	<p>Fabrication, developing and supply of sectioning diagram, schematic and TSWR board Fabrication and supply of pre compressed particle laminated board white in colour with Aluminum beading 1/2" x 1/2" on all around the board and an arrangement of fixing/hanging on wall of adequate strength of top of board as required</p> <p>The price shall cover all cost of labour and materials required for developing and supply of sectioning diagram, schematic and TSWR board Fabrication and supply of pre compressed particle laminated board white in colour with Aluminum beading 1/2" x 1/2" on all around the board and an arrangement of fixing/hanging on wall of adequate strength of top of board as per requirement and satisfaction of Engineer.</p>
<p>Item No NS-3b :-</p>	<p>Fabrication, developing and supply of sectioning diagram, schematic and TSWR board developing the sectioning diagram, schematic diagram & TSWR diagram with computerized digital printing on adhesive vinyl of adequate size as required.</p> <p>The price shall cover all cost of labour and materials required for fabrication, developing and supply of sectioning diagram, schematic and TSWR board developing the sectioning diagram, schematic diagram & TSWR diagram with computerized digital printing on adhesive vinyl of adequate size as per requirement and satisfaction of Engineer.</p>

LIST OF STANDARD DRAWINGS AND SPECIFICATIONS

All references to drawings, charts, schedules, specifications, IS etc. given in this part or elsewhere in the tender document shall be taken to be the latest versions including all amendments. All other items not covered under the Drawing/Specification shall be referred to as per relevant IS and Railway practice in force.

The Drawing and RDSO specification can be purchased from the office of CAO/CORE, Allahabad or TI Directorate of RDSO, Lucknow on payment basis.

(A) LIST OF STANDARD DRAWINGS FOR “OHE”:-

SI. No	Brief Description	Drawing		Mod. No.
		Series	Number	
1	2	3	4	5
1.	Extra allowance for setting of structures on curves (1676 mm Broad gauge)	ETI/OHE/G	00111 Sh-1	C
2.	Standard setting of structures in the vicinity of signals (broad gauge)	-do-	00112	D
3.	Typical design of side bearing foundation.	-do-	00131	-
4.	Typical design of cantilever mast.	RE/33/G	00141 Sh.3	-
5.	Standard drilling schedule of OHE masts 9.5 m long RSJ and BFB	ETI/OHE/G	00144 Sh.3	C
6.	Span and stagger chart for (conventional OHE, Cad. Cu catenary & Cu cont. wire) wind pressure 75,112.5 & 150kgf/m ² .	ETI/OHE/G	00202	-
7.	Employment schedule for Cantilever mast Regulated OHE without return conductor and without Earth wire (WP- 112.5 kgf/m ² (Cd- 65/Cu, Cont. 107/Cu)	ETI/OHE/G	00153 Sh.1	F
8.	Employment schedule for Cantilever mast Regulated OHE without return conductor and with Earth wire (WP- 112.5 kgf/m ² (Cd- 65/Cu, Cont. 107/Cu)	ETI/OHE/G	00153 Sh.2	F
9.	Employment schedule for Cantilever masts Regulated OHE with return conductor and without Earth wire (WP- 112.5 kgf/m ² (Cd- 65/Cu Cont. 107/Cu)	-do-	00153 Sh.3	F
10.	Employment schedule for Cantilever masts Regulated OHE with return conductor and with Earth wire (WP- 112.5 kgf/m ² (Cd- 65/Cu, Cont. 107/Cu)	-do-	00153 Sh.4	E
11.	Employment schedule for Cantilever masts unregulated OHE without return conductor and without Earth wire (WP- 112.5 kgf/m ² at 35°C and 28kgf/m ² at 4°C (Cat- 65/Cu, Cont. 107/Cu)	-do-	00154	D

12.	Employment schedule of bracket tubes Conventional OHE (Cad Cu Caty & Cu contact wire 1000 kgf tension each) WP-75 Kgf/ m ²	ETI/OHE/G	00158 sh.1 of 3	-
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1	2	3	4	5
13.	Employment schedule of bracket tubes Regulated Conventional OHE (Cad. Cu Cat & Cu contact wire 1000 kgf tension in each) WP- 112.5 Kgf/ m ²	ETI/OHE/G	00158 sh.2 of 3	-
14.	Employment schedule of bracket tubes Regulated Conventional OHE (Cad Cu Caty & Cu contact wire 1000 kgf tension in each) WP- 150 Kgf/ m ²	ETI/OHE/G	00158 sh.3 of 3	-
15.	Dropper schedule for uninsulated Overlap spans	-do	00169	A
16.	Dropper schedule for insulated Overlap spans	-do	00170	A
17.	Dropper schedule for conventional regulated OHE. With Zero presag (1400/1400)	-do	00177	A
18.	Adjustment chart of Regulating equipment 3 Pulley Type (3:1 ratio)	-do	00195	A
19.	Schematic arrangement of regulated OHE	-do	02101	A
20.	Schematic arrangement of uninsulated overlap (3 & 4 span overlaps)	-do	02121 Sh.4	A
21.	Schematic arrangement of insulated overlap	ETI/OHE/G	02131 Sh.3	A
22.	Standard termination of tramway type OHE (Regulated) with Pulley type regulating equipment (3:1 ratio).	ETI/OHE/G	04212	B
23.	General distribution of droppers	ETI/OHE/G	00161	-
24.	Outline of Pantograph (Broad gauge and metre gauge).	RE/33/G	00181	A
25.	General formation of single track in Embankments and cutting (Broad gauge.)	RE/33/G	01101 Sh.1	A
26.	General formation of double track in embankments and cutting (Broad gauge).	-do-	01102 Sh.1	A
27.	General formation of multiple tracks (1676 mm gauge).	-do-	01103 Sh.1	A
28.	Standard anchor arrangement	-do-	01401	E
29.	Anchor arrangement with dwarf mast.	ETI/OHE/G	01402	B
30.	Schedule of anchor block for B.G. track.	-do-	01403 Sh.1	E
31.	Schedule of anchor block for B.G. track.	-do-	01403 Sh.2	D
32.	Schedule of anchor block for B.G. track (Black cotton soil)	-do-	01403 Sh.3	D
33.	Standard guide tube arrangement on a mast and structures.	ETI/OHE/G	01505	-
34.	Trapezoidal counter weight arrangement on OHE structures.	ETI/OHE/G	01502	-
35.	Arrangement of 3KV & 25 KV Pedestal Insulator supports on OHE masts and portals.	-do-	01601	-
36.	Standard arrangements for mounting of number	ETI/OHE/G	01701	A

	plate on OHE Structures.			
37.	Schematic arrangement of regulated overhead equipment.	-do-	02101	A
38.	Typical arrangements of OHE on cantilever masts for double track section.	-do-	02102	-
39.	Typical arrangement for fixing of bracket assembly on 9.5 m mast and Structure to suit raising of tracks (in future)	-do	02102 Sh.3	-
40.	Mast on platforms (Metre Gauge)	RE/33/G	02104 Sh.2	A
41.	Details of bracket arrangement on tangent and curved tracks	ETI/OHE/G	02106 Sh.1	A

1	2	3	4	5
42.	Details of bracket arrangement for OHE	-do-	02106 Sh.3	C
43.	Single bracket assembly on Structures and dropped arms.	RE/33/G	02107	D
44.	Box type cantilever Arrangement.	ETI/OHE/G	02108	A
45.	Arrangement at anticreep.	TI/DRG/OHE/ GENL/RDSO/	00001/12/0	0
46.	Standard cantilever arrangement for boom anchor anticreep location.	ETI/OHE/G	02113	-
47.	Schematic arrangement of uninsulated over Lap (type-I) (3 & 4 Span overlaps)	RE/33/G	02121 Sh.1	F
48.	Schematic arrangement of insulated overlap.	ETI/OHE/G	02131 Sh.1	
49.	General arrangement of regulated OHE at turn-outs (overlap & crossed type).	ETI/OHE/G	02141	C
50.	General arrangement of regulated OHE at cross over(overlap & crossed type).	-do	02151	-
51.	Arrangement of neutral section	-do-	02161 Sh.1	C
52.	Arrangement of neutral section assembly (PTFE Type) at SWS.	-do	02162	-
53.	Arrangement of short neutral section.	-do	02161 Sh.2	-
54.	Schematic arrangement of unregulated overhead equipment.	-do	03101	-
55	Standard termination of OHE (Regulated & unregulated).	ETI/OHE/G	03121 Pt 1 of 3	E
56	-do-	-do	03121 Pt 2 of 3	E
57	-do-	-do	03121 Pt 3 of 3	E
58.	General arrangement of Unregulated OHE at turnouts (crossed & overlap type).	-do	03151	-
59.	General arrangement of unregulated OHE at crossovers and diamond crossings (overlap and crossed type).	-do	03152 Sh.1	-
60.	General arrangement of unregulated OHE at diamond crossing.	-do	03152 Sh.2	-
61.	General arrangement of pull off	-do-	03301	A
62.	General arrangement of Head span	-do	03201	-
63.	In span jumper connection between catenary &	-do-	05101	-

	contact wire.			
64.	Continuity jumper connection at un-insulated overlap turnouts and cross overs	-do	05102	C
65.	Anti- theft jumper	-do	05107	A
66.	Connections at turnouts	-do	05103	B
67.	Potential equalizer connection at insulated overlap and neutral section	-do-	05104	-
68.	Connections at diamond crossing.	-do-	05106	A
69.	General arrangement of connections to OHE by copper cross feeder (150).	-do	05121 Sh.1	C
70.	General arrangement of connections at switching station on double track section by copper cross feeder	ETI/OHE/G	05122 Sh.1	C
71.	General arrangement of connections at switching station on multiple track section by copper cross feeder	-do-	05123 Sh.1	C
72.	Suspension of 25kV feeder(Spider)on 25KV OHE masts	ETI/OHE/G	05143	B

1	2	3	4	5
73.	Termination of feeder, return conductor & return feeder(copper & aluminum).	ETI/OHE/G	05145-1	A
74.	Arrangement of suspension of double spider 25 KV feeder and return feeder between sub-station and feeding station	RE/33/G	05152	C
75.	Assembly of section insulators	RE/33/G	05181	C
76.	General arrangement of earth wire on OHE mast	ETI/OHE/G	05201	A
77.	General arrangement of earth wire on OHE mast	ETI/OHE/G	05201-1	-
78.	Arrangement of transverse bonds	ETI/OHE/G	05251	A
79.	Connection of return conductor to track	-do-	05306	F
80.	Suspension arrangement of aluminum return conductor (spider) on traction Structures	-do-	05307	B
81.	Suspension of return conductor (spider) from boom of Structures (with clevis type disc insulators)	-do-	05312	A
82.	Connections between OHE and aluminum return conductor at booster stations	ETI/OHE/G	05413	B
83.	Mounting of 25kv Isolators on OHE Structures (General arrangement)	ETI/OHE/G	05513 Sh.1	A
84.	Details of small part steel work for supporting 25kv Isolator on new T.T.C. boom	-do-	05513 Sh.2	A
85.	Connection from Isolator to OHE	-do-	05516	A
86.	Characteristics of conductors/ bus-bar for 25kv AC traction	-do-	05600	A
87.	Mounting arrangement of Auxiliary Transformer on OHE masts	ETI/OHE/G	05522	-

88	Employment Schedule for Cantilever Mast regulated OHE without return conductor & without earthwire (WP- 75 kgf/ m ² .) (Cat. 65/Cu & Cont. 107/Cu)	ETI/C	0702 (Sh.1)	B
89	Employment Schedule for Cantilever Mast regulated OHE with earth wire but without return conductor (WP- 75 kgf/ m ²) (Caty. 65/Cu & Cont. 107/Cu)	-do-	0702 (Sh.2)	B
90	Employment Schedule for Cantilever Mast regulated OHE with return conductor but without earth wire (WP- 75 kgf/ m ²) (Caty. 65/Cu & Cont. 107/Cu)	-do-	0702 (Sh.3)	B
91	Employment Schedule for Cantilever Mast regulated OHE with return conductor with earth wire (WP- 75 kgf/ m ²) (Caty. 65/Cu & Cont. 107/Cu)	-do-	0702 (Sh.4)	B
92	Employment Schedule for Tramway type regulated OHE RC & EW (WP- 75 kgf/m ²)	-do-	0704	B
93	Employment Schedule for 8''x 8''x35 lbs BFB (9.5 M. long)(WP-112.5 kgf/m ² Caty. 65/Cu & Cont. 107/Cu.	-do-	0708	B
94	Employment Schedule for OHE mast (9.5m) overlap central location with 3.0 m implantation WP-75 kgf/m ² Caty. 65/Cu & Cont. 107/Cu.	-do-	0709	A
95	Employment schedule for OHE mast (9.5M) overlap central with 3.0 M implantation WP-112.5 kgf/m ² (Caty 65/cu and Cont.107/Cu)	ETI/C	0710	A

1	2	3	4	5
96	Employment Schedule for OHE mast (9.5m) overlap inter with 3.0 m implantation. WP-75 kgf/ m ² Caty. 65/Cu & Cont. 107/Cu.	-do-	0711	A
97	Employment schedule for OHE mast (9.5M) overlap inter with 3.0 M implantations. WP-112.5kgf/m ² Caty.65/Cu and cont.107/Cu	-do-	0712	A
98	Employment Schedule for 9.5 m 200x200x49.9 kg mast WP-75 kgf/m ² (Caty. 65/Cu & Cont. 107/Cu.)	-do-	0713	B
99.	Employment schedule for 9.5 m long 200x200x49.9 kg mast WP-112.5 Kgf/ m ² (Caty. 65/Cu and Cont.107/Cu)	-do-	0714	B
100	Employment Schedule for OHE mast (9.5m) WP-75 kgf/ m ² overlap Anchor location with 3.0 m implantation (Copper OHE)	-do-	0715	A
101	Employment schedule for OHE mast (9.5M) WP 112.5 kgf/ m ² overlap anchor location with 3.0 M implantations. (Copper OHE)	-do-	0716	A

102	Employment Schedule for pre-stressed span concrete mast (PC 42) - 9.5 M long conventional OHE, normal location (WP-150),112.5 &75kgf/ m ²)	ETI/C	0725	A
103	STD portals (N,O,P,R,G & Double BFB types)	-do-	0064	-
104	Volume chart and equivalent chart of foundations (Side bearing, Side gravity and W.B.C.)	TI/DRG/CIV/ FND/RDSO	00001/04/0 SH-1	B
105	Volume chart and equivalent chart of foundations (Side bearing, Side gravity and W.B.C.)	TI/CIV/FND/ RDSO	00001/12/0 SH-1	A
106	Volume chart and equivalent chart of foundations (NG type)	TI/DRG/CIV/ FND/RDSO/	00001/04/0 SH-2	B
107	Volume chart and equivalent chart of foundations (NG type)	TI/CIV/FND/ RDSO	00001/12/0 SH-2	A
108	Volume and equivalent chart of foundations for Dry black cotton soil (NBC type) (For 16500 & 11000kgf/ m ²)	TI/DRG/CIV/ FND/RDSO/	00001/04/0 SH-3	B
109	Volume and equivalent chart of foundations for Dry black cotton soil (NBC type) (For 16500 & 11000kgf/ m ²)	TI/CIV/FND/ RDSO	00001/12/0 SH-3	A
110	Volume chart and equivalent chart of New pure gravity foundations (500 mm exposed)	TI/DRG/CIV/ FND/RDSO/	00001/04/0 SH-4	B
111	Volume chart and equivalent chart of New pure gravity foundations (500 mm exposed)	TI/CIV/FND/ RDSO	00001/12/0 SH-4	A
112	Volume and equivalent chart of New foundations for Dry black cotton soil only (8000 kg/m ²)(NBC type) 2.5 M depth	TI/DRG/CIV/ FND/RDSO/	00001/04/0 SH-5	B
113	Volume and equivalent chart of foundations for Dry black cotton soil only (8000 kg/m ²) NBC type 2.5 m depth	TI/CIV/FND/ RDSO	00001/12/0 SH-5	A
114	Volume and equivalent chart of foundations (For 8000 kg/m ² Direct load)	ETI/C	0058 Sh.6	B
115	Special BFB portal for 5 tracks (General arrangement)	-do-	0026 Sh.1	C
116	Protective screen of foot-over bridge and road over-bridge.	-do-	0068	H

1	2	3	4	5
117	Chart for portal foundation	-do-	0005/68	
118	Muff for OHE structures	-do-	0007/68	E
119	Structures muff for sand cored foundations	-do-	0012/69	E
120	9.5 m Standard traction mast (fabricated 'K' series)	-do-	0018-2	D
121	Remote Control Cubicle at Stn, Foundation, RCC slab, Building plant & Steel door	-do-	0067	B
122	9.5 m long standard traction mast (fabricated with bottom plates 'B' series)	ETI/C	0071	E

123 (a)	Details of OHE foundation in soft rock (Bearing capacity 45,000 Kgf/m ²).	ETI/C	0059	C
123 (b)	Details of OHE foundation in Hard rock (Bearing capacity 90,000 Kgf/m ²).	ETI/C	0060	D
124	Details of foundation for fencing upright	-do-	0032	B
125	Employment schedule for switching and booster station main masts	ETI/C	0185	B
126	Drilling schedule for S-1 mast	ETI/C	0030	F
127	Drilling schedule for S-2 mast	-do-	0031	D
128	Drilling schedule for S-3 mast (length 11.4 m)	-do-	0180	C
129	Drilling schedule for 8" x 6" x 35 lbs. RSJ mast 8.0 m long for booster transformer station Type S-4	-do-	0036	E
130	Drilling schedule for S-5 mast (11.4m long)	-do-	0042	E
131	Drilling schedule for S-6 mast (length 12.4m)	-do-	0181	C
132	Drilling schedule for S-7 mast (length 12.4m)	-do-	0182	C
133	Drilling schedule for S-8 mast (length 12.4m)	-do-	0183	C
134	Drilling schedule for S-9 mast (length 12.4m)	-do-	0184	C
135	General arrangement & details of fencing panels & gate for switching station	-do-	0186 Sh.1	E
136	Details of fencing uprights and anti-climbing device for switching station	-do-	0186 Sh.2	E
137	S-100 fabricated mast for mounting LT supply transformer and drop out fuse switch at switching station	-do-	0043	B
138	S-101 details of mast for supporting Isolator inside switching station	ETI/C	0044	A
139	Details of anchor beam or SP, SSP, & FP	-do-	0033	D
140	Details of small part steel for switching station	ETI/C	0034 Sh.1	K
141	Details of bracing for switching & B.T. masts	ETI/C	0034 Sh.2	B
142	Details of small parts steel of out rigger for switching stations and booster transformer stations	ETI/C	0037	C
143	Details of small parts steel for booster transformer stations	ETI/C	0040	E
144	Details of pre-cast cable trench for switching station	-do-	0038	E
145	Standard 'R' type portal rod laced general arrangement	-do-	0011/69 Sh.1	C
146	'G' type portal special upright and end piece	-do-	0056	C
147	Short bored pile foundation for traction mast (permissible BM & volume)	-do-	0062	B
148	Chart for portal foundations in dry black cotton soil safe bearing capacity 16500 Kg/ M ²	-do-	0063	B

1	2	3	4	5
149	Dwarf mast foundation on wet & dry black cotton soil	CORE/ALD/OHE/SK/C	02	-
150	Typical design of new pure gravity foundation.	ETI/SK/C	131	A

151	Typical design of side gravity foundation (Soil pressure=8,000 Kg/ M ²)	-do-	142	A
152	Rock Anchor for B.G. Track. –	ETI/SK/C	208	-
153	Bracket fitting for PSC Mast (cap 4200 Kgm) general arrangement and SPS details	ETI/SK/C	214 Sh.1 of 2	E
154	SPS details for Earth wire clamp on PSC mast	ETI/SK/C	214 Sh. 2 of 2	A
155	Special arrangement of OHE under over line structure	ETI/OHE/SK	529	--
156	Earthing and bonding of PSC mast.	ETI/OHE/SK	537 Sh.1 of 2	D
157	Typical Earthing arrangement in SPUN PSC Mast with 18mm dia rod.	-do-	537 Sh.2 of 2	B
158	Arrangement of overlap	ETI/OHE/SK	566	-
159	Catenary dropper assembly	ETI/OHE/P	1190	B
160	Parallel clamp (20/20)	ETI/OHE/P	1550	E
161	Standard guide tube assembly.	ETI/OHE/P	5060-2	C
161A	Counter weight assembly for Regulating Equipment (3:1 Ratio)	ETI/OHE/P	5090-5	E
161B	Trapezoidal weight assembly for Regulating Equipment (3:1 Ratio)	TI/DRG/OHE/ ATD/RDSO/	00004/00/2	-
161C	Trapezoidal weight assembly	ETI/OHE/P/	5090-1	G
161 D	Counter weight assembly	ETI/OHE/P/	5090	F
162	Standard anti-wind clamp	-do-	2550-1/2	L
163	Multiple cantilever cross arm assembly.	RE/33/P	3120	H
164	Anchor fitting assembly on rolled sections	ETI/OHE/P	3230	C
165	Anchor fitting assembly on 'K' series, TCC masts and 'P' type portal upright.	-do-	3240	D
166	Anchor assembly on 'N' and 'O' type portal upright	-do-	3250	D
167	Structure bonds	-do-	7000	F
168	Earthing station	-do-	7020	B
169	Longitudinal rail bond	-do-	7030	F
170	Short super mast assembly	ETI/C/P	8010	G
171	Long super mast assembly	-do-	8020	C
172	Bracket attachment assembly on portal upright (N,O,R,P,G &BFB Type)	-do-	8030	B
173	Super mast assembly on portals	-do-	8050	C
174	Medium super mast assembly	ETI/OHE/P	8060	C
175	Compensating plate	-do-	5191-1/2	D
176	Suspension clamp	RE/33/P	1160	J
177	Double suspension clamp	-do-	1170	K
178	Double suspension lock plate.	-do-	1172	C
179	Catenary splice (65)	ETI/OHE/P	1090	-
180	Typical location & schematic connection diagram for a three interrupter switching station	ETI/PSI	003	C
181	Typical general arrangement of a three interrupter switching station	-do-	004	F
182	Typical location plan & general arrangement for sectioning & paralleling station	-do-	005	F

183	Typical location plan and general arrangement for a feeding station	-do	006	E
1	2	3	4	5
184	Typical general arrangement at a Booster transformer station (with 4 cross feeder) Type III	-do-	013	B
185	General arrangement of 280 KVA Booster Transformer station Type III (with 4 cross feeder)	-do-	018	A
186	Typical general arrangement at a booster transformer station (without cross feeder) Type-I	ETI/PSI	011	C
187	Typical number plate for Auxiliary Transformer	ETI/PSI/P	7525	-
188	Typical fencing and anti-climbing arrangement at switching stations	ETI/PSI	104	E
189	Typical earthing layout of sub-sectioning and paralleling station	-do-	201	B
190	Typical earthing layout of a sectioning and paralleling station	-do-	202	B
191	Typical earthing layout of a feeding station	-do-	203	B
192	Earthing details for interrupter L.T. supply transformer 25 KV Lightning Arrestors P.T. Type-I (S-100 masts, S-101 mast, fencing upright and main mast)	-do-	204	C
193	Typical earthing layout at a booster transformer stations	-do-	211-1	A
194	Typical cable run layout of a sub-sectioning & paralleling station	-do-	301	C
195	Typical cable run layout of a sectioning and paralleling station	-do-	302	C
196	Typical cable run layout of a feeding station	-do-	303	B
197	Typical earthing layout at a booster transformer station (with 4 cross feeder for Type III,IV and V)	ETI/PSI	212	B
198	Typical drawing for a terminal board	-do-	501	C
199	36 mm Aluminum Bus terminal for 25kv Isolator (Rigid type)	ETI/PSI/P	6480	C
200	36 mm Aluminum Bus splices	-do-	6490	B
201	36 mm Aluminum Bus Tee connector	-do-	6500	C
202	36 mm Aluminum Bus Tee terminal	-do-	6510	D
203	36/15 mm Top connector	-do-	6520	B
204	36mm Aluminum flexible bus splice	-do-	6550	B
205	36 mm Aluminum bus splice cum tee connector	-do-	6560	B
206	Typical number plate for interrupter and double pole isolator	-do-	7520	B
207	Typical number plate for potential transformer Type	-do-	7521	B
208	Typical number plate for booster transformer	-do-	7522	B
209	Caution plate 25 KV AC	ETI/OHE/P	7531	C
210	General Caution notice at entrance to railway	RE/33/P	7551	C

	Station (Hindi & English)			
211	Typical details of pressed steel door, window and ventilator	RE/Civil/S	129/ 2001	R2
212	Bolted base connection for portals located in drains	ETI/C	0010	C
213	Details of base plate for mast on drains in station yards	-do-	0002/68	A
214	Height gauge for level crossings (for clear span upto 7.3 mtr) details of structure and foundation	TI/DRG/CIV/ HGAUGE/RD SO	00001/05/0	--
215	Height gauge for level crossings (for clear span above 7.3 mtr up to 12.2 mtr) details of structure and foundation	TI/DRG/CIV/ HGAUGE/RD SO	00002/05/0	--
216	Standard plan details of Height gauge for span 7.3 M to 10.0 M with rail Type	RE/CIVIL/S	146/2008	R3

1	2	3	4	5
217	Arrangement for false catenary under over line structure	ETI/OHE/SK	446	--
218	Typical arrangement of OHE with insulated copper catenary under over line structure	ETI/OHE/SK	570	--
218 A	Anti-Climbing Arrangement	TI/SK/OHE/A NTIMON/RDS O	00001/08/0	--
218 B	Anti-Climbing Arrangement	TI/SK/OHE/A NTIMON/RDS O	00001/09/0	--
218 C	GSSW Assembly	TI/DRG/OHE/ GSSW	0002/09/0	--
218 D	18 mm Lug (Forged) (Compression type)	TI/DRG/OHE/ GTBLUG/RDS O	00001/04/0	--

(B) LIST OF STANDARD DRAWINGS FOR TRAMWAY TYPE OHE (REGULATED)

1	2	3	4	5
219	Span and stagger chart for Tramway type OHE (Regulated)	ETI/OHE/G	04201	-
220	Drilling schedule of OHE mast 8.5m & 9m ling RSJ and BFB for Tramway OHE (Regulated) respectively.	ETI/OHE/G	04202 Sh.1 Sh.2	C C
221	Schematic arrangement of tramway type OHE (regulated).	-do-	04203	C
222	Arrangement of bracket assembly for Tramway Type OHE (regulated)	-do-	04204	B
223	Arrangement of anti-creep for Tramway Type OHE (Regulated)	ETI/OHE/G	04205	B
224	Arrangement of anticreep (alternative arrangement) for Tramway OHE (Regulated)	-do-	04206	B
225	Arrangement of section Insulator for Tramway Type OHE (Regulated)	-do-	04207 Sh.1	B
226	Small parts steel for supporting section insulator assembly for (regulated Tramway Type OHE)	-do-	04207 Sh.2	B
227	General arrangement of turnouts for Tramway type OHE (Regulated)	ETI/OHE/G	04208	-
228	Adjustment chart for Tramway type OHE (Regulated)	ETI/OHE/G	04209	-
229	Bridle wire clamp (6 mm) with two bolts	ETI/OHE/P	1070-1	B
230	Large suspension clamp 20mm (with Armour rod)	ETI/OHE/P	1580 Sh-2	-
231	Hook Bracket	ETI/OHE/P	2380	C
232	BFB Steady arm assembly for Tramway OHE (Regulated)	ETI/OHE/P	2540-1	-
233	Anti wind clamp for tramway OHE (Regulated)	-do-	2550-3	E
234	Counter weight assembly (light)	ETI/OHE/P	5090-3	I
235	Counter weight assembly	-do-	5090-6	D
236	Employment schedule for tramway type regulated OHE without R.C. and E.W. (W.P.112.5 kgf/sq.m)	ETI/C	0705	B
237	Protective screen at FOB/ROBs	ETI/C	0068	H

(C) STANDARD TYPICAL AND PARTICULAR DRAWINGS FOR TSS AND SHUNT CAPACITOR BANKS.

1	2	3	4	5
238	Typical layout of Remote Control cubicle at a switching station	ETI/PSI	0010	E
239	Typical layout of 132 /27kv Traction sub-station (Type-I)	TI/DRG/PSI/TSSLO/RDSO/	00001/01	0
240	Typical layout of 132 /27kv Traction sub-station (Type-II)	TI/DRG/PSI/TSSLO/RDSO/	00002/01/0	-
241	Typical layout of 132 /27kv Traction sub-station (Type-III)	TI/DRG/PSI/TSSLO/RDSO/	00003/02	0
242	Typical layout of 132/27kv Traction Sub-station (Type IV) (with outgoing feeders and metering Facilities)	TI/DRG/PSI/TSSLO/RDSO/	00004/02	0
243	Typical layout of 132/27kv Traction Sub-station (Type V)	TI/DRG/PSI/TSSLO/RDSO/	00005/02	0
244	Typical layout of 132/27kV traction sub-station (Type VI)	TI/DRG/PSI/TSSLO/RDSO/	00006/02	0
245	Typical layout of 132/27kV traction sub-station (Type VII)	TI/DRG/PSI/TSSLO/RDSO/	00007/02	0
246	Typical layout of 132/27kV traction sub-station (Type-VIII)	TI/DRG/PSI/TSSLO/RDSO/	000008/02	-
247	Typical layout of 132/27kV traction sub station with single transformer (Type -IX)	TI/DRG/PSI/TSSLO/RDSO/	00009/02	0
248	Typical layout of 132/27kv Traction Sub-station with 132kv Switching Station (Type x)	TI/DRG/PSI/TSSLO/RDSO/	00010/02	0
249	Typical layout of Control Room at traction sub-station.	TI/DRG/PSI/CPROO M/RDSO/	00001/01	0
250	Standard plan of control room at traction sub-station (General arrangement and RCC details)	RE/Civil/	S-144/06	0
251	Typical return current connection to buried rail at 132/25kv Traction sub-station	ETI/PSI	0212-1	Nil
252	Typical general arrangement of earth screen wire termination at Traction substation	ETI/PSI	0225	C
253	Typical termination arrangement for strung bus "Spider" (AAC) conductor at TSS.	ETI/PSI	0226	B
254	General arrangement & terminal connection for 25kV PT Type-II at TSS	ETI/PSI	0227	A
255	General arrangement and terminal connection for 25kV Potential Transformer at TSS (220kV)	ETI/PSI	0227-1	Nil
256	Typical layout of 220/27kV traction sub station (Type -I)	ETI/PSI	0240-1	Nil
257	Typical return current connection to buried rail at 220/25kV TSS.	ETI/PSI	0242	A
258	Typical termination arrangement for strung bus (ZEBRA ACSR) conductor at TSS (220kV)	ETI/PSI	0243	A
259	Typical general arrangement of earth screen wire termination at 220/25kV traction sub-station.	ETI/PSI	0244	Nil

260	Mounting arrangement of 100KVA 25kv/240V LT supply transformer at TSS	ETI/PSI	0312	B
261	25kv D.O. Fuse switch assembly	ETI/PSI	032	D
262	Typical fencing layout at traction Sub-station (Details of fencing panel, door, anticlimbing device etc.)	ETI/PSI	121	F
263	Typical arrangement of an earth electrode	ETI/PSI	222-1	Nil
264	Typical earthing, cable trench & foundation layout of 132/25kv TSS	ETI/PSI	224	E
265	Typical earthing arrangement for equipment/structure at TSS	ETI/PSI	228	A

266	Typical earthing cable trench and foundation layout of 132/25kV traction sub-station with Shunt Capacitor bay	ETI/PSI	229	Nil
267	Typical details of cable run at a two transformer TSS	ETI/PSI	323	E
268	Part Plan for Details of position of feeder Bus coupling interrupter at TSS	ETI/PSI/SK	272	Nil
269	Terminal connector for 220kV equipments	ETI/PSI/SK	324	Nil
270	Typical schematic diagram of protection for double Transformer traction sub station	ETI/PSI	024-1	Nil
271	Typical layout for 25kv Shunt capacitor with series reactor to be installed at 132/25kv TSS	ETI/PSI	0223	E
272	High speed auto reclosing scheme for feeder circuit breaker at 25kV A.C TSS	ETI/PSI	0231-1	A
273	Typical details of cable run at a two transformer TSS with Shunt Capacitor	ETI/PSI	325	Nil
274	Typical details of cable run at two transformers Traction Sub-station with Shunt capacitor (220kV)	ETI/PSI	326	Nil
275	General Scheme of supply for 25kV, 50 Hz single phase traction system	ETI/PSI	702-1	D
276	Standard Post Insulator for clean area (Creepage path 850mm min)	ETI/OHE/P	6090-1	C
277	Typical number plate for circuit breaker	ETI/PSI/P	7523	Nil
278	Typical number plate for Auxiliary Transformer	ETI/PSI/P	7525	Nil
279	Typical number plate for Power transformer at TSS	ETI/PSI/P	7526	Nil
280	Typical number plate for PT at TSS	ETI/PSI/P	7527	A
281	Typical number plate for CT at TSS	ETI/PSI/P	7528	A
282	Typical number plate for Isolators at TSS	ETI/PSI/P	7529	A
283	Bimetallic terminal connector to suit 'ZEBRA' ACSR conductor and 30 dia Cu stud of CT/CB/traction power transformer.	ETI/PSI/P	11010	C
284	220kV system bimetallic terminal connector to suit 'ZEBRA' (28.58 Dia) ACSR conductor & Al./Cu. pad of Isolator /CT/CB.	ETI/PSI/P	11030	C
285	220kV system tee connector to suit 'ZEBRA'	ETI/PSI/P	11040	C

	(28.58 dia) ACSR conductor on both ways.			
286	220kV system rigid connector on SI to suit ZEBRA (28.58 dia) ACSR conductor	ETI/PSI/P	11050	C
287	Details of expansion type terminal connector to suit 50 dia Al. tubular busbar to terminal pad of 25kv CT/ Isolator/ CB and Interrupter	ETI/PSI/P	11060 Sh.2 of 2	E
288	Detail of rigid type bimetallic terminal connector suitable for 50 dia Al. tubular busbar to 30 dia Cu. Stud of 25kV CT.	ETI/PSI/P	11070	B
289	Rigid bimetallic terminal connector suitable for 50 dia Al. tubular busbar to terminal pad of 25kv Isolator/ CT	ETI/PSI/P	11090	C
290	Rigid through connector to suit 50 dia Al. Tubular bus bar and 'SPIDER' AAC conductor for 25kv PT Type-II	ETI/PSI/P	11110	C
291	Details of Rigid terminal connector suitable for 20 dia Al. Conductor to terminal pad of 25kv PT Type I & II	ETI/PSI/P	11120	C

1	2	3	4	5
292	25kv system tee connector to suit 50 O/D Al. Tube and 'SPIDER' 'AAC' conductor	ETI/PSI/P	11140	B
293	25 K.V system Tee connector to suit 50. O/D AL. tubular busbar to 50. O/D AL. tubular busbar	ETI/PSI/P	11150	B
294	25Kv System Rigid bus splice connector to suit 50 O/D Al. tube on both ways	ETI/PSI/P	11180	B
295	25 kV System Sliding clamp for 50mm O/D Aluminium Bus bar	ETI/PSI/P	11190	C
296	25Kv System Rigid connector on S.I to suit 50 mm O/D Al. Bus bar	ETI/PSI/P	11200	C
297	25kv system expansion bus coupler on SI to suit 50 O/D Al. tube.	ETI/PSI/P	11210	D
298	Typical fencing , door and anticlimbing device details of traction sub-station	CORE/ALD/PSI	01	D
299	Structural layout of 132/25 KV traction sub-stations	ETI/C	0200, SH.No.-1	H
300	Structural layouts of 132/25kv traction sub-stations	ETI/C	0200, SH.No.-2	D
301	Details of Beam B/1 for 132/25 KV TSS	ETI/C	0201	D
302	Details of Tower T 1 for 132/25 KV TSS	ETI/C	0202	H
303	Details of Tower T 2 for 132/25 KV TSS	ETI/C	0203	G
304	Details of beam B/2 and column C/1 for 132/25kV traction sub-station.	ETI/C	0208	E
305	Typical cable trench and foundation lay out of 132/25kv TSS	ETI/C	0210	F
306	Details of baffle wall at TSS(WP-112.5kg/sq.m) and WP (75kg/sq.m)	ETI/C	0213	D
307	Details of RCC baffle Wall at TSS(WP-150kg/sq.m)	ETI/C	0214	B
308	Transformer oil drainage arrangement at sub-stations	ETI/C	0216	B
309	Line Diagram of Structural layouts of 220/25kV Traction sub-station	ETI/C	0222	Nil
310	Structural layout of 220/27kV traction sub-station (Type-I)	ETI/C	0222-1	Nil
311	Control Room for Traction substation	ETI/C	0225 Sheet-1	Nil
312	Control Room for Traction Sub-station(RCC details)	ETI/C	0225 Sheet-2	Nil
313	Details of structure for 132kv double pole Isolator	ETI/C	0310	G
314	Details of structure for 132kv support insulators	ETI/C	0320	E
315	Details of structure for 132kv Current transformer	ETI/C	0330	F
316	Details of structure for 120kv Lightning Arrester	ETI/C	0340	F

317	Details of structure for 25kv Current transformer	ETI/C	0360	F
318	Details of structure for 42kv ,10KA LA & 25kv support insulator	ETI/C	0370 Sheet-1	J
319	Black Weight of Structure for 42kv,10KA LA & 25kv support insulator.	ETI/C	0370 Sheet-2	Nil
320	Details of structure for 25kv Single Pole isolator	ETI/C	0380	F
321	Details of structure for 25kv Potential transformer	ETI/C	0390	E
322	S-100 Fabricated Mast for mounting LT supply transformer and DO fuse switch at switching station	ETI/C	0043	B
323	Details of structure and foundation for 25kV DP Isolator at TSS	ETI/SK/C	0180	C
324	Gillsans Letters and Figures	RE/33	527	A
325	Typical schematic diagram of protection for single transformer traction sub-station	ETI/PSI	0228-1	Nil
326	25 kV drop out fuse switch details	ETI/PSI	038	C
327	Operating pole for 25kV drop out fuse switch	ETI/PSI	039	B
328	Typical schematic diagram for TSS, FP, SSP and SP with 21.6 MVA or 30 MVA transformer for three lines.	TI/DRG/PSI/3L-TSS/RDSO	00001/07	1
329	Scheme of locking /Interlocking arrangement of 132 kV Isolator at Traction Sub-Station.	ETI/PSI	5212	B
330	Typical return current connection to buried rail at 132 kV/25 kV Traction Sub-Station.	ETI/PSI	0212-1	Nil
331	Typical arrangement of an earth electrode.	ETI/PSI	222-1	Nil
332	Flexible connector for 25 kV circuit breaker 25kV Interrupter & 25 kV side of 13.5/20 MVA traction transformer.	ETI/PSI/P	6570	F
333	Scheme of Interlocking arrangement for 25kV circuit breakers at Traction Sub-Station	ETI/PSI	5214	B
334	Expansion type terminal connector for 25 kV, 60mm dia terminal for traction power transformer.	ETI/PSI/P	11220	D

(D) STANDARD TYPICAL AND PARTICULAR DRAWINGS FOR SCADA WORKS

The annexure contains reference to standard, typical and particular drawings & specification referred to in various paragraph of Tender Specification/Explanatory Notes and particular specification.

1	2	3	4	5
335	General scheme of supply for 25 kV 50 Hz Single Phase AC	ETI/PSI	702-1	D
336	Typical layout of control room at TSS	TI/DRG/PSI/CPROGRAM/RDSO	00001/01	0
337	Typical layout of remote control cubicle at switching stations.	ETI/PSI	0010	E
338	Schematic inter connection diagram for remote control of power gear & supervision equipments at TSS.	ETI/PSI	644	C
339	Schematic inter connection diagram for remote control of power gear and supervision equipments at controlled station (SP & SSP)	ETI/PSI	645	C
340	High speed Auto reclosing Scheme for feeder Circuit Breaker at 25 kV A.C. Traction Sub-station.	ETI/PSI	0231-I	A
341	Control desk arrangement for 2 work stations of SCADA system.	ETI/PSI/SK	337	Nil
342	Setting up earthing station at switching posts (SSP & SP) with conventional earthing as per Special Maintenance No. TI/SMI/0032 Rev-1	-	-	-

(E) (a) LIST OF STANDARD DRAWING FOR HIGH RISE OHE

S.N.	Brief Description	Drawing		Mod No.
		Series	Number	
343	Design handout for Overhead equipment for running double stack containers under electrified routes (High Rise OHE) with speed potential of 140 Kmph based on revised wind zone.	TI/DESIGNS/OHE/2013/00001 (July'13)	-	-
344	Terms of reference for consultancy contract for high speed OHE and high rise OHE.	RDSO Letter No. TI/Traction policy/2013 dated 25.04.2013	-	-
345	OHE span in view of changes in wind zones in country.	RDSO Letter No. TI/OHE/GA/2013 dated 25/30.04.2013	-	-
346	SPECIAL BFB PORTAL FOR 5 TRACKS (GENERAL ARRANGEMENT)	TI/DRG/CIV/BFB-POTAL	00001/13/0	Sh No. 1
347	SPECIAL BFB PORTAL DETAILS OF UPRIGHT	TI/DRG/CIV/BFB-PORTAL	00001/13/0	Sh No. 2
348	G-TYPE PORTAL DETAILS SPECIAL UPRIGHT AND END PIECE	TI/DRG/CIV/G-PORTAL	00001/13/0	-
349	HIGH RISE OHE Employment Schedule Mast (11.4 m) (Wind Pressure 178 kgf/m ²) (Basic Wind Speed 50 m/s) (Without Return Conductor and Without Earth Wire)	TI/DRG/CIV/ES/	00001/13/0	SHEET-1
350	HIGH RISE OHE Employment Schedule Mast (11.4 m) (Wind Pressure 155 kgf/m ²) (Basic Wind Speed 47 m/s) (Without Return Conductor and Without Earth Wire)	TI/DRG/CIV/ES/	00001/13/0	SHEET-2
351	HIGH RISE OHE Employment Schedule Mast (11.4 m) (Wind Pressure 136 kgf/m ²) (Basic Wind Speed 44 m/s) (Without Return Conductor and Without Earth Wire)	TI/DRG/CIV/ES/	00001/13/0	SHEET-3
352	HIGH RISE OHE Employment Schedule Mast (11.4 m) (Wind Pressure 105 kgf/m ²) (Basic Wind Speed 39 m/s) (Without Return Conductor and Without Earth Wire)	TI/DRG/CIV/ES/	00001/13/0	SHEET-4
353	HIGH RISE OHE Employment Schedule Mast (11.4 m) (Wind Pressure 73 kgf/m ²) (Basic Wind Speed 33 m/s) (Without Return Conductor and Without Earth Wire)	TI/DRG/CIV/ES/	00001/13/0	SHEET-5
354	TWO TRACK CANTILEVER STRUCTURE (TTC) GENERAL ARRANGEMENT	TI/DRG/CIV/TTC/	00001/13/0	SHEET-1
355	TWO TRACK CANTILEVER STRUCTURE (TTC) DETAILS OF UPRIGHT	TI/DRG/CIV/TTC/	00001/13/0	SHEET-2
356	11.4 M Long Standard Traction Mast "B" Series (B-150, B-175, B-200, B-225 & B-	TI/DRG/CIV/B-Mast/	00001/13/0	-

	250 type Fabricated with Batten Plates)			
350	Volume Charts & Equivalent Charts of New Pattern of Side Beams at Side 500 mm & 400 mm	TI/DRG/CIV/FND/ TI/DRG/CIV/FND/	00001/13/0 00001/13/0	Sheet- 4 Sheet- 1
358	Volume Charts & Equivalent Charts of Foundations (No Dry) Black Cotton Soil	TI/DRG/CIV/FND/ TI/DRG/CIV/FND/	00001/13/0 00001/13/0	Sheet- 5 Sheet- 2
359	Volume Charts & Equivalent Charts of Foundations (No Dry) Black Cotton Soil			
362	Employment Schedule OHE Mast (11.4 metre) Wind Pressure 136 kgf/m ²	TI/DRG/CIV/ESD/	00001/13/0	Sheet- 3
363	Employment Schedule OHE Mast (11.4 metre) Wind Pressure 136 kgf/m ²	TI/DRG/CIV/ES/	00001/13/0	Sheet- 2
364	Employment Schedule OHE Mast (11.4 metre) Wind Pressure 105 kgf/m ²	TI/DRG/CIV/ES/	00001/13/0	Sheet- 3
365	Schedule Anchor Blocks for BG Tracks	TI/DRG/OHE/GUY HR/	00001/13/0	Sheet- 1
366	Double Guy Rod Arrangement with Anchor Block for BG Tracks	TI/DRG/OHE/GUY HR/	00001/13/0	Sheet- 2
367	Schedule Anchor Blocks for BG Track Black Cotton Soil	TI/DRG/OHE/GUY HR/	00001/13/0	Sheet- 3
368	Guy Rod Ø 25 mm	TI/DRG/OHE/GUY HR/	00001/13/0	Sheet- 4
368	Dropper Schedule Encumbrance A 1.4m/1.4m (For 25 kV AC Regulated OHE) (65 and 107 SQ. MM)	TI/DRG/OHE/DROP /	00001/10/1	Rev-1
368	Dropper Schedule Encumbrance B 1.4m/0.9m (For 25 kV AC Regulated OHE) (65 and 107 SQ. MM)	TI/DRG/OHE/DROP /	00002/10/1	Rev-1
368	Dropper Schedule Encumbrance C 1.4m/0.75m (For 25 kV AC Regulated OHE) (65 and 107 SQ. MM)	TI/DRG/OHE/DROP /	00003/10/1	Rev-1
368	Arrangement of mounting of 25kV/240V, 50kVA LT Supply Transformer for High Rise OHE (On separate mast)	ETI/OHE/HR/AT/G/	05522 Sheet-2	-
368	Mounting Arrangement of Auxiliary Transformer on High Rise OHE mast	ETI/OHE/HR/AT/G/	05522 Sheet-1	-
368	Anchor Arrangement with Dwarf Mast for conventional and High Rise OHE	ETI/OHE/HR/ G/	01402	-
368	Standard Arrangement of Drop Arm for supporting Cantilevers on the Booms of Portals and TTC (For Normal as well as High Rise OHE)	ETI/C/HR/	0076	-
368	Drilling schedule for S-6H mast (length	ETI/C/HR/	0181	-

H	13.0 m) (for High Rise OHE)			
368 J	Drilling schedule for S-7H mast (length 13.0 m) (for High Rise OHE)	ETI/C/HR/	0182	-
368 K	Drilling schedule for S-8H mast (length 13.0 m) (for High Rise OHE)	ETI/C/HR/	0183	-
368 L	'P' Type Portal General Arrangement and details of upright & End Pieces (High Rise OHE)	TI/DRG/CIV/P-Portal/	00001/13/0	-

(E) (b) LIST OF STANDARD DRAWING AS PER NEW WIND ZONES

369	Normal OHE Employment Schedule Mast (9.5 m) (Wind Pressure 178 kgf/m ²) (Basic Wind Speed 50 m/s) (Without Return Conductor and Without Earth Wire)	ETI/C/	0758 Sheet-1	A
370	Normal OHE Employment Schedule Mast (9.5 m) (Wind Pressure 155 kgf/m ²) (Basic Wind Speed 47 m/s) (Without Return Conductor and Without Earth Wire)	ETI/C/	0758 Sheet-2	A
371	Normal OHE Employment Schedule Mast (9.5 m) (Wind Pressure 136 kgf/m ²) (Basic Wind Speed 44 m/s) (Without Return Conductor and Without Earth Wire)	ETI/C/	0758 Sheet-3	A
372	Normal OHE Employment Schedule Mast (9.5 m) (Wind Pressure 105 kgf/m ²) (Basic Wind Speed 39 m/s) (Without Return Conductor and Without Earth Wire)	ETI/C/	0758 Sheet-4	B
373	Normal OHE Employment Schedule Mast (9.5 m) (Wind Pressure 73 kgf/m ²) (Basic Wind Speed 33 m/s) (Without Return Conductor and Without Earth Wire)	ETI/C/	0758 Sheet-5	A
374	Normal OHE Employment Schedule Mast (9.5 m) (Wind Pressure 178 kgf/m ²) (Basic Wind Speed 50 m/s) (Without Return Conductor and Without Earth Wire)(1100+1100) kgf tension CAT-65 mm ² , CONT-107 mm ² .	ETI/C/	0759 Sheet-1	-
375	Normal OHE Employment Schedule Mast (9.5 m) (Wind Pressure 155 kgf/m ²) (Basic Wind Speed 47 m/s) (Without Return Conductor and Without Earth Wire) (1100+1100) kgf tension CAT-65 mm ² , CONT-107 mm ² .	ETI/C/	0759 Sheet-2	-
376	Normal OHE Employment Schedule Mast (9.5 m) (Wind Pressure 136 kgf/m ²) (Basic Wind Speed 44 m/s) (Without Return Conductor and Without Earth Wire) (1100+1100) kgf tension CAT-65 mm ² , CONT-107 mm ² .	ETI/C/	0759 Sheet-3	-
377	Normal OHE Employment Schedule Mast (9.5 m) (Wind Pressure 105 kgf/m ²) (Basic Wind Speed 39 m/s) (Without Return Conductor and Without Earth Wire) (1100+1100) kgf tension CAT-65 mm ² , CONT-107 mm ² .	ETI/C/	0759 Sheet-4	-
378	Normal OHE Employment Schedule Mast (9.5 m) (Basic Wind Speed 33 m/s) (Wind Pressure 73 kgf/m ²) (Without Return Conductor and Without Earth Wire) (1100+1100) kgf tension CAT-65 mm ² , CONT-107 mm ² .	ETI/C/	0759 Sheet-5	-

379	Normal OHE Employment Schedule Mast (9.5 m) Basic Wind Speed 50 m/s Wind Pressure 178 kgf/m ² (Without Return Conductor and Without Earth Wire) 1000 kgf tension in CAT. 65mm ² 1000 kgf tension in CONT. 107mm ²	TI/DRG/CIV/ES/RDSO/00001/18 /0 Sheet-1/5	-
380	Normal OHE Employment Schedule Mast (9.5 m) (Basic Wind Speed 47 m/s) (Wind Pressure 155 kgf/m ²) (Without Return Conductor and Without Earth Wire) 1000 kgf tension in CAT. 65mm ² 1000 kgf tension in CONT. 107mm ²	TI/DRG/CIV/ES/RDSO/00001/18 /0 Sheet-2/5	-
381	Normal OHE Employment Schedule Mast (9.5 m) (Basic Wind Speed 44 m/s) (Wind Pressure 136 kgf/m ²) (Without Return Conductor and Without Earth Wire) 1000 kgf tension in CAT. 65mm ² 1000 kgf tension in CONT. 107mm ²	TI/DRG/CIV/ES/RDSO/00001/18 /0 Sheet-3/5	-
382	Normal OHE Employment Schedule Mast (9.5 m) (Basic Wind Speed 39 m/s) (Wind Pressure 105 kgf/m ²) (Without Return Conductor and Without Earth Wire) 1000 kgf tension CAT-65 mm ² , 1000 kgf tension in CONT-107 mm ² .	TI/DRG/CIV/ES/RDSO/00001/18 /0 Sheet-4/5	-
383	Normal OHE Employment Schedule Mast (9.5 m) (Basic Wind Speed 33 m/s) (Wind Pressure 73 kgf/m ²) (Without Return Conductor and Without Earth Wire) 1000 kgf tension in CAT. 65mm ² 1000 kgf tension in CONT. 107mm ²	TI/DRG/CIV/ES/RDSO/00001/18 /0 Sheet-5/5	-
384	Normal OHE Employment Schedule Mast (9.5 m) Basic Wind Speed 50 m/s Wind Pressure 178 kgf/m ² (Without Return Conductor and Without Earth Wire) 1000 kgf tension in CAT. 65mm ² 1000 kgf tension in CONT. 107mm ² (with implantation more than 2.8 m & upto 3.8 m)	TI/DRG/CIV/ES/RDSO/00002/18 /0 Sheet-5/5	-
385	Normal OHE Employment Schedule Mast (9.5 m) (Basic Wind Speed 47 m/s) (Wind Pressure 155 kgf/m ²) (Without Return Conductor and Without Earth Wire) 1000 kgf tension in CAT. 65mm ² 1000 kgf tension in CONT. 107mm ² (with implantation more than 2.8 m & upto 3.8 m)	TI/DRG/CIV/ES/RDSO/00002/18 /0 Sheet-4/5	-
386	Normal OHE Employment Schedule Mast (9.5 m) (Basic Wind Speed 44 m/s) (Wind Pressure 136 kgf/m ²) (Without Return Conductor and Without Earth Wire) 1000 kgf tension in CAT. 65mm ² 1000 kgf tension in CONT. 107mm ² (with implantation more than 2.8 m & upto 3.8 m)	TI/DRG/CIV/ES/RDSO/00002/18 /0 Sheet-3/5	-

387	Normal OHE Employment Schedule Mast (9.5 m) (Basic Wind Speed 39 m/s) (Wind Pressure 105 kgf/m ²) (Without Return Conductor and Without Earth Wire) 1000 kgf tension CAT-65 mm ² , 1000 kgf tension in CONT-107 mm ² . (with implantation more than 2.8 m & upto 3.8 m)	TI/DRG/CIV/ES/RDSO/00002/18 /0 Sheet-2/5	-
388	Normal OHE Employment Schedule Mast (9.5 m) (Basic Wind Speed 33 m/s) (Wind Pressure 73 kgf/m ²) (Without Return Conductor and Without Earth Wire) 1000 kgf tension in CAT. 65mm ² 1000 kgf tension in CONT. 107mm ² (with implantation more than 2.8 m & upto 3.8 m)	TI/DRG/CIV/ES/RDSO/00002/18 /0 Sheet-1/5	-
389	Normal OHE Employment Schedule Mast (9.5 m) Basic Wind Speed 50 m/s Wind Pressure 178 kgf/m ² (Without Return Conductor and Without Earth Wire) 1000 kgf tension in CAT. 65mm ² 1000 kgf tension in CONT. 107mm ² (with implantation more than 3.8 m & upto 4.85 m)	TI/DRG/CIV/ES/RDSO/00003/18 /0 Sheet-5/5	
390	Normal OHE Employment Schedule Mast (9.5 m) (Basic Wind Speed 47 m/s) (Wind Pressure 155 kgf/m ²) (Without Return Conductor and Without Earth Wire) 1000 kgf tension in CAT. 65mm ² 1000 kgf tension in CONT. 107mm ² (with implantation more than 3.8 m & upto 4.85 m)	TI/DRG/CIV/ES/RDSO/00003/18 /0 Sheet-4/5	
391	Normal OHE Employment Schedule Mast (9.5 m) (Basic Wind Speed 44 m/s) (Wind Pressure 136 kgf/m ²) (Without Return Conductor and Without Earth Wire) 1000 kgf tension in CAT. 65mm ² 1000 kgf tension in CONT. 107mm ² (with implantation more than 3.8 m & upto 4.85 m)	TI/DRG/CIV/ES/RDSO/00003/18 /0 Sheet-3/5	
392	Normal OHE Employment Schedule Mast (9.5 m) (Basic Wind Speed 39 m/s) (Wind Pressure 105 kgf/m ²) (Without Return Conductor and Without Earth Wire) 1000 kgf tension CAT-65 mm ² , 1000 kgf tension in CONT-107 mm ² . (with implantation more than 3.8 m & upto 4.85 m)	TI/DRG/CIV/ES/RDSO/00003/18 /0 Sheet-2/5	
393	Normal OHE Employment Schedule Mast (9.5 m) (Basic Wind Speed 33 m/s) (Wind Pressure 73 kgf/m ²) (Without Return Conductor and Without Earth Wire) 1000 kgf tension in CAT. 65mm ² 1000 kgf tension in CONT. 107mm ² (with implantation more than 3.8 m & upto 4.85 m)	TI/DRG/CIV/ES/RDSO/00003/18 /0 Sheet-1/5	

Note: New wind pressures/speeds as per RDSO letter No TI/CIV/MS/14 dated 14.07.2014 & IS: 875 Part-III, 1987, Reaffirmed during 1997 are:

Sl No.	Design Wind Pressure (Kg/m ²)	Basic Wind Speed	
		meter / second	Km / hour
i	178	50	180.0
ii	155	47	169.2
iii	136	44	158.4
Iv	105	39	140.4
v	73	33	118.8

F) LIST OF STANDARD RDSO's SPECIFICATIONS FOR OHE, TSS AND SCADA

SL.NO.	TITLE OF SPECIFICATION	SPECIFICATION NO
1	2	3
1.	Annealed stranded copper conductor for jumper wire.	ETI/OHE/3(2/94) with A&C slip No.1of (4/95)
2.	Copper busbar	RE/30/OHE/5 (11/60)
3.	Structural Steel tubes.	ETI/OHE/11 (5/89)
4.	Hot dip zinc galvanisation of steel masts (Rolled and Fabricated) tube and fittings used on 25 KV AC OHE.	ETI/OHE/13(4/84) with A&C slip No. 1of (5/86),2 of (4/90) & 3 of (4/90)
5.	Stainless steel wire ropes	TI/SPC/OHE/WR/1060 with A&C slip No 1 of (11/06) & 2 of (05/07)
6.	Solid core porcelain insulators for 25 KV 50 Hz single phase over head lines	TI/SPC/OHE/INS/0070 (04/2007)
7.	25 KV single and double pole isolators.	ETI/OHE/16(1/94) with A&C slip No.1 of (06/2000) & 2 of (3/2004)
8.	Steel fasteners & Stainless Steel fasteners	TI/SPC/OHE/Fasteners/0120
9.	Aluminum alloy section and tubes	ETI/OHE/21(9/74)
10.	Standard for drawings for Traction Overhead equipment	ETI/OHE/25(3/66)
11.	Light Weight Section Insulators assembly. OR Section Insulator assembly without sectioning insulator.	TI/SPC/OHE/LWTSI/0060 (8/2006) OR ETI/OHE/27(8/84) with A&C slip No.1 of (10/92)
12.	Enameled steel plates	ETI/OHE/33(8/85)
	Retro-reflective Structure Number Plates & Caution/Warning Boards	ETI/OHE/33A(12/97) Rev-8 (11/12)
13.	Galvanised steel wire	ETI/OHE/36(12/73) with A&C Slip No.1 of (5/98)
14.	3 pulley Type Regulating Equipment	TI/SPC/OHE/ATD/0060 (8/2006) with A&C Slip No1 of (10/2006), 2 of (5/2007) & 3 of (01/13)
15.	Fitting for 25 kV 50 Hz AC Overhead equipment.	TI/SPC/OHE/Fitting/0130(10/13) {Old ETI/OHE/49 (9/95) with A&C}
16.	Cadmium copper conductor for overhead Railway Traction	ETI/OHE/50 (6/97) with A&C slip No.1 to 3 (04/09).
17.	Principles of OHE layout plans and sectioning diagrams for 25 KV AC traction.	ETI/OHE/53(6/88) with A&C slip no.1 of (12/88), 2 of (8/89), 3 of (6/90), 4 of (8/92) & 5 of (11/2006)
18.	19/2.79mm All Aluminum alloy stranded catenary wire.	ETI/OHE/54(2/85) with A&C slip No. 1 of (11/89) &2 of (10/92)
19.	Bimetallic (Al-cu) strip	ETI/OHE/55(4/90)
20.	Short Neutral Section Assembly (Phase Break)	TI/SPC/OHE/SNS/0000 of (2/2000) with A&C slip No. 1
21.	Code for bonding and earthing for 25 KV, AC single phase, 50 Hz traction system.	ETI/OHE/71(11/90) with A&C slip no. 1 of (8/91) & 2 of (3/93)
22.	Insulated Cadmium copper catenary	TI/SPC/OHE/INSCAT/0000 of (4/2000)

	19/2.10 mm dia for provision under overline structures in the 25 KV AC Electric Traction.	
23.	Battery charger for 110 V battery, 40 AH.	ETI/PSI/1(6/81)
24.	Lightning arrestor- 7.5 KV	ETI/PSI/3(8/75) with A&C slip No.1 of (2/91)
1	2	3
25.	220 KV or 132 KV or 110 KV or 66 KV or 25 kV Potential transformers	TI/SPC/PSI/PTs/0990 with A&C slip No.1 to 5 (01/09)
26.	25 KV Dropout fuse switch & operating pole for use with 10 KVA and 100 kVA 25 kV/ 230 V L.T. Supply transformer.	ETI/PSI/14(1/86) with A&C slip no 1 of (4/87)
27.	25 kV/240 V, 5 kVA, 10 kVA, 25 kVA & 50 kVA, 50 Hz single phase oil filled Auxiliary Transformers.	ETI/PSI/15(8/03)
28.	Low maintenance Lead Acid 40AH & 200 AH cells.	RDSO/PE/SPEC/TL/0040-2003(Rev-0) with A&C slip no 1 of (9/2005)
29.	150 KVA, 25 KV, single phase, 50 Hz. Dry type Cast resin Booster Transformers	ETI/PSI/97(6/87) with A&C slip No.1 of (9/88)
30.	100 KVA & 150 KVA, 25 KV, single phase, 50 Hz, oil filled Booster Transformers	ETI/PSI/98(8/92) with A&C slip No.1 of (9/92), 2 of (1/94) & 3 of (6/94)
31(a)	25 KV AC Single Pole, Double Pole mounted, Out Door Vacuum Circuit Breaker (VCB) and Vacuum Interrupter (BM).	TI/SPC/PSI/LVCBIN/0120 (December'2013) Revision-0)
31(b)	220 kV/132 kV/110 kV/100 kV/66 kV Double Pole, Triple Pole, Out Door SF6 Circuit Breakers.	TI/SPC/PSI/HVCB/0120 (June'2014) with A&C slip No.1(March-16)
32	Hard drawn grooved copper Contact wire	ETI/OHE/76(6/97) with A&C slip No.1 of (4/01), 3 of (03/05) , 4 of (12/06), 5 of (7/09), 6 of (5/12) & 7 of (12/13)
33	Metal Oxide Gapless type Lightning Arrestor for use on 25kV side of Rly. traction sub stations & switching stations	TI/SPC/PSI/MOGLA/0100(07/10)
34	Technical Specification for Silicon Composite Insulators for 25 kV A.C. 50 Hz single phase over head traction lines.	TI/SPC/OHE/INSCOM/1070 (01/07) OR TI/SPC/OHE/INSCOM/1071 (04/13)
35	Specification for solid core porcelain cylindrical post insulator for systems with nominal voltage of 66kV, 110kV, 132kV & 220kV.	TI/SPC/OHE/POST/0100(01/2010)
36	25kv/240V L.T. supply Transformer, 100 KVA	ETI/PSI/15 A (7/82) with A&C Slip No.1(9/89)
37	Battery charger for 110V Battery, 200 AH	ETI/PSI/24(6/81)
38	Low tension Distribution panels for Rly. A.C traction sub-stations	ETI/PSI/29 (12/79)With A&C Slip No.1 (2/93)
39	Standard for drawings for power supply Installations.	ETI/PSI/31 (5/76)
40	Low tension distribution panels.	ETI/PSI/63(7/82)

45	Technical specification for current transformers. I. 220kV. 200-100/5A, II. 132kV. 400-200/5A, III. 110kV. 400-200/5A, IV. 66kV. 800-400/5A for Railway A.C traction substations.	ETI/PSI/117 (7/88) with A&C Slip No.1 (11/88), 2 (3/89), 3 (12/89), 4 (4/90), 5 (6/90), 6 (9/92), 7 (8/05), 8 (08/2007) & 9 (July 2008).
46	Specification for 21.6 MVA single phase, 50 Hz. i) 220/27kV ii) 132/27kV iii) 110/27kV, iv), 66/27kV traction power transformer for	ETI/PSI/118 (10/93) with A&C Slip No.1 to 9 & A&C slip No.10 (08/12) or latest
41	Technical specification for traction substation and	TI/SPC/PSI/PROTCT/6071
47	Technical specification for TSS including supply installation for 25kV A.C type 50 Hz, single phase traction system for	ETI/PSI/120 (2/91) with A&C Slip No.1 (10/93)
48	Technical specification for shunt capacitor bank and transmission line for 25kV ac TSS on Indian Railways.	ETI/PSI/122 (3/89) with A&C Slip
42	Technical specification for shunt capacitor & series reactor equipment for traction sub-station	TI/SPC/PSI/FC&SR/0100(01/10)
43	Technical specification for 25kV ac, 50 Hz, single phase, oil filled, current transformer with CT ratio of I-1000-500/5A (for general purpose), II-1500-750/5A (for heavy haul duties) for Railway ac traction substation.	ETI/PSI/90 (6/95) with A&C Slip No.1, 2,3,4,5,6,7 (08/2007) & 8 (April 2009).
44	Technical specification for two zone static relay for distance protection for 25kV ac single phase 50 Hz traction overhead equipment.	ETI/PSI/101 (8/87) with A&C Slip No.1 (09/87)

	145 kV, (iii) 123 kV, (iv) 72.5 kV double pole & triple pole Isolator for Railway traction sub stations.	No.1(4/90)
49	Specification for Metal Oxide gapless type lightning arrestors (combined) for use on 220/132/110/66 kV side of Railway A.C. traction sub station.	ETI/PSI/137 (8/89) with A&C Slip No.1,2,3 (Embodying) A&C slip No. 4(8/94) 5(04/01), 6 (9/05) & 7(07/2007)
50	Technical specification for 220 kV or 132 kV or 110 kV or 66kV or 25 kV potential transformer.	TI/SPC/PSI/PTs/0990 with A&C Slip No.1,2,3,4,& 5 (April 09)
51	Delta I type High resistive fault selective Relay for 25 kV AC Single phase 50 Hz traction system.	TI/SPC/PSI/PROTCT/1982(12/2003) with A&C slip No.1(10/13)
52	Panto flashover protection relay for 25 kV A.C. single phase 50 Hz traction system.	TI/SPC/PSI/PROTCT/2983 (09/2001)
53	Technical Specification of SCADA system for 25kV, AC Single phase Traction supply on Indian Railway.	TI/SPC/RCC/SCADA/0130(04/2014)
54	Technical Specification for Galvanised Steel Stranded Wire for Traction Masts	TI/SPC/OHE/GSSW/0090 (10/2009)
55	Technical specification for galvanized steel stranded wire for traction bonds	TI/SPC/OHE/GALSTB/0040(09/04) Rev. 1 (08/05)
56	Setting up Earthing Station at switching posts (SSP & SP) with conventional Earthing.	Special Maintenance Instruction No. TI/SMI/0032 Rev-1
57	Design handout for Overhead equipment for running double stack containers under electrified routes (High Rise OHE) with speed potential of 140 Kmph based on revised wind zone.	TI/DESIGN/OHE/2013/00001 (July'13)
58	OHE span in view of changes in wind zones in country	TI/OHE/GA/2013 DATED 25/30.04.2013
59	Technical guidelines and Standard Instruction for Railway Electrification Works including OHE,TSS, Transmission Line, SCADA , Electrical General Works, signaling Works, Telecom works & Civil Engineering Works.	CORE/RE TENDER/EPC/2014/STANDARD INSTRUCTIONS AND GUIDELINES

(G) LIST OF IS SPECIFICATION :-

S No.	IS Code No.	Descriptions
1	IS:210-1993	Grey iron castings
2	IS:269-1989	Specification for 33 grade ordinary Portland cement (4 th Rev)
3	IS:282-1982	Dropper Wire
4	IS:306-1983	Tin bronze castings
5	IS:335-1993	New Insulating oil (4 th Rev) Reaffirmed 2000
6	IS:371-1999	Ceiling rose spec.(3 rd Rev)
7	IS: 383-1970	Specification for coarse & fine aggregates from natural sources for concrete
8	IS:398(Pt.I)-1996	All Aluminum conductor
9	IS:398 Pt.II-1996	Al. conductor for overhead transmission purposes
10	IS:398(Part-III) 1976.	Aluminum conductors galvanized steel reinforced
11	IS: 432 Pt.1-1982	Specification for mild steel & medium tensile steel bars and hard drawn steel wires for concrete reinforcement
12	IS: 456-2000	Plain & Reinforced concrete Code of practice (3 rd Rev)
13	IS: 516-1959	Method of tests for strength of concrete
14	IS:617-1994	Aluminum castings
15	IS:694:1990	Al. Jumper wire
16	IS:702-1988	Specification for industrial bitumen (2 nd Rev) reaffirmed 1999
17	IS:731-1971	Porcelain Insulator for overhead power lines with a nominal voltage greater than 1000V
18	IS:732-1989	Code of practice for electrical wiring installation (3 rd Rev)
19	IS:800-1984	Code of practice for general construction in steel (2 nd Rev)
20	IS:808-1989	Dimensions for hot rolled steel beam, column, channel & angle sections
21	IS:816-1969	Welding
22	IS:875 (Part-3) 1987 (Reaffirmed)	Code of practice for design loads (other than earthquakes) for building and structures – Part 3: Wind loads second revision.
23	IS:1293-2005	Plugs & socket outlets of rated voltage upto and including 250V and rated current up to 16 Amp(3 rd Rev)
24	IS:1387-1993	General requirements for the supply of metals and metal products
25	IS: 1489 Pt. I 1991	Specification for Portland-Pozzalana cement Pt .I Fly ash based (3 rd Rev)
26	IS:1554(Part-I) 1988	PVC insulated cables
27	IS:1608-1995	Mechanical testing of metal- tensile testing
28	IS:1731-1971	Dimensions for steel flats for structural & general engineering purpose
29	IS:1777-1978	Industrial Luminaries with metal reflectors (1 st Rev)
30	IS:1786-1985	Specification for high strength deformed steel bars and wires for concrete reinforcement
31	IS:1897-1983	Copper strip for formed fittings
32	IS:2004-1991	Carbon steel forgings for general engineering purpose
33	IS:2062-2011	Steel for general structural purpose
34	IS: 2074-1992	Ready mix Paint, air drying, Red oxide, Zinc chrome
35	IS:2121-1981	Aluminum and steel cored Aluminum conductors for (Part I & II) overhead power lines.
36	IS:2141-2000	Galvanised stay strand

37	IS:2312-1967	Propeller type AC ventilating fans (1 st Rev)
38	IS: 2386 Pt.III-1963	Method of tests for aggregates for concrete Pt. III Specific gravity, density voids, absorption & buckling
39	IS:2673-2002	Dimensions for Aluminum Tubular Busbar.
40	IS:2675-1983	Enclosed distribution fuse boards ad cut-outs for voltage not exceeding 1000V AC & 1200V DC (2 nd Rev)
41	IS:3043-1987	Code of practice for earthing (1 st Rev)
42	IS:3091-1999	Aluminum bronze castings
43	IS:3188-1980	Characteristics of string insulator units
44	IS:3837-1976	Accessories for Rigid steel conduit for electrical wiring
45	IS:3854-1997	Switches for domestic & similar purposes(2 nd Rev)
46	IS:4826-1979	Specification for hot dipped for galvaised coatings on round steel wires (1 st Rev)
47	IS:5082-1998	Material for Aluminum tubular busbar.
48	IS: 6403-1981	Code of practice for determination bearing capacity of shallow foundations (1 st Rev)
49	IS:7098 (Part I) 1988	LT XLPE cables
50	IS:7098 (Part II) 1985	HT XLPE cables
51	IS: 8130-1984	Conductor for Insulated electric cables & flexible cords (1 st Rev)
52	IS:9537 Pt-I-1980	Conduits for electrical installations
53	IS:9968(Pt.2)-2002	Annealed Copper Jumper Wire
54	IS:13947 Pt. III 1993	Specification for low voltage switchgear & control gear Pt.-3, disconnectors & fuse combination unit
55	IS:14329-1995	Malleable iron castings

Note: -

- **Notwithstanding anything given anywhere else all work execution shall be as per latest design and drawing of RDSO/CORE and latest guideline issue by Railway Board.**
- **The contractor should follow all the clearances as per latest CEA regulation.**
- **All materials used in the work shall be procured from RDSO/ CORE approved sources only and of the best quality and of the class most suited for the purpose specified.**
- **In this work modification is to be done in the feeding post of existing SSP by using suitable height of gentry arrangement and other required electrical equipment. By doing this arrangement, the supply of Existing SSP is to be connected to the supply of elevated track. Complete design and drawing of such type of arrangement will be prepared by contractor and same will be duly approved by NR and HRIDC authorities.**

XXX

ANNEXURE – II

PART – V

**ANNEXURE AND SCHEDULE OF QUANTITY(BoQ)
AGREEMENT FOR ZONE CONTRACT**

CONTRACT AGREEMENT No. _____ DATED _____. ARTICLES OF AGREEMENT made this _____ day of _____ between the President of India acting through the _____, _____ HRIDC hereinafter called the "HRIDC" of the one part and _____ hereinafter called the "Contractor" of the other part.

WHEREAS the Contractor has agreed with the HRIDC during the period of _____ months from _____ to _____ for the performance of:

(a) New Works, additions and alterations to existing structures, special repair works and supply of building materials subject to the contract value for such works not exceeding _____.

(b) All ordinary repair and maintenance works at any site between kilometer _____ and kilometre _____ as will be set forth in the work orders (which work orders shall be deemed and taken to be part of this contract) that will be issued during the said period at _____ % above/below the Standard Schedule of Rates (SSOR) of the HRIDC corrected up to the latest correction slips and Standard Specifications of the HRIDC corrected up to latest correction slips and the Special Conditions and Special Specifications, if any in conformity with the drawings (if any) that will be issued with the work order, aforesaid AND WHEREAS the performance of the said work is an act in which the public are interested.

NOW THIS INDENTURE PRESENTS WITNESSETH That in consideration of the payment to be made by the HRIDC, the Contractor will duly perform the works set forth in the said Work Order and shall execute the same with great promptness, care and accuracy, in a workman like manner to the satisfaction of the HRIDC and will complete the same on or before the respective dates specified therein in accordance with the said specifications and said drawings (if any) and said conditions of contract and will observe, fulfill and keep all the conditions therein mentioned, (which shall be deemed and taken to be part of this contract as if the same had been duly set forth herein), AND the HRIDC both here-by agree that if the Contractor shall duly perform the said work in the manner aforesaid and observe and keep the said terms and conditions, the HRIDC will pay or cause to be paid to the Contractor for the said works on the completion thereof the amount due in respect thereof at the rates specified above.

Contractor _____

Designation

Address _____

HRIDC _____

(For President of India)

Witnesses (to signature of Contractor):

Signature of witnesses with address _____

Date _____

Signature of witnesses with address _____

ANNEXURE - III

WORK ORDER UNDER ZONE CONTRACT

WORK ORDER NO. _____, DATED _____ UNDER CONTRACT AGREEMENT

NO. _____ DATED _____.

Name of Work _____ (SITE) _____

Schedule of Drawings _____

Authority _____ Allocation _____

The Contractor(s) _____ is / are hereby ordered to carry out the following works at _____% above/below the Standard Schedule of Rates (SSOR) of _____, updated with correction slips issued up to date of inviting tender or as otherwise specified in the tender documents under Zone Contract Agreement here-in-before referred to:

SL	Item No.	Description of Item of Work	Approximate Quantity	Unit	Rates in Figures and Words (₹)	Amount (₹)
1	2	3	4	5	6	7
Total Approximate Value of Work = ₹ _____						

The works herein mentioned are required to be completed on or before _____ (Date). The quantities provided herein are approximate and subject to variation under Clause 42 of the Standard General Conditions of Contract updated with correction slips issued up to date of inviting tender or as otherwise specified in the tender documents.

GENERAL Manager/IE&A

HRIDC

Date _____

for President of India

I agree to complete the works herein set forth on or before the date specified under the Zone Contract Agreement herein before referred to in conformity with the drawings hereto annexed and in accordance with the General and Special (if any) Conditions of Contract updated with correction slips issued up to date of inviting tender or as otherwise specified in the tender documents and the Standard Specifications of HRIDC updated with correction slips issued up to date of inviting tender or as otherwise specified in the tender documents .

I also agree to maintain such works for the period specified below from the date of completion:

(a) Repair and maintenance work including white/color washing: three calendar months from date of completion.

(b) All new works except earth work: Six calendar months from date of completion.

Contractor _____ (Signature)

HRIDC: Designation _____

Address _____

For President of India)

Date _____

Date _____

Signature of Witnesses (to Signature of Contractor) with address

1. _____

2. _____

CONTRACT AGREEMENT OF WORKS

CONTRACT AGREEMENT NO. _____ DATED _____

ARTICLES OF AGREEMENT made this _____ day of _____ 20____ between President of India acting through the HRIDC Administration hereafter called the "HRIDC" of the one part and _____ herein after called the "Contractor" of other part.

WHEREAS the Contractor has agreed with the HRIDC for performance of the works _____ set forth in the Bill(s) of Quantities hereto annexed upon the Standard General Conditions of Contract, updated with correction slips issued up to date of inviting tender or as otherwise specified in the tender documents and the Specifications of _____ updated with correction slips issued up to date of inviting tender or as otherwise specified in the tender documents and the applicable Standard Schedule of Rates (SSOR) of _____ updated with correction slips issued up to date of inviting tender or as otherwise specified in the tender documents and the Special Conditions and Special Specifications, if any and in conformity with the drawings here-into annexed AND WHEREAS the performance of the said works is an act in which the public are interested.

NOW THIS INDENTURE WITNESSETH that in consideration to the payments to be made by the HRIDCs, the Contractors will duly perform the said works in the said Bill(s) of Quantities set forth and shall execute the same with great promptness, care and accuracy in a workman like manner to the satisfaction of the HRIDC and will complete the same in accordance with the said specifications and said drawings and said conditions of contract on or before the _____ day of _____ 20____ and will maintain the said works for a period of _____ Calendar months from the certified date of their completion and will observe, fulfill and keep all the conditions therein mentioned (which shall be deemed and taken to be part of this contract, as if the same have been fully set forth herein), AND the HRIDC, both hereby agree that if the Contractor shall duly perform the said works in the manner aforesaid and observe and keep the said terms and conditions, the HRIDC will pay or cause to be paid to the Contractor for the said works on the final completion thereof the amount due in respect thereof at the rates specified in the Bill(s) of Quantities hereto annexed.

Contractor _____ (Signature) HRIDC: Designation _____

Address _____ (For President of India)

Date _____ Date _____

Signature of **Witnesses** (to Signature of Contractor) with address:

Witnesses:

**FORMAT FOR AFFIDAVIT TO BE SUBMITTED BY TENDERER
ALONG WITH THE TENDER DOCUMENTS**

**(To be executed in presence of Notary public on non-judicial stamp paper of the value of
Rs. 100/-. The stamp paper has to be in the name of the Tenderer) ***

I (Name and designation) ** appointed as the attorney/
authorized signatory of the Tenderer (including its constituents),

M/s. _____ having its office at.....(hereinafter called the Tenderer) for
the purpose of the Tender documents for the work of (Name of work)** as per the Tender
No. _____ of Haryana Rail Infrastructure Development Corporation (HRIDC), do hereby
solemnly affirm and state on behalf of the Tenderer including its constituents as under:

1. I/We the Tenderer (s), am/are signing this document after carefully reading the contents.
2. I/We the tenderer(s) also accept all the conditions of the tender and have signed all the pages in confirmation thereof.
3. I/we hereby declare that I/we have downloaded the tender documents from the website <https://etenders.hry.nic.in>. I/we have verified the content of the document from the website and there is no addition, no deletion or no alteration to the content of the tender document. In case of any discrepancy noticed at any stage i.e. evaluation of tenders, execution of work or final payment of the contract, the master copy available with HRIDC shall be final and binding upon me/us.
4. I/we declare and certify that I/we have not made any misleading or false representation in the forms, statements and attachments in proof of the qualification requirements.
5. I/We also understand that my/our offer will be evaluated based on the documents/credentials submitted along with the offer and same shall be binding upon me/us.
6. I/We declare that the information and documents submitted along with the tender by me/us are correct and I/we are fully responsible for the correctness of the information and documents, submitted by us.
7. I/we certify that I/we the tenderer(s) is/are not blacklisted or debarred by Railways or any other Ministry / Department of Govt. of India from participation in tender on the date of submission of bids, either in individual capacity or as a HUF/ member of the partnership firm/LLP/JV/Society/Trust.
8. I/we understand that if the contents of the certificate 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 Bid Security besides banning of business for a period of up to five years. Further, I/we (insert name of the tenderer) ** _____ and all my/our constituents understand that my/our offer shall be summarily rejected

9. I/we also understand that if the contents of the certificates submitted by us are found to be false/forged or incorrect at any time after the award of the contract, it will lead to termination of the contract, along with forfeiture of Bid Security/SD and Performance guarantee besides any other action provided in the contract including banning of business for a period of up to 5 (five) years.
10. I/We have read the clause regarding restriction on procurement from a bidder of a country which shares a land border with India and certify that I am/We are not from such a country or, if from such a country, have been registered with the competent Authority. I/We hereby certify that I/we fulfil all the requirements in this regard and am/are eligible to be considered (evidence of valid registration by the competent authority is enclosed).

**SEAL AND SIGNATURE
OF THE TENDERER**

Place:

Dated:

**** The contents in italics are only for guidance purpose. Details as appropriate are to be filled in suitably by tenderer.**

ANNEXURE-V(A)

This certificates is to be given by Attorney/Authorized signatory/each member of Partnership firm/Joint Venture(JV)/Hindu Undivided Family(HUF)/Limited Liability Partnership(LLP) etc.

I/We(Name), attorney/Authorized signatory of the (Constitute firm/Constitute partner) and member/partner of the (tendering firm)here by solemnly affirm and state as under :

1. I/We certify that..... (constituent firm/constituent partner) is /are not blacklisted or debarred by Railway or any other Ministry/Department of Govt. of India from participation in tender on the date of submission of bids either in individual capacity or as a HUF/member of the partnership firm/LLP/JV/Society/Trust.
2. I/We have read the clause regarding restriction on procurement from a bidder of a country which shares a land border with India and certify that I am/we are not from such a country or, if from such a country, have been registered with the competent authority. I/we here by certify that I/we fulfil all the requirement in this regards and am/are eligible to be considered (evidence of valid registration by the competent authority is enclosed),

**SEAL AND SIGNATURE
OF THE CONSTITUENT FIRM/CONSTITUENT PARTNER**

Place:

Dated:

TENDERER’S CREDENTIALS (BID CAPACITY)

For tenders having advertised value more than Rs 20 crore wherein eligibility criteria include bid capacity also, the tenderer will be qualified only if its available bid capacity is equal to or more than the total bid value of the present tender. The available bid capacity shall be calculated as under:

$$\text{Available Bid Capacity} = [A \times N \times 2] - 0.33 \times N \times B$$

Where,

A = Maximum value of construction works executed and payment received in any one of the previous three financial years or the current financial year (up to date of inviting tender), taking into account the completed as well as works in progress.

N= Number of years prescribed for completion of work for which bids has been invited.

B = Value of existing commitments and balance amount of ongoing works with the tenderer as on date one month prior to the tender closing date to be completed in next ‘N’ years.

Note:

- (a) The Tenderer(s) shall furnish the details of -
- (i) Maximum value of construction works executed and payment received in any one of the previous three financial years or the current financial year (up to date of inviting tender) for calculating A, and
 - (ii) Existing commitments and balance amount of ongoing works with tenderer as per the prescribed proforma of HRIDC for statement of all works in progress and also the works which are awarded to tenderer but yet not started upto the date of inviting of tender for calculating B. In case of no works in hand, a ‘NIL’ statement should be furnished.

The submitted details for (i) and (ii) above should be duly verified by Chartered Accountant.

- (b) In case if a bidder is JV, the tenderer(s) must furnish the details of
- (i) Maximum value of construction works executed and payment received in any one of the previous three financial years or the current financial year (up to date of inviting tender) by each member of JV for calculating A, and
 - (ii) Existing commitments and balance amount of ongoing works with each member of JV either in individual capacity or as a member of other JV as per the prescribed proforma of HRIDC for statement of all works in progress and also the works which are awarded to each member of JV either in individual capacity or as a member of other JV but yet not started upto the date of inviting of tender for calculating B. In case of no works in hand, a ‘NIL’ statement should be furnished.

The submitted details for (i) and (ii) above should be duly verified by Chartered Accountant.

- (c) Value of a completed work/work in progress/work awarded but yet not started for a Member in an earlier JV shall be reckoned only to the extent of the concerned member's share in that JV

for the purpose of satisfying his/her compliance to the above mentioned bid capacity in the tender under consideration.

- (d) The arithmetic sum of individual “bid capacity” of all the members shall be taken as JV’s “bid capacity”.
- (e) In case, the tenderer/s failed to submit the above statement along with offer, their/his offer shall be considered as incomplete and will be rejected **summarily**.
- (f) The available bid capacity of tenderer shall be assessed based on the details submitted by the tenderer. In case, the available bid capacity is lesser than estimated cost of work put to tender, his offer shall not be considered even if he has been found eligible in other eligibility criteria/tender requirement.

Bank Guarantee Bond from any scheduled commercial bank of India
(On non-judicial stamp paper, which should be in the name of the Executing Bank).

Name of the Bank: -----

President of India,
Acting through,
HRIDC ,

Beneficiary: HRIDC

Date:.....

Bank Guarantee Bond No.:

Date:-----

In consideration of the President of India acting through----- (*Designation & address of Contract Signing Authority*), HRIDC,, (hereinafter called "The HRIDC") having invited the bid for _____ through Notice inviting tender (NIT) No. _____, We have been informed that *[Insert name of the Bidder]*..... (**hereinafter called "the Bidder"**) intends to submit its bid (hereinafter called "the Bid") .

WHEREAS, the Bidder is required to furnish Bid Security for the sum of *[Insert required Value of Bid Security]*, in the form of Bank Guarantee, according to conditions of Bid.

AND

WHEREAS,*[Insert Name of the Bank]*, with its Branch*[Insert Address]* having its Headquarters office at..... *[Insert Address]*, hereinafter called the **Bank**, acting through*[Insert Name and Designation of the authorised persons of the Bank]*, have, at the request of the Bidder, agreed to give guarantee for Bid Security as hereinafter contained, in favour of the HRIDC:

1. KNOW ALL MEN that 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 to the HRIDC full amount in the sum of *[Insert required Value of Bid Security]* as above stated.
2. The Bank undertakes to immediately pay on presentation of demand by the HRIDC any amount up to and including aforementioned full amount without any demur, reservation or recourse. Any such demand made by the HRIDC on the Bank shall be final, conclusive and binding, absolute and unequivocal on the Bank notwithstanding any disputes raised/ pending before any Court, Tribunal, Arbitration or any Authority or any threatened litigation by the Bidder or Bank.
3. The Bank shall pay the amount as demanded immediately on presentation of the demand by HRIDC without any reference to the Bidder and without the HRIDC being required to show grounds or give reasons for its demand of the amount so demanded.
4. The guarantee hereinbefore shall not be affected by any change in the constitution of the Bank or in the constitution of the Bidder.
5. The Bank agrees that no change, addition, modifications to the terms of the Bid document or to any documents, which have been or may be made between the HRIDC and the Bidder, will in any

way absolve the Bank from the liability under this guarantee; and the Bank, hereby, waives any requirement for notice of any such change, addition or modification made by HRIDC at any time.

6. This guarantee will remain valid and effective from.....*[insert date of issue]*till*[insert date, which should be minimum 90 days beyond the expiry of validity of Bid]*. Any demand in respect of this Guarantee should reach the Bank within the validity period of Bid Security.
7. The Bank Guarantee is unconditional and irrevocable.
8. The expressions Bank and HRIDC herein before used shall include their respective successors and assigns.
9. The Bank hereby undertakes not to revoke the guarantee during its currency, except with the previous consent in writing of the HRIDC. This guarantee is subject to the Uniform Rules for Demand Guarantees, ICC Publication No.758.
10. The Bank hereby confirms that it is on the SFMS (Structured Financial Messaging System) and shall invariably send the advice of this Bank Guarantee to the following bank details –

IFSC CODE	SBIN000RAIL
IFSC TYPE	BRANCH
BANK NAME	STATE BANK OF INDIA
BRANCH NAME	RAIL
CITY NAME	NAVI MUMBAI
ADDRESS	SECTOR-11, CBD BELAPUR, NAVI MUMBAI
DISTRICT	NAVI MUMBAI
STATE	MAHARASHTRA
BG ENABLED	YES

11. The Guarantee shall be valid in addition to and without prejudice to any other security Guarantee(s) of Bidder in favour of the HRIDC. The Bank, under this Guarantee, shall be deemed as Principal Debtor of the HRIDC.

Date

Place.....

Bank's Seal and authorized signature(s)
[Name in Block letters]
[Designation with Code No.].....
[P/Attorney] No.

Witness:

- 1 Signature, Name & Address & Seal
- 2 Signature, Name& address & Seal

Bank's Seal
*[P/Attorney]*No.

Note: All italicized text is for guidance on how to prepare this bank guarantee and shall be deleted from the final document.

Annexure –VIB

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

NAME OF BIDDER/JV PARTNER:

Annual Contractual Turnover Data for the Previous 3/4 Years (Contractual Payment only)			
Year	Amount Currency	Exchange Rate	Indian National Rupees Equivalent
Average Annual Contractual Turnover for last 3 years			

3. The average annual contractual turnover shall be calculated as an average of “total contractual payments” in the previous three financial years. However, in case balance sheet of the previous year is yet to be prepared/ audited, the audited balance sheet of the fourth previous year shall be considered for calculating average annual contractual turnover.
4. The information supplied shall be substantiated by data in the audited balance sheets and profit and loss accounts for the relevant years in respect of the bidder or all members constituting the bidder.
5. Contents of this form should be certified by a Chartered Accountant duly supported by Audited Balance Sheet duly certified by the Chartered Accountant.

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 Chartered Accountant)

Name of CA: _____

Registration No: _____

(Seal)

PROFORMA FOR TIME EXTENSION

No. _____

Dated: _____

Sub: (i) _____ (*name of work*).

(ii) Acceptance letter no. _____

(iii) Understanding/Agreement no. _____

Ref: _____ (*Quote specific application of Contractor for extension to the date received*) _____

Dear Sir,

1. The stipulated date for completion of the work mentioned above is _____. From the progress made so far and the present rate of progress, it is unlikely that the work will be completed by the above date (or ‘However, the work was not completed on this date’).

2. Expecting that you may be able to complete the work if some more time is given, the competent authority, although not bound to do so, hereby extends the time for completion from _____ to _____.

3. Please note that an amount equal to the liquidated damages for delay in the completion of the work after the expiry of _____ (*give here the stipulated date for completion with/without any liquidated damage fixed earlier*) will be recovered from you as mentioned in Clause 17B of the Standard General Conditions of Contract for the extended period, notwithstanding the grant of this extension. You may proceed with the work accordingly.

4. The above extension of the completion date will also be subject to the further condition that no increase in rates on any account will be payable to you.

5. Please intimate within a week of the receipt of this letter your acceptance of the extension of the conditions stated above.

6. Please note that in the event of your declining to accept the extension on the above said conditions or in the event of your failure after accepting or acting upto this extension to complete the work by _____ (*here mention the extended date*), further action will be taken in terms of Clause 62 of the Standard General Conditions of Contract.

Yours faithfully

For and on behalf of the President of India

ANNEXURE – VIIA

PROFORMA OF 14 DAYS NOTICE FOR OFFLOADING OF PART OF CONTRACT WORK

(Without Prejudice)

To

M/s _____

Dear Sir,

Contract Agreement No. _____

In connection with _____

In spite of repeated instructions to you by the subordinate offices as well as by this office through various letters of even no. _____, dated _____; you have failed to show adequate progress of work so as to complete the contract within the original / extended date of completion of contract and part(s) of contract work are yet to be started/ still lagging behind the agreed program of work, listed as under:

(Details of part(s) of work which is delayed and can be executed independently, to be mentioned).

2. Your attention is invited to this office letter no. _____, dated _____ in reference to your representation, dated _____.
3. As you have failed to abide by the instructions issued to commence the work /to show adequate progress of work, you are hereby given 14 days' notice in accordance with Clause 40A of the Standard General Conditions of Contract to deploy adequate resources i.e. (the details of resource requirement, to be mentioned) and commence / to make good the progress for part(s) of works detailed above, failing which action as provided in Clause 40A of the Standard General Conditions of Contract shall be commenced after expiry of 14 days' notice period viz. to offload few/ all part(s) of work mentioned above to any of the existing or new contractor without your participation and at your Risk & Cost, not exceeding the value of Performance Guarantee of this contract, which may please be noted.

Kindly acknowledge receipt.

Yours faithfully

For and on behalf of the President of India

NOTICE FOR PART OF CONTRACT WORK OFFLOADE

(Without Prejudice)

To

M/s _____

Dear Sir,

Contract Agreement No. _____

In connection with _____

1. Fourteen days' notice under Clause 40A of the Standard General Conditions of Contract was given to you under this office letter of even no., dated _____; but you have taken no/inadequate action to deploy adequate resources to commence the part(s) of work/show adequate progress of the part(s) of work, mentioned therein.

As you have failed to abide by the instructions issued to commence the part(s) of work/show adequate progress of the part(s) of work even at the lapse of 14 days' notice period under Clause 40A of the Standard General Conditions of Contract, few part(s) of the work under the contract have been offloaded and being executed by other mode(s) at the cost detailed below:

Or,

1. Please refer your request letter no..... dated, wherein it was requested under clause 40 A of the Standard General Conditions of Contract to offload part(s) of works at your risk & cost. The details of part(s) of the work under the contract which have been offloaded and being executed by other mode(s) at the cost detailed below:

(List of Part(s) of work offloaded, Details of mode of execution of such offloaded work alongwith approximate cost thereof to be mentioned)

2. The final measurement of work(s) already executed for above part(s) of work recorded as per clause 45 (A) or/and 45 (B) of the Standard General Conditions of Contract is enclosed herewith.

3. The Bill(s) of Quantities for Part(s) of work offloaded is enclosed herewith.

4. The additional cost in execution of offloaded work through mode(s) mentioned in para (1) above is determined as Rs. _____, over& above the cost of execution under this contract (including the

PVC amount payable as per contract, as on the date of issue of this notice). This additional cost shall be recovered from your next on account bill(s) or any other dues payable to you under contract.

5. The Contract value gets reduced to Rs.....:

6. You are requested to continue with the balance work in the contract subsequent to offloading of above part(s) of work.

Kindly acknowledge receipt.

Yours faithfully

For and on behalf of the President of India

CERTIFICATE OF FITNESS

1. (a) Serial Number _____
(b) Date _____
2. Name of person examined _____
3. Father's Name: son/daughter of _____
Residing at _____
4. Sex _____
5. Residence: _____

6. Physical fitness _____
7. Identification marks _____
8. Date of birth, if available, and/or certified age _____

I certify that I have personally examined (name) _____ who is desirous of being employed in a factory or on a work requiring manual labour and that his/her age as nearly as can be ascertained from my examination, is _____ years.

I certify that he/she is fit for employment in a factory or on a work requiring manual labour as an adult/child.

9. Reasons for :
 - (a) Refusal to grant certificate, or _____
 - (b) Revoking the certificate _____

Signature or left hand

Thumb impression of the person examined.

Signature of Certifying Surgeon

Note: In case of physical disability, the exact details and cause of the physical disability should be clearly stated.

**PROFORMA OF 7 DAYS NOTICE FOR WORKS AS A WHOLE/ IN PARTS
(DETAILS OF PART OF WORK TO BE MENTIONED)**

(Without Prejudice)

To

M/s _____

Dear Sir,

Contract Agreement No. _____

In connection with _____

In spite of repeated instructions to you by the subordinate offices as well as by this office through various letters of even no. _____, dated _____; you have failed to start work/show adequate progress and/or submit detailed programme for completing the work/ part of work (details of part of work to be mentioned).

2. Your attention is invited to this office. _____, dated _____ in reference to your representation, dated _____.

3. As you have failed to abide by the instructions issued to commence the work /to show adequate progress of work you are hereby given 7 days' notice in accordance with Clause 62 of the Standard General Conditions of Contract to commence works / to make good the progress, failing which further action as provided in Clause 62 of the Standard General Conditions of Contract viz. to terminate your Contract and complete the balance work without your participation will be taken.

Kindly acknowledge receipt.

Yours faithfully

For and on behalf of the President of India

PROFORMA OF 48 HRS. NOTICE FOR WHOLE WORK

(Without Prejudice)

To

M/s _____

Dear Sir,

Contract Agreement No. _____

In connection with _____

Seven days' notice under Clause 62 of the Standard General Conditions of Contract was given to you under this office letter of even no., dated _____; but you have taken no action to commence the work/show adequate progress of the work.

2. You are hereby given 48 hours' notice in terms of Clause 62 of the Standard General Conditions of Contract to commence works / to make good the progress of works, failing which and on expiry of this period your above contract will be rescinded and the work under this contract will be carried out independently without your participation and your Security Deposit shall be forfeited and Performance Guarantee shall also be encashed and any other consequences which may please be noted.

Kindly acknowledge receipt.

Yours faithfully

For and on behalf of the President of India

PROFORMA OF TERMINATION NOTICE

(Without Prejudice)

No. _____

Dated _____

To

M/s _____

Dear Sir,

Contract Agreement No. _____

In connection with _____

Forty eight hours (48 hrs.) notice was given to you under this office letter of even no., dated _____; but you have taken no action to commence the work/show adequate progress of the work.

Since the period of 48 hours' notice has already expired, the above contract stands rescinded in terms of Clause 62 of the Standard General Conditions of Contract and the balance work under this contract will be carried out independently without your participation. Your participation as well as participation of every member/partner in any manner as an individual or a partnership firm/JV is hereby debarred from participation in the tender for executing the balance work and your Security Deposit shall be forfeited and Performance Guarantee shall also be encashed.

Kindly acknowledge receipt.

Yours faithfully

For and on behalf of the President of India

ANNEXURE – XII

**PROFORMA OF 48 HRS. NOTICE FOR PART OF THE WORK.....
(DETAILS OF PART OF WORK TO BE MENTIONED)**

(Without Prejudice)

To

M/s _____

Dear Sir,

Contract Agreement No. _____

In connection with _____

1. Seven days' notice under Clause 62 of the Standard General Conditions of Contract was given to you under this office letter of even no., dated _____; but you have taken no action to commence the work/show adequate progress of the part of work.....(details of part to be mentioned).
2. You are hereby given 48 hours' notice in terms of Clause 62 of the Standard General Conditions of Contract to commence works / to make good the progress of works, failing which and on expiry of this period your above part of work.....(Details of part to be mentioned) in contract will be rescinded and the work will be carried out independently without your participation.
3. Your full Performance Guarantee for the contract shall be forfeited and you shall not be issued any completion certificate for the contract. However, no additional Performance Guarantee shall be required for balance of work being executed through the part terminated contract.
4. The contract value of part terminated contract shall stands reduced to

Kindly acknowledge receipt.

Yours faithfully

For and on behalf of the President of India

**PROFORMA OF TERMINATION NOTICE FOR PART OF THE WORK.....
(DETAILS OF PART OF WORK TO BE MENTIONED)**

(Without Prejudice)

No. _____

Dated _____

To

M/s _____

Dear Sir,

Contract Agreement No. _____

In connection with _____

1. Forty eight hours (48 hrs.) notice was given to you under this office letter of even no., dated _____; but you have taken no action to commence the work/show adequate progress of the part of work.....(details of part to be mentioned).
2. Your above part of work in contract(details of part to be mentioned) stands rescinded in terms of Clause 62 of the Standard General Conditions of Contract and the same will be carried out independently without your participation. Your participation as well as participation of every member/partner in any manner as an individual or a partnership firm/JV is hereby debarred from participation in the tender for executing the balance work
3. Your full Performance Guarantee for the contract shall be forfeited and you shall not be issued any completion certificate for the contract. However, no additional Performance Guarantee shall be required for balance of work being executed through the part terminated contract.
4. The contract value of part terminated contract stands reduced to

Kindly acknowledge receipt.

Yours faithfully

For and on behalf of the President of India

FINAL SUPPLEMENTARY AGREEMENT

1. Articles of agreement made this day _____ in the year _____ between the President of India, acting through the _____ HRIDC Administration having his office at _____ herein after called the HRIDC of the one part and _____ of the second part.
2. Whereas the party hereto of the second part executed an agreement with the party hereto of the first part being agreement Number _____ dated ____ for the performance _____ herein after called the 'Principal Agreement'.
3. And whereas it was agreed by and between the parties hereto that the works would be completed by the party hereto of the second part on _____ date last extended and whereas the party hereto of the second part has executed the work to the entire satisfaction of the party hereto of the first part.
4. And whereas the party hereto of the first part already made payment to the party hereto of the second part diverse sums from time to time aggregating to ₹ _____ including the Final Bill bearing voucher No. _____ dated _____ of value _____ duly adjusted as per price variation clause, if applicable (the receipt of which is hereby acknowledged by the party hereto of the second part in full and final settlement of all his /its claims under the principal agreement.

And whereas the party hereto of the second part have received sum of ₹ _____ through the Final Bill bearing voucher No. _____ dated _____ duly adjusted as per price variation clause (PVC), if applicable (the receipt of which is hereby acknowledged by the party thereto of the second part) from the party hereto of the first part in full and final settlement of all his/its disputed claims under principal agreement.

Now, it is hereby agreed by and between the parties in the consideration of sums already paid by the party hereto of the first part to the party hereto of the second part against all outstanding dues and claims for all works done under the aforesaid principal agreement excluding the Security Deposit, the party hereto of the second part have no further dues of claims against the party hereto of the first part under the said Principal Agreement. It is further agreed by and between the parties that the party hereto of the second part has accepted the said sums mentioned above in full and final satisfaction of all its dues and claims under the said Principal Agreement.

(Applicable in case Final Supplementary Agreement is signed after release of Final Payment)

Or

And whereas the party hereto of the first part already made payment to the party hereto of the second part diverse sums from time to time aggregating to ₹ _____ through various On Account Bills (the receipt of which is hereby acknowledged by the party hereto of the second part).

And whereas the party hereto of the second part have received sum of ₹ _____ through various On Account Bills (the receipt of which is hereby acknowledged by the party thereto of the second part) from the party hereto of the first part and party hereto of the second part have accepted final measurements recorded on Page No..... to Page No.... of Measurement Book

No.....and corresponding Final Bill duly adjusted as per price variation clause (PVC), if applicable, for full and final settlement of all his/its disputed claims under principal agreement.

Now, it is hereby agreed by and between the parties in the consideration of sums already paid through various On Account Bills and sums to be paid through Final Bill duly adjusted as per price variation clause (PVC), if applicable, based on accepted final measurements including the Security Deposit by the party hereto of the first part to the party hereto of the second part against all outstanding dues and claims for all works done under the aforesaid principal agreement, the party hereto of the second part have no further dues of claims against the party hereto of the first part under the said Principal Agreement.

(Applicable in case Final Supplementary Agreement is signed before release of Final Payment)

5. It is further agreed and understood by and between the parties that the arbitration clause contained in the said principal agreement shall cease to have any effect and/or shall be deemed to be non-existent for all purposes.

Signature of the Contractor/s

for and on behalf of the President of India

Witnesses

ADDRESS:_____

ANNEXURE-XV
Reference Para 64.3 & 64.6

Agreement towards Waiver under Section 12(5) and Section 31A (5) of Arbitration and Conciliation (Amendment) Act

I/we..... (Name of agency/Contractor) with reference to agreement no..... raise disputes as to the construction and operation of this contract, or the respective rights and liabilities, withholding of certificate and demand arbitration in respect of following claims :

Brief of claim:

- (i) Claim 1- Detailed at Annexure-
- (ii) Claim 2 –
- (iii) Claim 3 –

I/we..... (post of Engineer) with reference to agreement no..... hereby raise disputes as to the construction and operation of this contract, or the respective rights and liabilities, withholding of certificate and demand arbitration in respect of following claims:

I/we.....do/do not agree to waive off applicability of section 12(5) of Arbitration and Conciliation (Amendment) Act.

Signature of Claimant_____ Signature of Respondent _____

Agreement under Section 31(5)

I/we..... (Name of claimant) with reference to agreement no..... hereby waive off the applicability of sub section 31-A (2) to 31-A (4) of the Arbitration and Conciliation (Amendment) Act. We further agree that the cost of arbitration will be shared by the parties as per Clause 64(6) of the Standard General Conditions of Contract.

Signature of Claimant_____ Signature of Respondent_____

*Strike out whichever not applicable.

ANNEXURE-XVI

Certification by Arbitrators appointed under Clause 63 & 64 of Indian Railways General Conditions of Contract

1. Name:
2. Contact Details:
3. Prior experience (Including Experience with Arbitrations):
4. **I do not have more than ten on-going Arbitration cases with me.**
5. I hereby certify that I have retired from Railways w.e.f. _____ and empanelled as Railway Arbitrator as per 'The Arbitration and Conciliation Act- 1996'.
6. I have no any past or present relationship in relation to the subject matter in dispute, whether financial, business, professional or other kind.
Or
I have past or present relationship in relation to the subject matter in dispute, whether financial, business, professional or other kind. The list of such interests is as under:
7. I have no any past or present relationship with or interest in any of the parties whether financial, business, professional or other kind, which is likely to give rise to justifiable doubts as to my independence or impartiality in terms of The Arbitration and Conciliation Act-1996.
Or
I have past or present relationship with or interest in any of the parties whether financial, business, professional or other kind, which is likely to give rise to justifiable doubts as to my independence or impartiality in terms of The Arbitration and Conciliation Act-1996. The details of such relationship or interests are as under:
8. There are no concurrent Circumstances which are likely to affect my ability to devote sufficient time to the arbitration and in particular to finish the entire arbitration within twelve months.

Or

There are Circumstances which are likely to affect my ability to devote sufficient time to the arbitration and in particular to finish the entire arbitration within twelve months. The list of such circumstances is as under:

ANNEXURE-XVII

AFFIDAVIT BY SOLE PROPRIETORSHIP FIRM

(To be executed non judicial stamp paper of appropriate value as per law of state Concerned-Non-Judicial stamp paper should be purchased in the name of proprietor of the firm)

I.....S/o Shriaged aboutyears
R/o.....do hereby solemnly
affirm and declare as under:

1. That I am running a business in the name and style of M/S.....which is a sole proprietorship firm, and which has got GST registration No.....
2. That I am the sole proprietor of the said firm M/S
3. That the Head office of the above named firm is situated at

DEPONENT

Verification:

Verified at..... on thisday of.....that the contents of my above affidavit are true and correct to the best of my knowledge and belief and nothing material has been concealed therefrom.

DEPONENT

(seal and signature of Notary Public)

- Notes:**
1. The document should be notarized at its place of execution (Place of signing the document)
 2. Each page of the document should be signed by executants

POWER-OF-ATTORNEY FOR SIGNING OF BID ON BEHALF OF PARTNERSHIP FIRM

(To be executed non judicial stamp paper of appropriate value as per law of state Concerned-Non-Judicial stamp paper should be purchased in the name of partners of the firm)

KNOW ALL MEN BY THESE PRESENTS: WHEREAS WE

- (1)..... S/o Shri.....R/o.....
- (2)..... S/o Shri.....R/o.....
- (3)..... S/o Shri.....R/o.....
- (4)..... S/o Shri..... R/o.....

all are the partners of a partnership firm namely M/S..... (Name of firm) hereinafter referred to as 'firm', which is registered at Registration No.....by Registrar of Firms..... The firm is having its head office at..... (hereinafter to be referred as the 'Firm').

AND WHEREAS we all the above named partners have on.....(date) given our consent on behalf of firm to participate in the tender No._____ issued by HRIDC for the work namely “_____”

We the above named partners of above named firm do hereby irrevocably constitute, nominate, appoint and authorize Mr./ Ms. _____S/o Shri_____(address)_____&Mr./ Ms. _____S/o Shri_____(address)_____ as our true and lawful attorney (hereinafter referred to as “Attorney”) of the firm to jointly or severally exercise all or any of the following powers for and on behalf of M/S (name of firm) in connection with aforesaid bid:

- 1. To sign and submit Tender and participate in the aforesaid bid of HRIDC on behalf of the firm.
- 2. To sign and submit all the necessary papers, letters, forms, quotes, bids etc. on behalf of firm.
- 3. To negotiate, discuss, agree to make any amendments, alterations or modifications thereto and to make representations, submit papers, affidavits and to do any other act and complete requisite formalities on behalf of the firm in connection with completion of aforesaid tender work and to enter into liability against the firm.
- 4. To sign, execute the contract with HRIDC for and on behalf of the firm.
- 5. And generally to do all such acts, deeds or things as may be necessary or proper for the purposes mentioned above.

We on behalf of firm undertake that it shall not cancel or amend this power of Attorney without obtaining previous written consent of HRIDC.

We on behalf of firm hereby agree that all acts, deeds or things lawfully done by the said Attorneys or either of them under the authority of this power shall be construed as acts, deeds and things done by the firm and we hereby undertake to confirm and ratify all and whatsoever the said Attorneys or either of them shall lawfully do or cause to be done by virtue of the powers hereby given.

Specimen signatures of the Attorney are appended below.

IN WITNESS WHEREOF this deed has been signed and sealed by us the under named, on this..... day of..... 20...., in presence of:

WITNESSES:

1. Signature	Executants Partners
Name:	(Name)(Signature)
Address:	1.....
	2.
	3.
	4.

2. Signature
 Name:
 Address:

Specimen Signatures of Attorney Holder(s) in token of acceptance:

(1) Name..... Signature.....

(2) Name..... Signature.....

Executed and Signed before me on this.....day of At(place).

(Seal and signature of Notary Public)

Notes:

1. In this format space has been provided for entering details of four partners & two attorney holders however if the numbers vary details may accordingly be entered.
2. The document should be notarized at its place of execution (Place of signing the document).
3. Each page of the document should be signed by executants.
4. The power of attorney should be **duly registered**.

ANNEXURE-XIX

MEMORANDUM OF UNDERSTANDING FOR JV

(The memorandum of understanding shall be submitted in following format on the non-judicial stamp of Rs.100/- duly notarized)

NOW THIS Memorandum of Understanding is executed at (Name of Place) on this date (DD/MM/YY) between M/s.....(Name of first constituent and address) as the first party represented by Shriand M/s..... (Name of 2nd constituent and address) represented by Shri as the second party and so on 3rd, 4th & 5th subsequent parties. (the expression and words of first and second and other shall mean and include their heirs successors, assigns, nominees, execution, administrators and legal representatives respectively).

WHEREAS all the parties are engaged mainly in the business of execution of Civil Engineering and general contracts for various Government Departments and organizations.

AND WHEREAS the parties herein above mentioned are desirous of entering into a joint venture for carrying out civil engineering and/or contract works in connection with Tender No. (Name of work)..... as mutually decided between members of Joint Venture Agreement.

1. That we M/s..... (JV firm) on behalf of all members of this joint venture agreement agreed that M/s will be "Lead Partner" of this Joint Venture.
2. That under this MOU, the work will be done jointly by M/s the first party and M/s the second and so onin the name and style of(Name) (joint venture firm).
3. That we JV firm M/s on behalf of all the members of JV firm shall be legally liable, severally and jointly responsible/ liable for the satisfactory/ successful execution/ completion of the works including maintenance period in all respects and in accordance with terms and conditions of the contract.
4. That we M/s JV firm..... on behalf of all the members of the JV firm to which the contract is awarded, shall be jointly and severally liable to the Employer (HRIDC) for execution of the project in accordance with General and Special Conditions of the Contract. The JV members shall also be liable jointly and severally for the loss, damages caused to HRIDC during the course of execution of the contract or due to non-execution of the contract or part thereof.
5. M/s(Name of Lead Firm) of JV firm shall be the lead member of the JV firm who shall have a majority% share of interest in the JV firm. The other (One/Two) members shall have following share: - M/s (Name of Second Firm) have % and M/s (Name of Third Firm if any) have% share of interest in the JV Firm.
6. That this JV shall be valid during the entire currency of the contract including the period of extension, if any, and the maintenance period after the work is completed.
7. That we all the Joint Venture members authorize M/sone of the members on behalf of the JV firm to deal with the tender, sign the agreement or enter into contract

in respect of the said tender, to receive payment, to witness joint measurement of work done, to sign measurement books and similar such action in respect of the said tender/contract. All notices/ correspondence with respect to the contract would be sent to this authorized member (address) of the JV firm.

8. That no member of the JV shall have the right to assign or transfer the interest right or liability in the contract without the written consent of the other members and that of the Employer (HRIDC) in respect of the said tender/contract.

9. That we all the members of the JV certify that we have not been black- listed or debarred by Railways or any other Ministry/Department /PSU (Public Sector Undertaking) of the Govt. of India/ State Govt. from participation in tenders/contract in the past either in our individual capacity or as a member of the JV firm or partnership firm in which they were members/partners.

10. That this Joint Venture MOU shall in all respect be governed by and interpreted in accordance with Indian Laws.

Now the parties have joined hands to form this MOU on this date(DD/MM/YY) with reference to and in confirmation of their discussions and understanding brought on record on date (DD/MM /YY).

In witness thereof all/both the above-named parties have set their respective hands on this MOU on the day, month and year first above mentioned, in the presence of the following witnesses:

1 First party (authorized signatory)

2 Second party (authorized signatory)

3.Third party (if any) (authorized signatory)

With Seal of parties

Witnesses with name & address:

1..... 2.....

Date.....

Place.....

Note: Should MOU be in more than one separate page; each page shall be signed by the authorized signatory.

ANNEXURE-XX

POWER-OF-ATTORNEY ON BEHALF OF THE JOINT VENTURE

(To be executed non judicial stamp paper of appropriate value as per law of state Concerned-Non-Judicial stamp paper should be purchased in the name of the members of Joint Venture)

KNOW ALL MEN BY THESE PRESENTS THAT WE THE PARTIES whose details are given here under:

1. (name of constituent)
..... (address) as the first party.
2. (name of constituent)
..... (address) as the second party.

Have entered into a Joint Venture agreement for the purpose of securing the work advertised by HRIDC vide NIT No..... details of works are as under:

“.....”

The aforesaid Joint Venture shall be known by the name “.....” (Hereinafter called the Joint Venture Which Expression shall unless repugnant to the context or meaning thereof, include its successors, administrators and assigns.

We the above said parties, through this power of Attorney do hereby irrevocably constitute, nominate, appoint and authorize Mr./ Ms. _____S/o Shri _____(address) who is presently holding the position of inthe firm/ company as our true and lawful attorney (hereinafter referred to as “Attorney”) of the Joint Venture to jointly or severally exercise all or any of the following powers for and on behalf of “..... (name of JV) in connection with aforesaid bid:

1. To sign and submit Tender and participate in the aforesaid bid of HRIDC on behalf of the Joint Venture.
2. To sign and submit all the necessary papers, letters, forms, quotes, bids etc. on behalf of Joint Venture
3. To negotiate, discuss, agree to make any amendments, alterations or modifications thereto and to make representations, submit papers, affidavits and to do any other act and complete requisite formalities on behalf of the Joint Venture in connection with completion of aforesaid tender work and to enter into liability against the Joint Venture.
4. To sign, execute the contract with HRIDC for and on behalf of the Joint Venture.
5. And generally to do all such acts, deeds or things as may be necessary or proper for the purposes mentioned above on behalf of Joint Venture.

The Joint Venture agrees and undertakes that in the event of any change in the constitution of the Joint Venture the rights and obligations of the Joint Venture shall continue to be in full force without any effect thereof.

We all the members of Joint Venture undertake that we shall not cancel or amend this Power of Attorney unilaterally and without prior written consent of HRIDC.

AND the Joint Venture hereby agrees that all acts, deeds or things lawfully done by the said Attorneys or either of them under the authority of this power shall be construed as acts, deeds and things done by the Joint Venture and the Company hereby undertakes to confirm and ratify all and whatsoever the said Attorneys or either of them shall lawfully do or cause to be done by virtue of the powers hereby given.

IN WITNESS WHEREOF the members constituting the Joint Venture as aforesaid have executed these present, on this..... day of..... 20.... , under the common seal(s)/seals of their companies and/or firms(s), in presence of:

WITNESSES:

- | | |
|-----------------------------------|--|
| 1. Signature
Name:
Address: | Signature of authorized signatories & their
Seals:
1. First Party (Signature):
Name:
Seal: |
| 2. Signature
Name:
Address: | 2. Second Party (Signature):
Name:
Seal: |

Specimen Signatures of Attorney Holder in token of acceptance:

Name.....Signature.....

Executed and Signed before me on this.....day of At
..... (place).
(seal and signature of Notary Public)

- Notes:**
1. In this format space has been provided for entering details of two constituents of the JV however if the number vary the details may accordingly be entered.
 2. The document should be notarized at its place of execution (Place of signing the document).
 3. Each page of the document should be signed by executants.

ANNEXURE-XXI

CONSENT OF PARTNERS OF PARTNERSHIP FIRM FOR SIGNING JOINT VENTURE

(To be executed on non-judicial stamp paper as per tender conditions, Non-Judicial stamp paper should be purchased in the name of partners of the firm)

KNOW ALL MEN BY THESE PRESENTS: WHEREAS WE :

- (1)..... S/o Shri..... R/o.....
- (2)..... S/o Shri..... R/o.....
- (3)..... S/o Shri..... R/o.....
- (4)..... S/o Shri..... R/o.....

all are the partners of a partnership firm namely M/S(Name of firm) hereinafter referred to as 'firm', which is registered at Registration No.....by Registrar of Firms..... The firm is having its head office at.....

AND WHEREAS it has come to our knowledge that NIT No. _____ has been issued by HRIDC for the work namely “ _____ ”

We all the above named partners on behalf of the above named firm hereby give our consent to participate in the above tender in Joint Venture.

Further we all the above named partners on behalf of the above named firm hereby give our consent to enter in to Joint Venture agreement, with M/S _____ & M/S _____ (name of other constituent(s) of joint venture) and to participate in tender as Joint Venture aforesaid.

Date:

Place:

Executants Partners

(Name)(Signature)

- 1.....
- 2.....
- 3.....
- 4.....

(seal and signature of Notary Public)

- Notes: 1. In this format space has been provided for entering details of four partners and two JV constituents however if the number vary details may accordingly be entered.
2. The document should be notarized at its place of execution (Place of signing the document).
3. Each page of the document should be signed by executants.

ANNEXURE-XXII

POWER-OF-ATTORNEY FOR SIGNING JOINT VENTURE AGREEMENT ON BEHALF OF PARTNERSHIP FIRM

(To be executed non judicial stamp paper of appropriate value as per law of state concerned- Non-Judicial stamp paper should be purchased in the name of partners of the firm)

KNOW ALL MEN BY THESE PRESENTS: WHEREAS WE

- (1)..... S/o Shri..... R/o.....
- (2)..... S/o Shri..... R/o.....
- (3)..... S/o Shri..... R/o.....
- (4)..... S/o Shri..... R/o.....

All are the partners of a partnership firm namely M/s.Name of firm) hereinafter referred to as 'firm', which is registered at Registration No.....by Registrar of Firms..... The firm is having its head office at..... (hereinafter to be referred as the 'Firm').

AND WHEREAS we all the above named partners have on.....(date) given our consent on behalf of firm to participate in the tender No. _____ issued by HRIDC for the work namely "in _____" in Joint Venture with M/S.....& M/S.....

We the above named partners of above named firm do hereby irrevocably constitute, nominate, appoint and authorize Mr./ Ms. _____ S/o Shri _____ (address) _____ & Mr./ Ms. _____ S/o Shri _____ (address) _____ as our true and lawful attorney (hereinafter referred to as "Attorney") of the firm to jointly or severally exercise all or any of the following powers for and on behalf of M/S (name of firm) in connection with aforesaid bid:

- 1. To enter into and execute and sign JOINT VENTURE agreement, on behalf of our firm with M/S.....& M/S.....
- 2. To sign and submit all the necessary papers, letters, forms, quotes, bids etc. in connection with aforesaid bid.
- 3. To negotiate, discuss, agree to make any amendments, alterations or modifications thereto and to make representations, submit papers, affidavits and to do any other act and complete requisite formalities on behalf of the firm in connection with completion of aforesaid tender work and to enter into liability against the firm.
- 4. To sign, execute the contract with HRIDC for and on behalf of the firm.
- 5. And generally to do all such acts, deeds or things as may be necessary or proper for the purposes mentioned above and to enter into liability against the firm.

We on behalf of firm undertake that it shall not cancel or amend this power of Attorney without obtaining previous written consent of HRIDC.

We on behalf of firm hereby agree that all acts, deeds or things lawfully done by the said Attorneys or either of them under the authority of this power shall be construed as acts, deeds and things done by the firm and we hereby undertakes to confirm and ratify all and whatsoever the said Attorneys or either of them shall lawfully do or cause to be done by virtue of the powers hereby given.

Specimen signatures of the Attorney are appended below.

IN WITNESS WHEREOF this deed has been signed and sealed by us the under named, on this..... day of..... 20.... , in presence of:

WITNESSES:

1. Signature

Name:
Address:

Executants Partners

(Name) (Signature)

1
2
3.....
4.....

2. Signature

Name:
Address:

Specimen Signatures of Attorney Holder(s) in token of acceptance:

(1) Name.....Signature.....

(2) Name.....Signature.....

Executed and Signed before me on this.....day of At(place).

(Seal and signature of Notary Public)

- Notes: 1. In this format space has been provided for entering details of four partners, two constituents of JV and two attorney holders, however if the number vary the details may accordingly be entered.
2. The document should be notarized at its place of execution.
3. Each page of the document should be signed by executants

ANNEXURE-XXIV

AFFIDAVIT BY SOLE PROPRIETORSHIP FIRM WHEN PARTICIPATING IN JOINT VENTURE

(To be executed non judicial stamp paper of appropriate value as per law of state concerned- Non-Judicial stamp paper should be purchased in the name of proprietor of the firm)

I.....S/o Shri.....aged aboutyears
R/o.....do hereby solemnly affirm and declare as under:

1. That I am running a business in the name and style of M/s..... which is a sole proprietorship firm and which has got GST registration No.....

2. That I am the sole proprietor of the said firm M/S.....

3. That the Head office of the above named firm is situated at.....

4. That I through my above named firm shall participate in the tender No._____ issued by HRIDC for the work namely “_____” in Joint Venture and for the purpose shall enter into and execute joint venture agreement with M/S_____ & M/S_____ (name of other constituent(s) of joint venture).

DEPONENT

Verification:

Verified at.....on thisday of.....that the contents of my above affidavit are true and correct to the best of my knowledge and belief and nothing material has been concealed therefrom.

DEPONENT

(Seal and signature of Notary Public)

- Notes: 1. In this format space has been provided for entering details of two constituents of the JV however if the number vary details may accordingly be entered.
2. The document should be notarized at its place of execution (Place of signing the document).
3. Each page of the document should be signed by executants.

ANNEXURE-XXV

**BOARD'S RESOLUTION OF COMPANY FOR ENTERING INTO JOINT VENTURE
(To be printed on Company's letter head)**

EXTRACT OF THE RESOLUTION PASSED AT THE MEETING OF THE BOARD OF DIRECTORS OF (Company Name) _____ (CIN _____) (hereinafter referred to as company) HELD ON (Date) _____ AT (Address) _____

Whereas the Board has been described about NIT No. _____ issued by HRIDC for the work namely " _____ ".

Board discussed the matter and after discussion following resolution was passed:

RESOLVED THAT the company (company name) shall participate in the above tender in Joint Venture and for the purpose the company shall enter into and execute joint venture agreement, with M/S _____ & M/S _____ (name of other constituent(s) of joint venture).

Resolved further that the Board authorizes, Mr. /Ms. _____ & Mr./Ms. _____ (name and designation) of the company, to jointly or severally, sign joint venture agreement, and to sign such other documents and to do any other act and complete requisite formalities on behalf of the company in connection with completion of aforesaid tender work and to enter into liability against the company.

Resolved further that Board authorizes Mr./Ms. _____ (name and designation) of the company to execute Power of Attorney in terms of this resolution in favor of Mr./Ms. _____ & Mr./Ms. _____ the person(s) above named.

The acts done and documents executed by such above named authorized person(s) shall be binding on the company.

For the Organization,

(Seal of company & Signature of authorized person)

Name: _____

Designation: _____

Place:

Dated:

Executed and Signed before me on this.....day ofAt(place).

(Seal and signature of Notary Public)

- Notes:**
1. In this format space has been provided for entering details of two constituents of the JV and two authorized persons however if the number vary details may accordingly be entered.
 2. The document should be notarized at its place of execution (Place of signing the document).
 3. Each page of the document should be signed by authorized signatory(s).

ANNEXURE-XXVI

POWER-OF-ATTORNEY BY A COMPANY (incorporated under companies Act) for entering into JOINT VENTURE AGREEMENT

**(To be executed non judicial stamp paper of appropriate value as per law of state concerned
Non-Judicial stamp paper should be purchased in the name of the company)**

KNOW ALL MEN BY THESE PRESENTS: WHEREAS M/S
..... (name of company & CIN number) is a Company registered under the Companies Act, 2013, and having its registered office at..... (Hereinafter called the 'Company').

AND WHEREAS by its resolution No..... passed in the meeting held on..... of the Board of directors of the company the company (company name) has decided to participate in the tender No._____ issued by HRIDC for the work namely “_____” in Joint Venture and for the purpose the company shall enter into and execute joint venture agreement with M/S_____ & M/S_____ (name of other constituent(s) of joint venture) AND THAT M/S_____ (name of the lead member of joint venture) shall act as the lead member of above mentioned joint venture.

I.....(name and designation) the authorised representative of M/S (name of company) duly authorized in this behalf by aforesaid resolution do hereby irrevocably constitute, nominate, appoint and authorize Mr./ Ms. _____(designation)_____ (address)_____ &Mr./ Ms.Mr./ Ms. _____(designation)_____ (address)_____ who is/are presently holding the above mentioned position in the company as our true and lawful attorney (hereinafter referred to as “Attorney”) of the company to jointly or severally exercise all or any of the following powers for and on behalf of M/S (Name of company & CIN number) in connection with aforesaid bid:

1. To enter into and execute and sign JOINT VENTURE agreement, draft of which has been approved by the company, on behalf of the company with above named constituents for participating in the aforesaid bid of the HRIDC on behalf of the company.
2. To sign and submit all the necessary papers, letters, forms, quotes, bids etc.
3. To do any other act and complete requisite formalities on behalf of the company in connection with completion of aforesaid tender work and to enter into liability against the company.
4. And generally, to do all such acts, deeds or things as may be necessary or proper for the purposes mentioned above.

The company agrees and undertakes that in the event of any change in the constitution of the company the rights and obligations of the company shall continue to be in full force without any effect thereof. The company undertakes that it shall not cancel or amend this power of Attorney without obtaining previous written consent of HRIDC.

AND the Company hereby agrees that all acts, deeds or things lawfully done by the said Attorneys or either of them under the authority of this power shall be construed as acts, deeds and things done by the Company and the Company hereby undertakes to confirm and ratify all and whatsoever the said Attorneys or either of them shall lawfully do or cause to be done by virtue of the powers hereby given. IN WITNESS WHEREOF this deed has been signed and sealed by Shri..... (name and designation), on this..... day of..... 20... , in presence of:

WITNESSES:

- | | |
|--------------|---|
| 1. Signature | Executants Signature & Seal of Company: |
| Name: | Name: |
| Address: | Designation: |
| 2. Signature | |
| Name: | |
| Address: | |

Specimen Signatures of Attorney Holder in token of acceptance:

- (1) NameSignature.....
- (2) NameSignature.....

Executed and Signed before me on this.....day of At (place).

(Seal and signature of Notary Public)

- Notes:
- 1. In this format space has been provided for entering details of two constituents of the JV and two authorized persons/attorney holders however if the number vary the details may accordingly be entered.
 - 2. The document should be notarized at its place of execution (Place of signing the document).
 - 3. Each page of the document should be signed by executants

ANNEXURE-XXVII

Partner's Resolution of LLP Firm for entering into Joint Venture (To be printed on LLP Firm's letter head)

EXTRACT OF THE RESOLUTION PASSED AT THE MEETING OF THE PARTNERS OF _____ (LLP Name) having LLPIN _____ of 20.....)(hereinafter referred to as LLP) HELD ON (Date) _____ AT (Address) _____

Whereas the Partners have been described about NIT No. _____ issued by HRIDC for the work namely " _____".

Partners discussed the matter and after discussion following resolution was passed:

RESOLVED THAT the LLP..... (LLP name) shall participate in the above tender in Joint Venture and for the purpose the LLP shall enter into and execute joint venture agreement, with M/s _____ & M/s _____ (name of other constituent(s) of joint venture).

Resolved further that the LLP/Partners authorize(s), Mr./ Ms. _____ & Mr./ Ms. _____ (name and designation) of the LLP, to jointly or severally, sign joint venture agreement, and to sign such other documents and to do any other act and complete requisite formalities on behalf of the LLP in connection with completion of aforesaid tender work and to enter into liability against the LLP.

Resolved further that LLP/Partners authorize(s) Mr./Ms. _____ (name and designation) of the LLP to execute Power of Attorney in terms of this resolution in favour of Mr./Ms. _____ & Mr./Ms. _____ the person(s) above named.

The acts done and documents executed by such above named authorized person(s) shall be binding on the LLP.

For the Organization,

(Seal of LLP & Signature of authorized person)

Name of authorized person: _____

Designation: _____

Place:

Dated:

Executed and Signed before me on this.....day of At(place).

(Seal and signature of Notary Public)

- Notes: 1. In this format space has been provided for entering details of two constituents of the JV and two authorized persons however if the number vary details may accordingly be entered.
2. The document should be notarized at its place of execution (Place of signing the document).
3. Each page of the document should be signed by authorized signatory(s).

ANNEXURE-XXVIII

**POWER of ATTORNEY BY AN LLP Firm (incorporated under LLP Act) for entering into
JOINT VENTURE AGREEMENT**

**(To be executed non judicial stamp paper of appropriate value as per law of state concerned
Non-Judicial stamp paper should be purchased in the name of the LLP)**

KNOW ALL MEN BY THESE PRESENTS: WHEREAS M/S
..... (name of LLP & LLPIN number) is a LLP
registered under the LLP Act, 2008, and having its registered office at..... (Hereinafter
called the 'LLP')

AND WHEREAS by its resolution No..... passed in the meeting held
on..... of the Partners of the LLP, the LLP..... (LLP name) has
decided to participate in the tender No._____ issued by HRIDC
for the work namely “_____”
in Joint Venture and for the purpose the LLP shall enter into and execute joint venture agreement with
M/S_____ & M/S_____ (name of other
constituent(s) of joint venture) AND THAT M/S_____ (name of the lead
member of joint venture) shall act as the lead member of above mentioned joint venture.

I.....(name and designation) the authorised
representative of M/S (name of
LLP) duly authorized in this behalf by aforesaid resolution do hereby irrevocably constitute, nominate,
appoint _____ and _____ authorize _____ Mr./Ms.
_____ (designation) _____ (address) _____ & _____ Mr./Ms.
_____ (designation) _____ (address) _____ who is/are presently
holding the above mentioned position in the LLP as our true and lawful attorney (hereinafter referred
to as “Attorney”) of the LLP to jointly or severally exercise all or any of the following powers for and
on behalf of M/S (Name of
LLP & LLPIN number) in connection with aforesaid bid:

1. To enter into and execute and sign JOINT VENTURE agreement, draft of which has been approved
by the LLP, on behalf of the LLP with above named constituents for participating in the aforesaid
bid of HRIDC on behalf of the LLP.
2. To sign and submit all the necessary papers, letters, forms, quotes, bids etc.
3. To do any other act and complete requisite formalities on behalf of the LLP in connection with
completion of aforesaid tender work and to enter into liability against the LLP.
4. And generally to do all such acts, deeds or things as may be necessary or proper for the purposes
mentioned above.

The LLP agrees and undertakes that in the event of any change in the constitution of the LLP, the
rights and obligations of the LLP shall continue to be in full force without any effect thereof.

The LLP undertakes that it shall not cancel or amend this power of Attorney without obtaining
previous written consent of HRIDC.

AND the LLP hereby agrees that all acts, deeds or things lawfully done by the said Attorneys or either of them under the authority of this power shall be construed as acts, deeds and things done by the LLP and the LLP hereby undertakes to confirm and ratify all and whatsoever the said Attorneys or either of them shall lawfully do or cause to be done by virtue of the powers hereby given.

IN WITNESS WHEREOF this deed has been signed and sealed by Shri.....(name and designation), on this..... day of..... 20... , in presence of:

Specimen Signatures of Attorney Holder in token of acceptance:

(1) Name Signature.....

(2) Name Signature.....

Executed and Signed before me on this.....day of At(place).

(Seal and signature of Notary Public)

- Notes: 1. In this format space has been provided for entering details of two constituents of the JV and two authorized persons/attorney holders however if the number vary the details may accordingly be entered.
2. The document should be notarized at its place of execution (Place of signing the document).
3. Each page of the document should be signed by executants.

ANNEXURE-XXIX

POWER-OF-ATTORNEY FOR SIGNING OF BID (when Tenderer is company incorporated under Companies Act)

**(To be executed non judicial stamp paper of appropriate value as per law of state concerned
Non-Judicial stamp paper should be purchased in the name of the company)**

KNOW ALL MEN BY THESE PRESENTS: WHEREAS M/S
..... (name of company & CIN number) is a Company registered under the Companies Act, 2013, and having its registered office at..... (Hereinafter called the 'Company').

AND WHEREAS by its resolution No..... passed in the meeting held on..... of the Board of directors of the company the company (company name) have decided to participate in the tender No._____ issued by HRIDC for the work namely “_____”

I.....(name and designation) the authorised representative of M/S (name of company) duly authorized in this behalf by aforesaid resolution do hereby irrevocably constitute, nominate, appoint and authorize Mr./ Ms. _____(designation)_____ (address)_____ &Mr./ Ms.Mr./ Ms. _____(designation)_____ (address)_____ who is/are presently holding the above mentioned position in the company as our true and lawful attorney (hereinafter referred to as “Attorney”) of the company to jointly or severally exercise all or any of the following powers for and on behalf of M/S (name of company & CIN number) in connection with aforesaid bid:

1. To sign and submit Tender and participate in the aforesaid bid of HRIDC on behalf of the company.
2. To sign and submit all the necessary papers, letters, forms, quotes, bids etc.
3. To negotiate, discuss, agree to make any amendments, alterations or modifications thereto and to make representations, submit papers, affidavits and to do any other act and complete requisite formalities on behalf of the company in connection with completion of aforesaid tender work and to enter into liability against the company.
4. To sign, execute the contract with HRIDC for and on behalf of the company.
5. And generally to do all such acts, deeds or things as may be necessary or proper for the purposes mentioned above.

The company agrees and undertakes that in the event of any change in the constitution of the company the rights and obligations of the company shall continue to be in full force without any effect thereof. The company undertakes that it shall not cancel or amend this power of Attorney without obtaining previous written consent of HRIDC.

AND the Company hereby agrees that all acts, deeds or things lawfully done by the said Attorneys or either of them under the authority of this power shall be construed as acts, deeds and things done by the Company and the Company hereby undertakes to confirm and ratify all and whatsoever the said Attorneys or either of them shall lawfully do or cause to be done by virtue of the powers hereby given.

IN WITNESS WHEREOF this deed has been signed and sealed by Shri.....(name and designation), on this..... day of..... 20...., in presence of:

WITNESSES:

1. Signature
Name:
Address:

Executants Signature & Seal of Company:
Name:
Designation:

2. Signature
Name:
Address:

Specimen Signatures of Attorney Holder(s) in token of acceptance:

(1) Name Signature.....

(2) Name..... Signature.....

Executed and Signed before me on this.....day of At(place).

(Seal and signature of Notary Public)

- Notes:** 1. In this format space has been provided for entering details of two authorized persons/attorney holders however if the number vary details may accordingly be entered.
2. The document should be notarized at its place of execution (Place of signing the document).
3. Each page of the document should be signed by executants.

ANNEXURE-XXX

Board's Resolution of company incorporated under companies Act for submitting Tender by company (To be printed on company's letter head)

EXTRACT OF THE RESOLUTION PASSED AT THE MEETING OF THE BOARD OF DIRECTORS OF _____ (Company Name) _____ (CIN _____) (hereinafter referred to as company) HELD ON (Date) _____ AT (Address) _____

Whereas the Board has been described about NIT no. _____ issued by HRIDC for the work namely “ _____ ”. Board discussed the matter and after discussion following resolution was passed:

RESOLVED THAT the company (company name) shall participate in the above tender.

Resolved further that the Board authorizes, Mr./ Ms. _____ & Mr./ Ms. _____ (name and designation) of the company, to jointly or severally sign and submit all the necessary papers, letters, forms, quotes, bids etc, negotiate, discuss, agree to make any amendments, alterations or modifications thereto and to make representations, submit papers, affidavits and to do any other act and complete requisite formalities on behalf of the company in connection with completion of aforesaid tender work and to enter into liability against the company.

Resolved further that Board authorizes Mr./Ms. _____ (name and designation) of the company to execute Power of Attorney in terms of this resolution in favour of Mr./Ms. _____ & Mr./Ms. _____ the person(s) above named.

The acts done and documents executed by such above named authorized person(s) shall be binding on the company.

For the Organization,

(Seal of company & Signature of authorized person)

Name: _____

Designation: _____

Place:

Dated:

Executed and Signed before me on this.....day of At(place).

(Seal and signature of Notary Public)

- Notes:**
1. In this format space has been provided for entering details of two authorized persons however if the number vary details may accordingly be entered.
 2. The document should be notarized at its place of execution (Place of signing the document).
 3. Each page of the document should be signed by authorized signatory (s).

ANNEXURE-XXXI

POWER-OF-ATTORNEY FOR SIGNING OF BID (when Tenderer is LLP Firm incorporated under LLP Act)

**(To be executed non judicial stamp paper of appropriate value as per law of state concerned
Non-Judicial stamp paper should be purchased in the name of the LLP Firm)**

KNOW ALL MEN BY THESE PRESENTS: WHEREAS M/S
..... (name of LLP & LLPIN number) is a LLP Firm registered under the LLP Act, 2008, and having its registered office at..... (hereinafter called the 'LLP').
AND WHEREAS by its resolution No..... passed in the meeting held on..... of the Partners of the LLP the LLP..... (LLP name) have decided to participate in the tender No. _____ issued by HRIDC for the work namely “ _____ ”

I.....name and designation) the authorised representative of M/S (name of LLP) duly authorized in this behalf by aforesaid resolution do hereby irrevocably constitute, nominate, appoint and authorize Mr./Ms. _____ (designation) _____ (address) _____ &Mr./ Ms./Mr./Ms. _____ (designation) _____ (address) _____ who is/are presently holding the above mentioned position in the LLP as our true and lawful attorney (hereinafter referred to as “Attorney”) of the LLP to jointly or severally exercise all or any of the following powers for and on behalf of M/S (name of LLP & LLPIN number) in connection with aforesaid bid:

1. To sign and submit Tender and participate in the aforesaid bid of HRIDC on behalf of the LLP.
2. To sign and submit all the necessary papers, letters, forms, quotes, bids etc.
3. To negotiate, discuss, agree to make any amendments, alterations or modifications thereto and to make representations, submit papers, affidavits and to do any other act and complete requisite formalities on behalf of the LLP in connection with completion of aforesaid tender work and to enter into liability against the LLP.
4. To sign, execute the contract with HRIDC for and on behalf of the LLP.
5. And generally to do all such acts, deeds or things as may be necessary or proper for the purposes mentioned above.

The LLP agrees and undertakes that in the event of any change in the constitution of the LLP, the rights and obligations of the LLP shall continue to be in full force without any effect thereof.
The LLP undertakes that it shall not cancel or amend this power of Attorney without obtaining previous written consent of HRIDC.

AND the LLP hereby agrees that all acts, deeds or things lawfully done by the said Attorneys or either of them under the authority of this power shall be construed as acts, deeds and things done by the LLP and the LLP hereby undertakes to confirm and ratify all and whatsoever the said Attorneys or either of them shall lawfully do or cause to be done by virtue of the powers hereby given.

IN WITNESS WHEREOF this deed has been signed and sealed by Shri.....(name and designation), on this..... day of..... 20...., in presence of:

WITNESSES:

- | | |
|--------------|--|
| 1. Signature | Signatures of authorized representative & Seal of LLP: |
| Name: | |
| Address: | |
| | Name of authorized representative (Executant): |
| | Designation: |
| 2. Signature | |
| Name: | |
| Address: | |

Specimen Signatures of Attorney Holder(s) in token of acceptance:

- (1)Name Signature.....
- (2Name).....Signature.....

Executed and Signed before me on this.....day of At(place).

(Seal and signature of Notary Public)

- Notes:** 1. In this format space has been provided for entering details of two authorized persons/attorney holders however if the number vary details may accordingly be entered.
2. The document should be notarized at its place of execution (Place of signing the document).
3. Each page of the document should be signed by executants.

DECLARATION

I/We hereby solemnly declare that I/We visited the site of the work (as on top sheet) personally and have made myself/ourselves fully conversant of the conditions therein and particular the following:

1. Topography of area.
2. Soil strata at site of work.
3. Sources and availability of construction materials.
4. Rates for construction of material, water, electricity including all local taxes, royalties, octrois etc.
5. Availability of local labour (both skilled and unskilled) and relevant labour rates and labour laws.
6. The existing roads and approaches to the site of work and requirements for further service roads/approaches to be constructed by me/us.
7. The availability and rates of private land etc. that shall be required by me/us for various purposes.
8. Climatic conditions and availability of working days.

I/We have quoted my/our rates for various items in the schedule of items, quantities and rates taking into account all the above factors also.

Signatures of the Tenderer/s

INSTRUCTIONS REGARDING ELECTRONIC TENDERING SYSTEM

These conditions will over-rule the conditions stated in the tender documents, wherever relevant and applicable.

1. Registration of bidders on e-tendering Portal:

All the bidders intending to participate in the tenders process online are required to get registered on the centralized e-tendering Portal i.e. <https://etenders.hry.nic.in>. Please visit the website for more details.

2. Obtaining a Digital Certificate:

2.1. The Bids submitted online should be encrypted and signed electronically with a Digital Certificate to establish the identity of the bidder bidding online. These Digital Certificates are issued by an Approved Certifying Authority, by the Controller of Certifying Authorities, Government of India.

2.2. A Digital Certificate is issued upon receipt of mandatory identity (i.e. Applicant's PAN Card) and Address proofs and verification form duly attested by the Bank Manager/ Postmaster/ Gazetted Officer. Only upon the receipt of the required documents, a digital certificate can be issued. For more details please visit the website– <https://etenders.hry.nic.in>.

2.3. The bidders may obtain Class-II or III digital signature certificate from any Certifying Authority or Sub-Certifying Authority authorized by the Controller of Certifying Authorities or may obtain information and application format and documents required for the issue of digital certificate from.

2.4. The bidder must ensure that he/she comply by the online available important guidelines at the portal <https://etenders.hry.nic.in> for Digital Signature Certificate (DSC) including the e-Token carrying DSCs.

Ms. Manju Aggarwal

Technical Director,

Scientist-E, NIC.

Panchkula.

E - mail: a.manju@nic.in

Help Desk: 0172 – 584257, 94170-69017.

2.5. Bid for a particular tender must be submitted online using the digital certificate (Encryption & Signing), which is used to encrypt and sign the data during the stage of bid preparation. In case, during the process of a particular tender, the user loses his digital certificate (due to virus attack, hardware problem, operating system or any other problem) he will not be able to submit the bid online.

Hence, the users are advised **to keep a backup of the certificate** and also keep the copies at safe place under proper security (for its use in case of emergencies).

- 2.6. In case of online tendering, if the digital certificate issued to the authorized user of a firm is used for signing and submitting a bid, it will be considered equivalent to a no-objection certificate/power of attorney /lawful authorization to that User. The firm has to authorize a specific individual through an authorization certificate signed by all partners to use the digital certificate as per Indian Information Technology Act 2000. Unless the certificates are revoked, it will be assumed to represent adequate authority of the user to bid on behalf of the firm in the department tenders as per Information Technology Act 2000. The digital signature of this authorized user will be binding on the firm.
- 2.7. In case of any change in the authorization, it shall be the responsibility of management/ partners of the firm to inform the certifying authority about the change and to obtain the digital signatures -7- of the new person / user on behalf of the firm / company. The procedure for application of a digital certificate however will remain the same for the new user.
- 2.8. The same procedure holds true for the authorized users in a private/Public limited company. In this case, the authorization certificate will have to be signed by the directors of the company.

3. Opening of an Electronic Payment Account:

For purchasing the tender documents online, bidders are required to pay the tender documents fees online using the electronic payments gateway service shall be integrated with the system very soon till then it will be submitted manually. For online payments guidelines, please refer to the Home page of the e-tendering Portal <https://etenders.hry.nic.in>

4. Pre-requisites for online bidding:

In order to operate on the electronic tender management system, a user's machine is required to be set up. A help file on system setup/Pre-requisite can be obtained from National Informatics Centre or downloaded from the home page of the website - <https://etenders.hry.nic.in> the link for downloading required java applet & DC setup are also available on the Home page of the e-tendering Portal.

5. Online Viewing of Detailed Notice Inviting Tenders:

The bidders can view the detailed N.I.T and the time schedule (Key Dates) for all the tenders floated through the single portal e-tendering system on the Home Page at <https://etenders.hry.nic.in>

6. Download of Tender Documents:

The tender documents can be downloaded free of cost from the e-tendering portal <https://etenders.hry.nic.in>

7. Key Dates:

The bidders are strictly advised to follow dates and times as indicated in the online Notice Inviting Tenders. The date and time shall be binding on all bidders. All online activities are time tracked and the system enforces time locks that ensure that no activity or transaction can take place outside the start and end dates and the time of the stage as defined in the online Notice Inviting Tenders.

8. Online Payment of Tender Document Fee, eService fee & EMD fees & Bid Preparation & Submission (Technical & Commercial/ Financial Bid):

8.1. Online Payment of Tender Document Fee + e-Service fee: The online payment for Tender document fee, eService Fee & EMD can be done using the secure electronic payment gateway. The Payment for Tender Document Fee and eService Fee shall be made by bidders/ Vendors online directly through Debit Cards & Internet Banking Accounts and the Payment for EMD shall be made online directly through RTGS / NEFT & OTC.

The secure electronic payments gateway is an online interface between Contractors and Debit card/ online payment authorization networks.

8.2. Preparation & Submission of online Applications/Bids:

- i. Detailed Tender documents may be downloaded from e-tendering website (<https://etenders.hry.nic.in>) from **11.01.2023 at 05:00 PM to 03.02.2023 up to 03:00 PM** and tender mandatorily be submitted online following the instructions appearing on the screen.
- ii. **Scan copy of Documents to be submitted/uploaded for Technical& Commercial bid under online Technical Envelope:** The required documents as indicated in this tender document shall be prepared and scanned in different file formats (in PDF /JPEG/MS WORD format such that file size is not exceed more than 10 MB) and uploaded during the on-line submission of PQQ or Technical Envelope.

A. Only Electronic Form (Refer Tender document).

Financial or Price Bid shall be submitted mandatorily online under Commercial Envelope and original not to be submitted manually.

NOTE: -

- (A) *Bidders participating in online tenders shall check the validity of his/her Digital Signature Certificate before participating in the online Tenders at the portal <https://etenders.hry.nic.in>.*
- (B) **For help manual please refer to the ‘Home Page’ of the e-tendering website at <https://etenders.hry.nic.in>, and click on the available link ‘How to...?’ to download the file.**

In the first instance, the online payment details of tender document fee + e-Service and EMD & PQQ/Technical Envelope shall be opened. Henceforth financial bid quoted against each of the item by the shortlisted bidder/ Agency wherever required shall be opened online in the presence of such bidders/ agency who either themselves or through their representatives choose to be present.

The bidder can submit online their bids as per the dates mentioned in the schedule/Key Dates above.

Other Information:

1. The Tenderers shall fill in the item rate in the online BOQ templates of the tender.

2. Duly accepted copy of notarized or registered power of Attorney along with its two certified copies in the name of tenderer or authorized representative to act on behalf of the agency.
3. Bidder must strictly abide by the stipulations set forth in detailed notice inviting tenders while tendering for the work.
4. In case any tenderer does not comply with procedure given in the tender document, it will be presumed that the tenderer is not interested in work and the work shall not be let out to him. Further he may be de-barred without further notice to him for failing to abide by the approved terms of detailed notice inviting tenders for this work.
5. The tenders which are not accompanied by the earnest money or do not strictly follow the technical requirement, are liable to be summarily rejected without arising any reason and no claim whatsoever on their account will be considered.
6. Tenders quotations which are dependent upon the quotations of another tender shall be summarily rejected.

Constitution of Firm

S.No.	Particular	Response
1	Constitution of the Firm (Tick as applicable)	Sole Proprietorship Firm/ Partnership Firm/ Company/ JV/ LLP/ Registered Society or Trust
2	Full name of the Sole Proprietorship Firm/ Partnership Firm/ Company/ JV/ LLP/ Registered Society or Trust (as the case may be)	
3	Year of formation/ incorporation	
4	PAN No.	
5	Registered Office Address	
6	Address on which correspondence regarding this tender should be done	
7	Names of the proprietor/ partners/ JV members etc.	

Undertaking:

We have uploaded along with the tender, all the requisite documents pertaining to the constitution of the firm/ concern/company. etc, as specified in Annexure –A of Tender Notice. **I/We understand that in the absence of these documents, offer shall be considered incomplete and shall be summarily rejected.**

Date:

Signature of Tenderer/s with Seal

ANNEXURE-XXXV

Details of Plant and Machinery already available with the firm

S.No	Particulars of equipment, plant/ machinery	No. of Unit	Kind and make	Capacity	Date by which the plant/ machinery would be available for use on this work	Age & Conditions
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1.						
2.						
3.						
4.						
5.						
6.						
7.						
8.						

Signature of Tenderer/s with Seal

ANNEXURE-XXXVI

LIST OF ENGINEERS/PERSONNEL ALREADY AVAILABLE/ PROPOSED TO BE EMPLOYED FOR DEPLOYMENT ON THIS WORK:

S. No	Name & Designation	Qualification	Professional experience	Organization with whom working	Date by which personnel will be available for this work.
(1)	(2)	(3)	(4)	(5)	(6)

Date:

Signature of Tenderer/s with Seal

ANNEXURE-XXXVII

**STATEMENT OF WORKS EXECUTED/COMPLETED BY THE CONTRACTORS DURING
LAST 7 (SEVEN) YEARS ENDING LAST DAY OF MONTH PREVIOUS TO THE ONE IN
WHICH TENDER IS INVITED**

(Details of works of similar nature physically completed in all respect as per contract agreement during last seven years, ending last day of month previous to the one in which tender is invited)

S. No	Name and place of work	Authority /agency for which work was carried out	Date of award & agreement No.	Date of completion (original /actual)	Agreemental cost/ completion cost.	Principal / Technica l features work in brief	S.No. at which relevant certificate /documents are attached
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)

Signature of Tenderer/s with Seal

ANNEXURE-XXXVIII

STATEMENT OF WORKS BEING EXECUTED/IN HAND BY THE CONTRACTOR/S

S . N o	Name and place of work	Authority /agency for which work was carried out	Date of award & agreement No.	Date of completion	Agreement Cost	Principa l/ Technic al features work in brief	S.No. at which relevant certificat e /documen ts are attached	Payment taken till date
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)

Date:

Signature of Tenderer/s with Seal

ANNEXURE-XXXIX

Detail of contractual payment received in last 3 (three) financial year and current financial year

S. No	Name and place of work	Name of employer	Detail of payment.	For the financial year	Total contract amount received
(1)	(2)	(3)	(4)	(5)	(6)

**Real Time Gross Saving (RTGS)/National Electronic Fund Transfer (NEFT)
Model Mandate Form**

(Investor/customer's option to receive payments through RTGS/NEFT)

1. Investor/customer's name

2. Particulars of Bank Account:

A) Name of the Bank:

B) Name of the Branch.

Address

Telephone No.

C) RTGS/NEFT IFS Code.

D) Type of the account (S.B. Current or Cash Credit)

With code (10/11/13).

E) Ledger and Ledger folio number.

F) Account number (as appearing on the Cheque book) in lieu of the bank certificate to be obtained as under, please attach a blank cancelled cheque or a photocopy of a cheque or front page of your savings bank passbook issued by your bank for verification of the above particulars)

3. Date of effect

I hereby declare that the particulars given above are correct and complete. If the transaction is delayed or not effected at all for reasons of incomplete or incorrect information, I would not hold the user institution responsible. I have read the option invitation letter and agree to discharge the responsibility expected of me as a participant under the scheme.

(.....)
Signature of the Investor/ Customer

Date:

Certified that the particulars furnished above are correct as per our records.

Bank's Stamp

COMPLETION CERTIFICATE

The work of “----- (Full name of the work) -----” has been Completed with following details:

1	Name & complete address of the Contractor.	
2	Nature of entity (sole prop/partnership firm/company / JV)	
3	a) In case of Sole proprietorship, the name of sole proprietor	
	b) In case of partnership firm/JV, the names & shares of various partners/members.	
4	Date of Acceptance/LOA	
5	Agreement No. & date	
6	i) Original Agreement Cost ii) Final Agreement Cost	
7	Total payment made along with financial year-wise break-up	
8	Original date of completion (DOC)	
9	a) Actual date of completion (b)Whether extension to DOC given with penalty or without penalty	
10	Brief description of nature & scope of work	
11	Performance of Contractor (Satisfactory/unsatisfactory)	

It is certified that the above work has been completed successfully in accordance with provisions of contract.

(-----)
Name & Signature
Issuing authority with seal

Date of issue of certificate: -----

ANNEXURE-XLII

DECLARATION/UNDERTAKING

I/We, _____ (name and Designation) on behalf of _____ (Name of the tendering firm) do hereby declare/undertake that I/We have not employed any retired Engineer or retired gazette officer, nor made any Partner/Director etc. in our firm who retires from Government of India/ Government of Haryana Service in last one year as on the date of opening of tender, as per terms of tender document.

(authorized signatory)
Name of the tendering firm

Place:

Dated:

ANNEXURE-XLIII

STANDING INDEMNITY BOND FOR 'ON ACCOUNT' PAYMENTS

(On paper of requisite stamp value)

We, M/s..... hereby undertake that we hold at our stores Depot/s at for and on behalf of the President of India acting in the premises through the General Manager(IE&A) or his successor..... HRIDC..... (hereinafter referred to as "The Purchaser") all materials for which 'On Account' payments have been made to us against the Contract for supply and erection of (25 KV A.C Traction overhead equipment, Switching Stations, B.T. Stations, L.T. Supply Transformer Stations, Traction Sub-Station and SCADA works) *.on the section/s.....HRIDC also referred to as Group/s vide letter of Acceptance of Tender No..... dated..... and materials handed over to us by the purchaser for the purpose of execution of the said Contract, until such time the materials are duly erected or otherwise handed over to him.

We shall be entirely responsible for the safe custody and protection of the said materials against all risk till they are duly delivered as erected equipment to the purchaser or as he may direct otherwise and shall indemnify the purchaser against any loss damage or deterioration whatsoever in respect of the said materials while in our possession and against disposal of surplus materials. The said materials shall at all times be open to inspection by any officer authorised by the General Manager(IE&A) in charge of HRIDC (whose address will be intimated in due course).

Should any loss, damage or deterioration of materials occur or surplus materials disposed of and refund becomes due, the Purchaser shall be entitled to recover from us the full cost as per prices included in Schedule 3, for OHE works and in respect of other materials. section 1 and also compensation for such loss or damage if any long with the amount to be refunded without prejudice to any other remedies available to him by deduction from any sum due or any sum which at any time hereafter becomes due to us under the said or any other Contract.

Dated this day..... day of..... 20

for and on behalf of

M/s.....(Contractor)

Signature of witness

Name of witness in Block Letters

Address.

* Strike out whichever is not applicable

ANNEXURE-XLIV

(On Stamp Paper of Requisite Value)

GUARANTEE BOND AGAINST "ON ACCOUNT" PAYMENTS

(TO BE USED BY APPROVED SCHEDULE BANKS/NATIONALISED BANKS)

In consideration of the President of India " hereinafter called "the Government") having agreed to exempt.....(hereinafter called "the said Contractor (s)") from the demand, under the terms and conditions of an Agreement dated.....made between.... and for (hereinafter called "the said Agreement") of "On- Account" Payments for the due fulfilment by the said Contractor (s) of the terms and conditions contented in the said Agreement, on production of a Bank guarantee for Rs.....(Rupees.....only).

We,..... (indicate the name of Bank)hereinafter referred to as "the Bank" at the request of (Contractor(s) do hereby undertake to pay to the Government an amount not exceeding Rs..... against any loss or damage caused to or suffered or would be caused to or suffered by the Government by reason of any breach by the said Contractor (s) of any of the terms or conditions contained in the said Agreement.

2. We..... do hereby undertake to Pay (indicate the name of the Bank) the amount due and payable under this guarantee without any demur, merely on a demand from the Government stating that the amount claimed is due by way of loss or damage caused to or would be caused to or suffered by the Government by reason of breach by the said Contractor (s) of any of the terms or conditions contained in the said Agreement or by reason of the Contractor (s) failure to perform the said Agreement. Any such demand made on the Bank shall be conclusive as regards the amount due and payable by the Bank under this guarantee. However, our liability under this guarantee shall be restricted to an amount not exceeding.....

3. We undertake to pay to the Government any money so demanded notwithstanding any dispute or disputes raised by the Contractor (s)/ supplier (s) in any suit for proceeding pending before any court or Tribunal relating thereto our liability under this present contract being absolute and unequivocal,

The payment so made by us under this bond shall be a valid discharge of our liability for payment there under and the Contractor (s)/supplier(s) shall have no claim against us for making such payment.

4. We..... (indicate the name of Bank) further agree that the guarantee herein contained shall remain in full force and effect during the period that would be taken for the performance of the said Agreement and that it shall continue to be enforceable till all the dues of the Government under or by virtue of the said Agreement have been fully paid and its claims satisfied or discharged or till..... office/ Department Ministry of.....certifies that the terms and conditions of the said Agreement have been fully and properly carried out by the said contractor (s) and accordingly discharges this guarantee. Unless a Demand or claim under this guarantee is made on us in writing on or before the (b) we shall be discharged from all liability under this guarantee thereafter.

5. We..... (indicate the name of Bank) further agree with the Government that the Government shall have the fullest liberty without our consent and without affecting in any manner our obligations hereunder to vary any of the terms and conditions of the said Agreement or to extend time of performance by the said Contractor (s) from time to time or to postpone for any time or from time to time any of the powers exercisable by the Government against the said

Contractor (s) and to forbear or enforce any of the terms and conditions relating to the said agreement and we shall not be relieved from our liability by reason of any such variation, or extension being granted to the said Contractor (s) or for any forbearance, act or omission on the part of the Government or any indulgence by the Government to the said Contractor (s) or by any such matter or thing whatsoever which under the law relating to sureties would, but for this provision, have effect of so relieving us.

6. This guarantee will not be discharged due to the change in the constitution of the Bank or the Contractor (s)/ Supplier (s).

7. We..... (indicate the name of Bank) lastly undertake not to revoke this guarantee during its currency except with the previous consent of the Government in writing.

Dated : the day of 200

for.....

(indicate the name of Bank)

SCHEDULE OF QUANTITY (BoQ's)

Abstract of 25 kV single Phase Overhead Equipment work of KKDE By Pass- Narwana line of Northern Railway (5.18 TKM)								
In C/W Elevated Railway Track work at Kurukshetra								
Schedule 1		OHE Items						
S N.	Section	Supply	Percentage (%) above SOR Rates as per average of LAR	Amount	Erection	Percentage(%) above SOR Rates as per average of LAR	Amount	Grand Total (Supply + Erection)
1	Section-1 (General)	312828.00	145.11%	766772.71	153149.20	129.77%	351890.92	1118663.63
2	Section-2 (Concrete)	176904.00	231.65%	586702.12	55305.00	211.08%	172042.79	758744.91
3	Section-3 (Ferrous)	9887723.14	160.06%	25714012.81	348422.12	141.45%	841265.20	26555278.01
4	Section-4(a) (Non-Ferrous)	593474.20	132.77%	1381429.90	108669.20	124.87%	244364.43	1625794.33
5	Section-4(b) (Non-Ferrous)	16276214.00	0.00%	16276214.00	0.00	0.00%	0.00	16276214.00
6	Section-5 (Insulators)	708012.82	158.38%	1829363.52	0.00	0.00%	0.00	1829363.52
7	Section-6 (Ns-Item)							1625275.57
TOTAL (Including GST@ 18 %)		27955156.16		46554495.05	665545.52		1609563.34	49789333.97
GRAND TOTAL (Round Off)								49789334.00

Qty Schedule Of OHE KKDE By pass Narwana line of Northern Railway(5.18TKM)								
SCHEDULE 1								Form-5,Sheet-1
SCHEDULE OF PRICES & TOTAL PRICES								
SECTION 1 (GENERAL)								
This schedule shall be read in conjunction with its explanatory notes in tender document for detailed description for various items included therein. The rates at which payments are to be made shall be arrived at by loading these rates uniformly for each item with the percentage quoted by the tenderer for this section.								
Item No.	Description	UOM	(All prices are in Rs.)					
			SOR Rate		Qty.	Total Prices		
			Materials	Erection		Materials	Erection	Total (M+E)
1	2	3	4	5	6	7	8	9
1(a)	Preparation of designs and drawings for overhead equipment and verification of pegging plan.	Track km.	0	9344	5.925	0.00	55,363.20	55,363.20
1(b)	Preparation of designs and drawings for switching stations (FP/SP/SSP)	Each	0	16051	1	0.00	16,051.00	16,051.00
5(a)(i)	Supply without insulator and erection of mounting arrangements for span wire.	Each	3199	434	0	0.00	0.00	0.00
8(a)(xii)	Marking/paint of temperature & 'Y'- Measurement of OHE mast at BWA locations	Each	0	62	12	0.00	744.00	744.00
8(b)(i)	Supply without insulator and erection of material for termination of Single conductor of Over head equipment or terminating wire.	Each	2411	408	6	14,466.00	2,448.00	16,914.00
8(b)(iii)	Supply without Insulator and erection of material for termination of all aluminium 25KV Feeder / return conductor (Single SPIDER)	Each	3043	408	4	12,172.00	1,632.00	13,804.00
8(b)(vi)	Supply without insulator and erection of materials for termination of tramway type OHE (Regulated)	Each	1816	408	0	0.00	0.00	0.00
8(b)(ix)	Supply without insulator and erection of materials for termination of copper cross feeder with gantries.	Set	2895	408	2	5,790.00	816.00	6,606.00
9(dz)	Supply without insulator and erection of anti-	Each	2,792	1317	0	0.00	0.00	0.00

	creep with Cadmium copper catenary wire in polluted area							
9(ez)	Supply without insulator and erection of anti-creep with Cadmium copper catenary wire suitable for tramway type OHE (Regulated) in polluted area	Each	2,719	1317	0	0.00	0.00	0.00
Page Total						32,428.00	77,054.20	109,482.20
FORM 5, Sheet-2								
1	2	3	4	5	6	7	8	9
11(a) (i)	Supply without Insulator and erection of cut-in (9Tonne) Insulator	Each	688	283	6	4,128.00	1,698.00	5,826.00
11(a) (ii)	Supply without Insulator and erection of a suspension (9 Tonne) Insulator	Each	713	168	4	2,852.00	672.00	3,524.00
11(b)	Supply without Insulator and erection of 25 kV Post Insulator	Each	515	130	6	3,090.00	780.00	3,870.00
11(c)	Supply without Insulator and erection of 3 kV Disc Insulator	Each	922	132	0	0.00	0.00	0.00
11(d)	Supply without Insulator and erection of 11 kV Post Insulator	Each	133	108	0	0.00	0.00	0.00
17(b)	Extra for special embedment of earth electrode.	Each	0	679	8	0.00	5,432.00	5,432.00
18(a)	Supply & Erection of 25kV SF-6 Gas filled Interrupters	Each	205,019	1,913	0	0.00	0.00	0.00
18(b)	Supply & Erection of 25kV Vacuum type Interrupter	Each	173,491	1,913	1	173,491.00	1,913.00	175,404.00
19	Supply and Erection of 25kV Potential Transformers Type-I	Each	44,466	429	1	44,466.00	429.00	44,895.00
20(a)	Supply and Erection of 42KV Lightning Arrestors (station class)	Each	15,119	278	1	15,119.00	278.00	15,397.00
20(b)	Supply and Erection of 7.5 KV Lightning Arrestors	Each	705	145	0	0.00	0.00	0.00
21	Supply and Erection of Terminal Boards in control cubicles.	Each	5,061	204	0	0.00	0.00	0.00
22(a)	Supply and Erection of an Iron clad 110 V.D.C Fuse Box.	Each	1,593	47	0	0.00	0.00	0.00
22 (b)	Supply and erection of an Iron clad 230 V.A.C Fuse Box.	Each	1,762	47	0	0.00	0.00	0.00
23	Supply and Erection of Lead Acid Batteries.	Each	42,715	3,065	0	0.00	0.00	0.00
24	Supply and Erection of Battery chargers.	Each	41,587	418	0	0.00	0.00	0.00

25(a)	Supply and Installation of cables for Control and indication circuit	Metre	201	7	30	6,030.00	210.00	6,240.00
25(b)	Supply and Installation of cables for Heater supply	Metre	95	7	30	2,850.00	210.00	3,060.00
25(c)	Supply and Installation of cables for Catenary indication	Metre	137	7	30	4,110.00	210.00	4,320.00
25(d)	Supply and Installation of cables for L.T. Power supply	Metre	217	10	30	6,510.00	300.00	6,810.00
25(e)	Supply and Installation of cables for 110V D.C. supply	Metre	137	10	30	4,110.00	300.00	4,410.00
27(a)	Supply, Erection, oil-filtration, testing and commissioning of L.T. supply transformers (10 kVA).	Each	27,426	4,572	0	0.00	0.00	0.00
27(b)	Supply, Erection, oil-filtration, testing and commissioning of L.T. supply transformers (5 kVA).	Each	22,971	4,572	0	0.00	0.00	0.00
	Supply, Erection, oil-filtration, testing and commissioning of L.T. supply transformers (25 kVA).	Each	93,611	4,572	0	0.00	0.00	0.00
	Page Total					266,756.00	12,432.00	279,188.00

1	2	3	4	5	6	7	8	9
27(d)	Supply, Erection, oil-filtration, testing and commissioning of L.T. supply transformers (50 kVA).	Each	121,643	4,572	0	0.00	0.00	0.00
28	Supply without Insulator & erection of 25 kV D.O. fuse switch.	Each	4,934	239	1	4,934.00	239.00	5,173.00
29(a)	Erection, oil filtration, testing & commissioning of Booster transformer.	Each	59	8,466	0	0.00	0.00	0.00
31	Modification to erected equipments :					0.00	0.00	0.00
31(a)	Transfer of equipment from one mast or support to another.	Each	804	1,179	10	8,040.00	11,790.00	19,830.00
31(b)	Provision of an additional bracket assembly/ assemblies on a mast or support.	Each	0	1,047	5	0.00	5,235.00	5,235.00
31(c)	Re-adjustment of head-span	Each	0	1,156	0	0.00	0.00	0.00
31(d)	Dismantling of overhead equipment.	Km	0	6,222	6	0.00	37,332.00	37,332.00
31(e)	Dismantling of Feeder/ Return Conductor	Km	0	2,697	0	0.00	0.00	0.00
31(f)	Splicing & extension of an anchored overhead equipment.	Each	0	1,156	2	0.00	2,312.00	2,312.00
31(g)	Dismantling of a Section Insulator Assembly	Each	670	1,156	1	670.00	1,156.00	1,826.00
31(h)	Slewing and putting back of OHE in original shape	Span	0	937	4	0.00	3,748.00	3,748.00
31(i)	Dismantling of an Isolator	Each	0	627	1	0.00	627.00	627.00
31(j)	Dismantling of a Post/ Pedestal Insulator.	Each	0	204	6	0.00	1,224.00	1,224.00
31(m) (i)	Manning of Switching stations (SP/SSP)	Each per month	0	19,148	0	0.00	0.00	0.00
31(m) (ii)	Manning of Traction Sub-stations	Each per month	0	30,878	0	0.00	0.00	0.00
35	Supply and Erection of materials for internal and external lighting of Switching Station Building (SP/SSP).	Each	0	16,416	0	0.00	0.00	0.00
Page Total						13,644.00	63,663.00	77,307.00
Total for Section-1 (GENERAL) =						312,828.00	153,149.20	465,977.20
NOTE:- for 31(m)(i) & 31(m)(ii): In case Feeding post is situated in adjacent to TSS, same will also be included for manning along with TSS.								

SCHEDULE 1						FORM-5, Sheet-4		
SCHEDULE OF PRICES & TOTAL PRICES								
SECTION 2 (CONCRETE)								
This schedule shall be read in conjunction with its explanatory notes in tender document for detailed description for various items included therein. The rates at which payments are to be made shall be arrived at by loading these rates uniformly for each item with the percentage quoted by the tenderer for this section.								
Item No.	Description	UOM	(All prices are in Rs.)					
			SOR Rate		Qty.	Total Prices		
			Material s	Erectio n		Materials	Erection	Total (M+E)
1	2	3	4	5	6	7	8	9
2(a)	Concrete for foundation and plinth							
	(i) In hard soil:	Cum	2,056	749	0	0	0	0
	(ii) In rocky soil	Cum	2,120	977	0	0	0	0
2(az)	Concrete for foundation and plinth							
	(i) In hard soil:	cum	2,359	749	0	0	0	0
	(ii) in rocky soil	cum	2,423	977	0	0	0	0
2(b)	In other than hard soil and rock	Cum.	2,140	566	80	171,200	45,280	216,480
2(c)	Reinforced concrete	Cum.	2,852	676	2	5,704	1,352	7,056
2(e)	Extra for supply & sinking of concrete shells	Cum.	2,225	314	0	0	0	0
2(f)	Casting of foundations using mechanized Augur.	Cum	2,629	389	0	0	0	0
34(a)	Supply of materials and costruction of Super Structure of SP/SSP building (Control cubicles)	Each	0	81,393	0	0	0	0
34(b)	Cement concrete for foundation with stone ballast 40mm nominal size	Cum.	0	1,360	0	0	0	0
34(c)	RCC work for foundation and plinth in ratio 1:1½:3.	Cum.	0	2,211	3	0	6,633	6,633
34(d)	Brick work in foundation plinth, retaining walls and drainage.	Cum.	0	1,203	0	0	0	0
34(e)	Construction of retaining wall with random rubble masonry in cement & sand..	Cum.	0	931	0	0	0	0
34(f)	Earth work in excavation and filling including compaction					0	0	0
	(i) In normal soil	Cum.	0	26	40	0	1,040	1,040
	(ii) In hard soil	Cum.	0	33	0	0	0	0
34(g)	Earth work, excavation for foundation					0	0	0
	(i) In normal soil	Cum.	0	25	40	0	1,000	1,000
	(ii) In hard soil	Cum.	0	32	0	0	0	0

34(h)	Excavation of pile of 100 mm to 200 mm dia upto 3.5M deep.	Metre	0	43	0	0	0	0
34(i)	Plastering of retaining wall with 1:4 cement & sand mortar.	Sqm	0	36	0	0	0	0
34(j)	Supply & Spreading of Ballast/Gravel in the Switch Yard.	Sqm	345	2	0	0	0	0
Total for Section-2 (Concrete) =						176,904.00	55,305	232,209.00

SCHEDULE 1						Form-5,Sheet-5		
SCHEDULE OF PRICES & TOTAL PRICES								
SECTION 3 (FERROUS)								
This schedule shall be read in conjunction with its explanatory notes in tender document for detailed description for various items included therein. The rates at which payments are to be made shall be arrived at by loading these rates uniformly for each item with the percentage quoted by the tenderer for this section.								
Item No.	Description	UOM	(All prices are in Rs.)					
			SOR Rate		Qty.	Total Prices		
			Material s	Erectio n		Materials(S)	Erection(E)	Total (M+E)
1	2	3	4	5	6	7	8	9
3(a)(i)	Supply and erection of traction masts fabricated from Rolled mild steel beam (BFB) of size 152mm x152mm x 37.1 Kg/m and galvanised in length 9.5 m or 8.5 m long.	MT	45,259	1,037	0	0.00	0.00	0.00
3(a)(i)	Supply and erection of traction masts, main masts of switching stations, Booster transformer station, fabricated from Rolled mild steel joist (RSJ) of size 203mm x 152 mm x 52.0 Kg/m and galvanised in lengths 9.5 m or 8.5 m long.	MT	42,491	1,037	3	127,473.00	3,111.00	130,584.00
3(b)(i)	Supply and erection of fabricated and galvanised structures (O,N & R type portals) with all necessary components other than masts.	MT	53,854	3,546	0	0.00	0.00	0.00
3(b)(i)	Supply and erection of Structure steel (traction masts) fabricated and galvanised of all Type : B-Series Mast.	MT	45,423	1,037	130	5,904,990.00	134,810.00	6,039,800.00
3(b)(i)	Supply & Erection of special fabricated and galvanised steel structures other than Portals & traction-Masts not covered under items 3(b)(i) & 3(b)(ii).	MT	47,703	3,546	13	620,139.00	46,098.00	666,237.00
3(c)	Supply only of fabricated steel other than masts	MT	66,257	0	20	1,325,140.00	0.00	1,325,140.00
3(e)(i)	Supply and erection of a Guy Rod Assembly	Each	4,086	473	36	147,096.00	17,028.00	164,124.00
3(g)	Supply of steel reinforcement for RCC	MT	42,171	0	1	42,171.00	0.00	42,171.00

3(e)(i)	Supply and erection of Anchoring Arrangement of traction mast with Galvanised steel stranded wire	Each	6,472	473	0	0.00	0.00	0.00
3(i)	Supply and erection of 25KV Caution Boards/Plates.	Each	131	42	0	0.00	0.00	0.00
4(a)(i)	Supply without insulator and erection of Single bracket assembly.	Each	5,734	429	176	1,009,184.00	75,504.00	1,084,688.00
4(a)(i)	Extra on 4 (a)(i) for supporting two OHEs.	Each	1,268	129	2	2,536.00	258.00	2,794.00
Page Total						9,178,729.00	276,809.00	9,455,538.00
								Form-5,Sheet-6
1	2	3	4	5	6	7	8	9
4(a)(iii)	Supply without Insulator and erection of Single bracket assembly suitable for tramway type OHE (Regulated)	Each	4,705	429	0	0.00	0.00	0.00
4(a)(iv)	Extra on item 4(a)(iii) for supporting two tramway type OHE (Regulated)	Each	1,424	129	0	0.00	0.00	0.00
4(a)(v)	Supply without insulator and erection of Single bracket assembly for composite OHE	Each	5,741	429	0	0.00	0.00	0.00
4(b)(i)	Supply without Insulator and erection of a pull off arrangement for one OHE	Each	4,848	267	2	9,696.00	534.00	10,230.00
4(b)(i)	Extra for each additional equipment pulled.	Each	2,664	267	0	0.00	0.00	0.00
4(b)(iii)	Supply without Insulator and erection of a pull off arrangement for regulated tramway type OHE.	Each	2,744	212	0	0.00	0.00	0.00
4(b)(iv)	Supply without Insulator and erection of a pull off arrangement for one composite OHE.	Each	4,848	267	0	0.00	0.00	0.00
5(b)	Supply without insulator and erection of suspension of conventional/ composite OHE from Head Span.	Each	3,852	461	0	0.00	0.00	0.00
8(a)(v)	Supply and erection of Regulating Equipment (3-Pulley type) with counter weight assembly for	Each	32,186	1,764	14	450,604.00	24,696.00	475,300.00

	conventional/ composite OHE.							
8(a) (vi)	Supply and erection of Regulating Equipment (3-Pulley type) with counter weight assembly for tramway type OHE (Regulated)	Each	24,282	1,485	0	0.00	0.00	0.00
8(a) (x)	Same as 8(a)(v) but excluding stainless steel wire rope.	Each	29,189	1,764	0	0.00	0.00	0.00
8(a) (xi)	Same as 8(a)(vi) but excluding stainless steel wire rope.	Each	21,611	1,485	0	0.00	0.00	0.00
8(b)(i)	Supply without Insulator and erection of materials for termination of Double conductor.	Each	4,185	469	14	58,590.00	6,566.00	65,156.00
8(b) (v)	Supply without Insulator and erection of materials for termination of Earth wire	Each	2,244	195	0	0.00	0.00	0.00
	Total					518,890.00	31,796.00	550,686.00
								Form-5,Sheet-7
1	2	3	4	5	6	7	8	9
8(b) (vii)	Supply without Insulator and erection of materials for termination of double conductors for composite OHE.	Each	4,081	469	0	0.00	0.00	0.00
9(a)	Supply without Insulator and erection of anticreep with galvanized steel wire.	Each	10,740	1,317	6	64,440.00	7,902.00	72,342.00
9(b)	Supply without Insulator and erection of anticreep with galvanized steel wire suitable for tramway type Overhead equipment (Regulated)	Each	9,204	1,317	0	0.00	0.00	0.00
9(c)	Supply without Insulator and erection of anticreep for composite OHE with galvanized Steel wire.	Each	11,345	1,317	0	0.00	0.00	0.00
13(e)	Extra on item 13(a), (b) or (c) for an inter- locking device	Each	916	108	1	916.00	108.00	1,024.00
14	Supply & erection of a connection between return conductor and rail.	Each	5,031	1,645	0	0.00	0.00	0.00
16(a) (i)	Supply and erection of a structure bond.	Each	528	131	150	79,200.00	19,650.00	98,850.00
16(a) (ii)	Supply and erection of a Galvanised steel stranded wire	each	1,511	131	0	0.00	0.00	0.00

	structure bond								
16(b)	Supply and erection of a longitudinal bond	Each	298	117	20	5,960.00	2,340.00	8,300.00	
16(c)	Supply & erection of a transverse and special bond.	Each	679	140	10	6,790.00	1,400.00	8,190.00	
17(a)	Supply & erection of a single earth electrode.	Each	1,191	498	10	11,910.00	4,980.00	16,890.00	
17(c)	Supply and erection of earth bus	Metre	126	35	60	7,560.00	2,100.00	9,660.00	
17(e)	Supply and erection of 8 SWG G.I. wire for earthing	Metre	11	9	89.01 3	979.14	801.12	1,780.26	
30(a) (i)	Supply and erection of fencing panels at switching stations.	Metre	2,298	39	0	0.00	0.00	0.00	
30(a) (ii)	Supply and erection of fencing uprights	MT	63,551	1,869	0	0.00	0.00	0.00	
30(b) (i)	Supply and erection of anticlimbing device for Switching stations	Metre	153	4	60	9,180.00	240.00	9,420.00	
30(b) (ii)	Supply and erection of anticlimbing device for B.T. stations.	Each	1,448	250	0	0.00	0.00	0.00	
30(b) (iii)	Supply and erection of anticlimbing device for L.T. Supply Transformer Stations.	Each	635	148	1	635.00	148.00	783.00	
30(b) (iv)	Supply and erection of anti monkey menace.	Each	2,534	148	1	2,534.00	148.00	2,682.00	
						Page Total	190,104.14	39,817.12	229,921.26
						Total for Section-3	9,887,723.14	348,422.12	10,236,145.26

SCHEDULE 1							Form-5,Sheet-8	
SCHEDULE OF PRICES & TOTAL PRICES								
SECTION 4 (a) (NON-FERROUS)								
This schedule shall be read in conjunction with its explanatory notes in tender document for detailed description for various items included therein. The rates at which payments are to be made shall be arrived at by loading these rates uniformly for each item with the percentage quoted by the tenderer for this section.								
Item No.	Description	UOM	(All prices are in Rs.)					
			SOR Rate		Qty.	Total Prices		
			Material s	Erectio n		Materials	Erection	Total (M+E)
1	2	3	4	5	6	7	8	9
5az(ii)	supply and erection of span wire	Metre	498	23	100	49800	2,300.00	52100
5(c)	Supply of without insulator and erection of Suspension/ registration of contact wire only.	Each	1,196	183	0	0.00	0.00	0.00
6(az)	Supply and erection of Over Head equipment only	Km	46,757	13,521	6.0	280,542.00	81,126.00	361,668.00
6(bz)	Supply & Erection of contact wire only	Km	2,828	6,048	0	0.00	0.00	0.00
6(cz)	Supply and Erection of contact wire only (Regulated with bridle wire)	Km	27,230	7,944	0	0.00	0.00	0.00
7(a)	Supply and Erection of all aluminium 25KV Feeder/ Return conductor (Single Spider)	Km	87,846	1,584	0.1	8,784.60	158.40	8,943.00
7(c)	Supply and erection of earth wire.	Km.	43,213	1,208	0	0.00	0.00	0.00
7(d)	Supply and Manual Erection of all aluminium 25KV Feeder/ Return conductor (Single Spider)	Km	87,846	2,476	0.1	8,784.60	247.60	9,032.20
7(e)	Supply and Erection of copper cross feeder wires (37/2.25 mm HDBC) across the track at SP/SSP/FP/BT locations	Km	577,320	1,584	0.05	28,866.00	79.20	28,945.20
10(a z)	Extra on item 6(a) for supply and erection of additional fittings at a turn-out, diamond crossing or overlap	Each	3,096	541	10	30,960.00	5,410.00	36,370.00
10(b z)	Extra on item 6(b) for supply and erection of additional fittings required at a turnout, diamond crossing or overlap.	Each	2,603	431	10	26,030.00	4,310.00	30,340.00
10(cz)	Extra on item 6(c) & (d) for supply and erection of additional fittings	Each	5,552	541	0	0.00	0.00	0.00

	required at a turnout, diamond crossing or overlap.							
12(a z)	Supply without Insulator & erection of a section insulator assembly	Each	16,405	1,406	2	32,810.00	2,812.00	35,622.00
12(b)	Supply without insulators.& erection of a double wire section insulator assembly	Each	16,612	1,412	0	0.00	0.00	0.00
Page Total						466,577.20	96,443.20	563,020.40
FORM 5, Sheet-9								
1	2	3	4	5	6	7	8	9
12(cz)	Supply without Insulator & erection of a section insulator assembly suitable for tramway type OHE (Regulated)	Each	16,295	1,249	0	0.00	0.00	0.00
12(d)	Supply & Erection of a Ceramic/beaded Glass Fibre type (PTFE) Short Neutral section assembly	Each	263,409	2,174	0	0.00	0.00	0.00
13(a)	Supply without Insulator and erection of a 25 KV single pole isolator without earth contact assembly.	Each	18,104	1,302	2	36,208.00	2,604.00	38,812.00
13(b)	Supply without Insulators & erection of two 25 kV Single Pole Isolator gang operated without earth contact assembly.	Each	36,148	1,377	0	0.00	0.00	0.00
13(c)	Supply without Insulators & erection of 25kV Double Pole Isolator.	Each	29,523	1,438	1	29,523.00	1,438.00	30,961.00
13(d)	Extra for supply & erection of an earth contact assembly in an Isolator.	Each	6,025	150	0	0.00	0.00	0.00
15(a)(i)	Supply & erection of large copper jumpers	Each	2,508	236	4	10,032.00	944.00	10,976.00
15(a)(ii)	Supply & erection of small copper jumpers	Each	294	236	20	5,880.00	4,720.00	10,600.00
15(a z)(iii)	Supply & erection of copper jumpers	Each	92	236	1	92.00	236.00	328.00
15(a)(iv)	Supply & erection of a copper jumper (5mm dia droper wire).	Each	804	236	1	804.00	236.00	1,040.00
15(b)	Supply and erection of an aluminum jumper.	Each	1,286	109	2	2,572.00	218.00	2,790.00
15(c)	Supply and erection of insulated catenary cable in the span under over-line structures.	Each	2,621	217	0	0.00	0.00	0.00
15(d)	Supply of materials and erection of Large	Each	3,154	236	1	3,154.00	236.00	3,390.00

	copper jumper 160 Sq. mm between Aluminium bus and cross feeders							
15(e)	Supply of materials and erection of Large copper jumper 160 Sq. mm between cross feeder and OHE	Each	4,801	236	1	4,801.00	236.00	5,037.00
17(d)	Supply and erection of copper strips for equipment earthing.	Metre	271	32	3	813.00	96.00	909.00
26(a) (i)	Supply & erection of : Aluminum bus-bars 36mm x 28mm.	Metre	195	31	15	2,925.00	465.00	3,390.00
Page Total						96,804.00	11,429.00	108,233.00
FORM 5, Sheet-10								
1	2	3	4	5	6	7	8	9
26(a) (ii)	Supply & erection of Solid copper bus-bars 18mm.:	Metre	879	44	10	8,790.00	440.00	9,230.00
26(b) (i)	Supply and erection of Aluminum bus-bar connectors:- Bus terminal (6480)	Each	1,341	19	6	8,046.00	114.00	8,160.00
26(b) (ii)	Supply and erection of Aluminum bus-bar connectors:- Bus splice (6490)	Each	1,482	19	0	0.00	0.00	0.00
26(b) (iii)	Supply and erection of Aluminum bus-bar connectors:- Bus tee connector (6500)	Each	1,495	17	1	1,495.00	17.00	1,512.00
26(b) (iv)	Supply and erection of Aluminum bus-bar connectors:- Terminal connector 36/20 (6530)	Each	1,349	17	1	1,349.00	17.00	1,366.00
26(b) (v)	Supply and erection of Aluminum bus-bar connectors:- Tap connector (6520)	Each	1,349	19	1	1,349.00	19.00	1,368.00
26(b) (vi)	Supply and erection of Aluminum bus-bar connectors:- Flexible bus splice (6550)	Each	3,924	19	0	0.00	0.00	0.00
26(b) (vii)	Supply and erection of Aluminum bus-bar connectors:- Terminal connector Bolted Type (6830-1)	Each	1,067	17	0	0.00	0.00	0.00
26(c) (i)	Supply & erection of solid copper bus-bar connectors: Bus terminal (6310)	Each	888	19	8	7,104.00	152.00	7,256.00
26(c) (ii)	Supply & erection of solid copper bus-bar connectors: Bus splice (6320)	Each	980	19	2	1,960.00	38.00	1,998.00
26(c) (iii)	Supply & erection of solid copper bus-bar connectors: Bus tee	Each	2,664	19	0	0.00	0.00	0.00

	joint (6330)							
26(c) (iv)	Supply & erection of solid copper bus-bar connectors: Bus terminating tee (6351)	Each	1,804	19	0	0.00	0.00	0.00
Page Total						30,093.00	797.00	30,890.00
Total for Section-4(a)						593,474.20	108,669.20	702,143.40

SCHEDULE 1							FORM-5, Sheet-11	
SCHEDULE OF PRICES & TOTAL PRICES								
SECTION 4(b) (Non-Ferous)								
This schedule shall be read in conjunction with its explanatory notes in tender document for detailed description for various items included therein. The rates at which payments are to be made shall be arrived at by loading these rates uniformly for each item with the percentage quoted by the tenderer for this section.								
Item No.	Description	UOM	(All prices are in Rs.)					
			SOR Rate		Qty	Total Prices		
			Material s	Erectio n		Materials	Erection	Total (M+E)
1	2	3	4	5	6	7	8	9
6(ax)(i)	Supply 107 sqmm Hard Drawn Grooved Copper Contact Wire required for item Nos 6(az), 6(bz), 6(cz), 10(az), 10(bz), 10(cz), 12(az), 12(cz), and 31(gz)	MT	1168777	0	8.0	9350216	0	9350216
6(ax)(ii)	Supply 65 Sqmm, 19/2.10 mm Cadmium copper catenary wire required for item nos. 5(az)(ii), 6(az), 9(dz), 9(ez), 10(az), 10(cz), 12(cz), 15(az)(iii), and 31(gz)	MT	1154333	0	6.0	6925998	0	6925998
Total for Section -4(b)						16276214	0	16276214

SCHEDULE 1							FORM-5, Sheet-12	
SCHEDULE OF PRICES & TOTAL PRICES								
SECTION 5 (INSULATORS)								
This schedule shall be read in conjunction with its explanatory notes in tender document for detailed description for various items included therein. The rates at which payments are to be made shall be arrived at by loading these rates uniformly for each item with the percentage quoted by the tenderer for this section.								
Item No.	Description	UOM	(All prices are in Rs.)					
			SOR Rate		Qty.	Total Prices		
			Material s	Erectio n		Materials	Erection	Total (M+E)
1	2	3	4	5	6	7	8	9
4(ax)	Supply of Insulators for item4(a)(i)&4(a)(iii)							
4(ax)(i)	Stay Arm Porcelain (CD-1050 mm)	Each	1554.72	0.00	176	273,630.72	0	273,630.72
4(ax)(ii)	Stay Arm Composite (CD-1050 mm)	Each	1498.75	0.00	0	0.00	0	0.00
4(ax)(iii)	Stay Arm Composite (CD-1600 mm)	Each	2293.56	0.00	0	0.00	0	0.00
4(ax)(iv)	Bracket Porcelain (CD-1050 mm)	Each	1338.07	0.00	176	235,500.32	0	235,500.32
4(ax)(v)	Bracket Composite (CD-1050 mm)	Each	890.29	0.00	0	0.00	0	0.00
4(ax)(vi)	Bracket Composite (CD-1600 mm)	Each	2293.56	0.00	0	0.00	0	0.00
4(bx)	Supply of 9-Tonne Insulators for items 4(b)(i) & 4(b)(iii)					0.00	0	0.00
4(bx)(i)	Porcelain (CD-1050 mm)	Each	1962.33	0.00	4	7,849.32	0	7,849.32
4(bx)	Composite (CD-1050 mm)	Each	1240.61	0.00	0	0.00	0	0.00

(ii)	mm)								
4(bx)(iii)	Composite (CD-1600 mm)	Each	2293.56	0.00	0	0.00	0	0.00	
5(ax)	Supply of 9-Tonne insulators for item 5(a)(i), 5(b) & 5(c)					0.00	0	0.00	
5(ax)(i)	Porcelain (CD-1050 mm)	Set	3924.66	0.00	0	0.00	0	0.00	
5(ax)(ii)	Composite (CD-1050 mm)	Set	2481.22	0.00	0	0.00	0	0.00	
5(ax)(iii)	Composite (CD-1600 mm)	Set	4587.12	0.00	0	0.00	0	0.00	
8(bx)	Supply of 9-Tonne insulators for item 8(b)(i), (ii), (iii), (vi), (vii), (viii) & (ix)					0.00	0	0.00	
8(bx)(i)	Porcelain (CD-1050 mm)	Each	1962.33	0.00	20	39,246.60	0	39,246.60	
8(bx)(ii)	Composite (CD-1050 mm)	Each	1240.61	0.00	0	0.00	0	0.00	
8(bx)(iii)	Composite (CD-1600 mm)	Each	2293.56	0.00	0	0.00	0	0.00	
9(ax)	Supply of 9-Tonne insulators for item 9(a), (b), (c), (d) & (e)					0.00	0	0.00	
9(ax)(i)	Porcelain (CD-1050 mm)	Set	3924.66	0.00	12	47,095.92	0	47,095.92	
9(ax)(ii)	Composite (CD-1050 mm)	Set	2481.22	0.00	0	0.00	0	0.00	
9(ax)(iii)	Composite (CD-1600 mm)	Set	4587.12	0.00	0	0.00	0	0.00	
11(a)x)	Supply of 9-Tonne Insulator for item 11(a)(i) & 11(a)(ii)					0.00	0	0.00	
11(a)x)(i)	Porcelain (CD-1050 mm)	Each	1962.33	0.00	6	11,773.98	0	11,773.98	
11(a)x)(ii)	Composite (CD-1050 mm)	Each	1240.61	0.00	0	0.00	0	0.00	
11(a)x)(iii)	Composite (CD-1600 mm)	Each	2293.56	0.00	0	0.00	0	0.00	
11(b)x)	Supply of 25 kV Post Insulator for Item 11 (b)	Each	3947.24	0.00	6	23,683.44	0	23,683.44	
11(cx)	Supply of 3 kV Disc Insulator for Item 11 (c)	Each	422.92	0.00	0	0.00	0	0.00	
11(d)x)	Supply of 11 kV Post Insulator for Item 11 (d)	Each	422.92	0.00	0	0.00	0	0.00	
12(a)x)	Supply of 9 Tonne and Sectioning Insulators for item No.12(a)					0.00	0	0.00	
12(a)x)(i)	Porcelain 9-Tonne (CD-1050 mm) & Sectioning Insulator	Set	6614.43	0.00	2	13,228.86	0	13,228.86	
12(a)x)(ii)	Composite 9-Tonne (CD-1050 mm) & Sectioning Insulator	Set	5892.71	0.00	0	0.00	0	0.00	
Page Total						652,009.16	0.00	652,009.16	

FORM 5, Sheet-13								
1	2	3	4	5	6	7	8	9
12(a) x(iii)	Composite 9-Tonne (CD-1600 mm) & Sectioning Insulator	Set	6945.66	0.00	1	6,945.66	0	6,945.66
12(b) x)	Supply of 9 Tonne and Sectioning Insulators for item No.12(b)							
12(b) x(i)	Porcelain 9-Tonne (CD-1050 mm) & Sectioning Insulator	Set	11266.5 3	0.00	0	0.00	0	0.00
12(b) x(ii)	Composite 9-Tonne (CD-1050 mm) & Sectioning Insulator	Set	10544.8 1	0.00	0	0.00	0	0.00
12(b) x(iii)	Composite 9-Tonne (CD-1600 mm) & Sectioning Insulator	Set	11597.7 6	0.00	0	0.00	0	0.00
12(cx))	Supply of Sectioning Insulators for 12(c) and 12(cz)	Each	4652.00	0.00	0	0.00	0	0.00
13(a) x)	Supply of Post & Operating rod insulators for item 13(a)	Set	10291.0 0	0.00	2	20,582.00	0	20,582.00
13(b) x)	Supply of Post & Operating rod insulators for item 13(b)	Set	20582.0 0	0.00	0	0.00	0	0.00
13(cx))	Supply of Post & Operating rod insulators for item 13(c)	Set	20582.0 0	0.00	1	20,582.00	0	20,582.00
28(x)	Supply of Post insulators for item 28	Set	7894.00	0.00	1	7,894.00	0	7,894.00
Page Total						56,003.66	0.00	56,003.66
Total for section-5						708,012.82	0.00	708,012.82
<p>Note : Earlier, Item nos. 11(a)(i), 11(a)(ii), 11(b), 11(c) & 11(d) include supply as well as erection both. For similarity with other items, supply and erection have been separated. Supply portion is under section-5 (Insulators) and erection portion included in Section-1 (General).</p>								

Qty Schedule Of Non-Schedule Items KKDE By pass Narwana line of Northern Railway (5.18 TKM)					
Section-6 (NS- ITEMS)					
Item No.	Brief Description of Items	Unit	Qty	Unit Rate of Supply & Erection	Total Amt.
NS-1(a)	Supply and erection of OHE caution board with supply of fixing material (Clamp,back flat strip & fastner) for "caution clearance to OHE near by rectified" Board Size 400mmx270mmx2mm	Nos.	10	758.27	7582.70
NS-1(b)	Supply and erection of OHE caution board with supply of fixing material (Clamp,back flat strip & fastner) for "Power block working limit" Board Size 450mmx450mmx2mm	Nos.	5	1072.84	5364.20
NS-1(c)	Supply and erection of OHE caution board with supply of fixing material (Clamp,back flat strip & fastner) for "caution unwired turnout" Board Size 900mmx600mmx2mm	Nos.	10	2859.55	28595.50
NS-1(d)	Supply and erection of OHE caution board with supply of fixing material (Clamp,back flat strip & fastner) for "Electric Engine Stop Board" Board Size 900mmx600mmx2mm	Nos.	5	2852.92	14264.60
NS-1(e)	Supply and erection of OHE caution board with supply of fixing material (Clamp,back flat strip & fastner) for "Caution live wire" Board Size 400mmx270mmx2mm	Nos.	20	521.13	10422.60
NS-2	Design,Manufacturing supply of retro reflective type sigma board as per RDSO drawing no. T1/DRG/OHE/PLTBRD/RDSO/00036/12/0 (Sixe-450mmx60mm) And RDSO Specification No. ETI/OHE/33A(12/97) Rev.8	Set	5	1485.21	7426.05
NS-3(a)	Fabrication, developing and supply of sectioning diagram, schematic and TSWR board Fabrication and supply of pre compressed particle laminated board white in colour with Aluminium beading 1/2" x 1/2" on all around the board and an arrangement of fixing/hanging on wall of adequate strength of top of board as required	Square foot	80	81.73	6538.40
NS-3(b)	Fabrication, developing and supply of sectioning diagram, schematic and TSWR board developing the sectioning diagram, schematic diagram & TSWR diagram with computerised digital printing on adhesive vinyl of adequate size as required.	Square foot	40	548.37	21934.80
NS-4(a)	Dismantling of Mast/Gantry	MT	60	4587.13	275227.80
NS-4(b)	Extra on erection under power block for Item No-NS-4a	MT	60	4587.13	275227.80

NS-5(a)	Dismantling of Portal	MT	2	6426.00	12852.00
NS-5(b)	Extra on erection under power block for Item No-NS-5a	MT	2	6426.00	12852.00
NS-6(a)	Dismantling of a Copper/Aluminium Jumper	Each	20	360.00	7200.00
NS-6(b)	Extra on erection under power block for Item No-NS-6a	Each	20	360.00	7200.00
NS-7(a)	Shifting of OHE Termination (fixed) location from one mast/support to another.	Each	5	2871.25	14356.25
NS-7(b)	Extra on erection under power block for Item No-NS-7a	Each	5	2871.25	14356.25
NS-8(a)	Shifting of OHE Termination (Regulated) from one mast/support to another.	Each	5	3091.30	15456.50
NS-8(b)	Extra on erection under power block for Item No-NS-8a	Each	5	3091.30	15456.50
NS-9(a)	Adjustment on bracket assemblies for assemblies for lowering/raising the height of contact and catenary wire where Encumbrance is changed.	Each	10	2093.82	20938.20
NS-9(b)	Extra on erection under power block for Item No-NS-9a	Each	10	2093.82	20938.20
NS-10(a)	Adjustment on bracket assemblies for assemblies for lowering/raising the height of contact and catenary wire where Encumbrance is not changed.	Each	10	1914.77	19147.70
NS-10(b)	Extra on erection under power block for Item No-NS-10a	Each	10	1914.77	19147.70
NS-11	Loading, leading, Transportation, unloading and stacking of steel structure & Conductor etc from Dismantling site to Concern Engineer Incharge Store or site suggested by HRIDC site engineer.	MT	70	3343.50	234045.00
NS-12(a)	Hiring & operating of 01 Nos. MUV (Multi Utility Vehicle) of loading capacity of one MT, Sitting capacity of 4 person 4 stroke, 4 Cylinder engine, factory build metal body cargo box type- Mahindra, TATA or similar type multi utility vehicle (with 24 Hours available) including major minor repairs, cost of lubricant, fuels, salary of driver, toll taxes and all other taxes complete operation & maintainance for running of 2000 KM in a month for the use of Electrical Department of HRIDC for supervision of work of KKDE Elevated track Project & for transportation of material/machines & other usage. The Vehicle shall run on pucca/latcha road and along the track. The Contractor shall have road permit for use vehicle in the state of Haryana & Delhi.	Months	12	25643.60	307723.20

NS-12(b)	Extra on Item NS-12a for more than 1200 KM (1x12x1500=18000)	Per KM	18000	5.46	98280.0
NS-13	Hiring of 1 No vehicle (Maruti Dzire or similar) on daily basis including all maintenance, major/minor repairs, cost of lubricants, fuels, driver, GST, taxes etc. complete (only extra hours, Night halt charges, Toll tax and parking charges will be paid extra) for the use of HRIDC officers at KURUKSHETRA area.				
(a)	Fix Charges up to Km 100 per day	Per Day	50	1169.00	58450
(b)	Extra charges beyond Km 100 per day per vehicle	Per Km	2000	8.29	16580
(c)	Extra hours charges beyond 12 Hrs duty	Per Hrs	500	85	42500
NS-14(a)	Supply & Erection of Safety item with supply of fixing material (Plastic/wooden/gitti & Secrew) for supply & erection of electric shock treatment chart (Glass framed) size 22"x28" complete with aluminium angle beading 1"x1" all around	Nos.	10	736.02	7360.20
NS-14(b)	Supply & Erection of Safety item with supply of fixing material (Plastic/wooden/gitti & Secrew) for supply & erection of electric shock treatment chart & its first aid coloured calender in Hindi & English Size 550mm x 900mm with plastic at top & bottom.	Nos.	10	55.33	553.30
NS-15	Route Mapping of OHE mast by Oliver G kit with use of GPS System in 25 KV AC OHE System of all siding of respective Division.	Km	6	2103.02	12618.12
NS-16	Lowering/Raising the height of OHE Termination on same Mast/support	Each	10	1468.00	14680.00
				Total Amount	1625275.57

SCHEDULE - 3
UNIT PRICES
SECTION - 1 (GENERAL)

The rates given below against different items of work in different sections of this schedule are the standard schedule of rates of Jan'06. The rates at which deduction are to be made shall be arrived at by multiplying these rates uniformly with escalation of estimate (% above SOR) and loading of percentage quoted by the tenderer over advertised value of the section.

RAILWAY DRAWINGS			RAILWAY IDENTIFICATION	DESCRIPTION OF EQUIPMENTS & MATERIALS.	UNIT OF MEASUREMENT	UNIT PRICES AT CONTRACTOR'S DEPOT IN (RS)
SERIES	DRG No MOD	REF No.				
1	2	3	4	5	6	7
CABLES				2.5 sq.mm copper cable 7 core PVC insulated.	Meter	104
				2.5 sq.mm copper cable 2 core PVC insulated	Meter	39
				25 sq.mm Aluminum cable 2 core PVC Insulated	Meter	162
				4.0 sq. mm Aluminum cable 2 core PVC insulated	Meter	40
EQUIPMENTS						
Metal Oxide gapless type lightning Arrestor complete.					Each	15119
7.5 KV lightening Arrestor complete					Each	705
Potential transformer type-I complete					Each	44406
Integral locks complete					Each	916
Inter locks complete					Each	1833
Earth contact assembly complete					Each	3877
25 KV single pole isolator assembly					Each	16917
25 KV Double pole isolator assembly					Each	29463
25 KV D.O. Fuse switch complete					Each	4934
Regulating equipment (Winch type)					Each	9868
Regulating equipment (3 pulley type)					Each	5780
L.T. supply transformers, 25KV/240V 50 kVA					Each	121584
L.T. supply transformers, 25KV/240V 25 kVA					Each	93552
L.T. supply transformers, 25KV/240V 10 kVA					Each	23312
L.T. supply transformers, 25KV/240V 5 kVA					Each	19525
SF-6 gas filled 25 kV Interrupters					Each	174266

Vacuum type 25 kV Interrupters	Each	147467
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FORM -7
Sheet -2

1	2	3	4	5	6	7
PART II: SWITCHING STATIONS BATTERIES						
				Lead Acid Battery 110V (40 Ah)	Set	34256
				Battery Stand	Each	8458
				Tool Board	Each	615
				15A Iron clad fuse box two way	Each	1593
				250V Iron clad fuse box four way	Each	1762
				Battery charger(Complete)	Each	41587
				Fixing bolts and nuts etc.	Set	
				Terminal Board	Each	4920

**SCHEDULE - 3
UNIT PRICES
SECTION - 2 (CONCRETE)**

The rates given below against different items of work in different sections of this schedule are the standard schedule of rates of Jan'06. The rates at which deduction are to be made shall be arrived at by multiplying these rates uniformly with escalation of estimate (% above SOR) and loading of percentage quoted by the tenderer over advertised value of the section.

RAILWAY DRAWINGS			RAILWAY IDENTIFICATION	DESCRIPTION OF EQUIPMENTS COMPONENTS & MATERIALS.	UNIT OF MEASUREMENT	UNIT PRICE AT CONTRACTOR'S DEPOT IN (Rs)
SERIES	DRG No & MOD	REF No				
1	2	3	4	5	6	7
ETI/OH E/P	5090-4 (MOD.F)	1 to 3		Cement concrete counter weight assembly (Excl. counter weight eye rod).	Set	6355

SCHEDULE - 3
UNIT PRICES
SECTION - 3 (FERROUS)

The rates given below against different items of work in different sections of this schedule are the standard schedule of rates of Jan'06. The rates at which payments are to be made shall be arrived at by loading these rates uniformly for each item with escalation of estimate (% above SOR) and loading of percentage quoted by the tenderer over advertised value of the section.

RAILWAY DRAWINGS			RAILWAY IDENTIFICATION	DESCRIPTION OF EQUIPMENTS COMPONENTS & MATERIALS.	UNIT OF MEASUREMENT	UNIT PRICES AT CONTRACTOR'S DEPOT (in Rs)
SERIES	DRG No & MOD	REF No.				
1	2	3	4	5	6	7
ETI/OHE/P	1030-2 (Mod.D)	2&3	16/3,N	S.S. Bolt M 16x50/38 with nut and Phosphor bronze spring washer.	Each	95
-do-	1040-2 (Mod.E)	2&3	16/3,N	S.S. Bolt M 16x50/38 with nut and Phosphor bronze spring washer.	Each	95
-do-	1050-3 (Mod.A)	2&3	16/3, N	S. S. Bolt M16x50/38 with Nut & Phosphor Bronze Washer	Each	95
-do-	1070-1 (Mod.B)	3 to 5	12/17, N	S.S. Bolt M 10x35/30 with nut punched washer A-12 and Phosphor bronze spring washer.	Set of 2 Nos	70
-do-	1080-1 (Mod.B)	2	12/14	S.S. Stud Bolt M 12x25/20	Set of 8 Nos	208
-do-	1110-2 (Mod.D)	1&2	1118 & 1119	Contact wire Ending Clamp(107).	Each	226
-do-	1110-2 (Mod.E)	1&2	1118-3 & 1119-3	Contact wire Ending Clamp (107).	Each	226
-do-	-do-	3,4 &5	263	G.S. pin ϕ 20x50(Snap head) with punched washer A 22 & Annealed copper split pin ϕ 4x40	Each	18

-do-	1120 (Mod.B)	4 to 6	261	G.S. pin m 20x55 (Snap head) with punched washer A 22 & Annealed copper split pin ϕ 4x40	Each	18
ETI/OHE/P	1120-1 (Mod A)	1 to 5	1122 & 1123	Catenary ending clamp	Each	367
-do-	1130	4 to 6	261	G.S. Pin ϕ 20x55 (Snap head),punched washer A 22 and Anealed Copper Split Pin 4 x 40.	Each	18
-do-	1140 (Mod.B)	4 to 6	261	G.S. pin ϕ 20x55 (Snap head) with punched washer A 22 & Annealed copper split pin ϕ 4x40	Each	18
RE/33/P	1160 (Mod.J)	2& 5	1162- S & 10 N	S.S. ϕ 10`U` Bolt with nuts.	Each	65
-do-	-do-	3, 6 & 7	161-S	S.S. Pin ϕ 10x35 mm with punched washer A 12& annealed copper split pin 2.5x20 mm.	Each	27

1	2	3	4	5	6	7
-do-	1170 (Mod.K)	3 & 5	1173- S & 10 N	S.S. ϕ 10`U`bolt with nuts.	Each	65
-do-		7 to 9	161-S	S.S.pin ϕ 10x35 mm with punched washer A 12 and copper split pin 2.5 x 20.	Each	27
ETI/OHE/P	1192 (Mod.C)	2, 3 & 4	10/16 N	S.S. bolt M 10x35/30 with nut, Phosphor bronze spring washer B 10 and annealed copper split pin 2.5 x 20	Each	33
-do-	1194 (Mod.A)	2 to 4	10/16 N	S.S. Bolt M 10x35/30 with nut, Phosphor bronze spring washer B 10 & annealed copper split pin 2.5x20	Each	33
ETI/OHE/P	1216 (Mod.D)	1& 2	(1214- 2, 2492- 2)	Knuckle tube clamp(MCI)	Each	268
ETI/OHE/P	1216 (Mod.D)	3	14/1 NL	G.S. Bolt M 14x75/34 with Nut and lock nut.	Each	15
ETI/OHE/P	1263	1	1263	Strain clamp link	Each	62
RE/33/P	1270-1 (Mod.F)	2, 3 &5	261	G.S. Snap head pin ϕ 20 x 55 with punched washer A 22 and annealed copper split pin 4 x 40.	Each	18
-do-	-do-	3	12/18	S.S. Stud M-12x50/50	Set of 8 Nos	300
ETI/OHE/P	1310	-	-	S.S. Bolt ϕ 10x35/30 with nut, Phosphor bronze spring washer B-10 & annealed copper split pin ϕ 2.5 x 25.	Set of 2 Nos	67
-do-	1320 (Mod.B)	2 to4	1322, 10 N	S.S.`U` Bolt M-10 with Nuts & Phosphor bronze spring washers B 10.	Each	75
-do-	1330 (Mod.B)	2& 4 to 6	4032- S& 10 NL	S.S.`U` Bolt ϕ 10 mm with Nut, lock nut & annealed copper split pin 2.5 x 20.	Each	76
-do-	1360 (Mod.B)	4 to6	261	G.S. pin ϕ 20x55(snap head) punched washer A 22 and annealed copper split pin 4 x 40.	Each	18
-do-	1370-1 (Mod.F)	1	1371-1	Raised Register Arm Clamp	1Set	247
-do-	-do-	2& 3	16/6 NL	G.S. Bolt M 16x60/38 with Nut, Lock nut and Galvanised steel	Set of 2 nos	24

				spring washer B 16		
-do-	1390-1 (Mod.D)	1	1391-1	Crossing clamp piece	Set of 4 Nos	261
-do-	-do-	2 to 4	14/1 N	G.S. Bolt M 14x75/34 with Nut, punched washer A16 and annealed copper split pin 3.2x25	Set	37
-do-	1400 (Mod.C)	1& 4	1401, 1174	Short Dropper assembly	Each	37

1	2	3	4	5	6	7
-do-	1400, Mod-C	5,7 & 8	10/18 N	S.S. Bolt M 10x55/30 with Nut, Phosphor bronze spring washer B-10 and punched washer	Each	44
-do-	-do-	6& 7	10/17 N	S.S. Bolt M 10x40/26 with Nut & Phosphor bronze spring washer B-10	Each	36
-do-	1540 (Mod.D)	2 to 4	12/19 N	S.S. Bolt M 12x60/30 with Nut, punched washer A 14 and Phosphor bronze spring washer B 12.	Set of 2 Nos	129
-do-	1550 (Mod.E)	2 to 4	12/19 N	S.S Bolt M 12x60/30 with nut punched washer A 14 and Phosphor bronze spring washer B 12.	Set of 3 Nos	194
-do-	1560 (Mod.D)	2 to 4	12/19 N	S.S. Bolt M 12x60/30 with nut, punched washer A 14 and Phosphor bronze spring washer B 12	Set of 3 Nos	194
ETI/OHE/P	1580 (Sh.1- Mod.F)	3 to 9	1583, 12 N	S.S `U` Bolt ϕ 12mm with Nut, Phosphor bronze spring washer B 12, punched washer A 14, 16 ϕ pin 70 mm long, punched washer A 18 and annealed copper split pin 4 x 32	Set of 2 Nos	177
ETI/OHE/P	1600 (Mod.C)	1& 2	1601& 1602	20 mm Strain clamp	Each	747
ETI/OHE/P	-do-	3 to 8	1603, 12 N	S.S.`U` Bolt ϕ 12,nut, punched washer A 14,snap head pin ϕ 16x55, punched washer A 18 and annealed copper split pin 4x32	Set of 2 Nos	349
RE/33/P	2086 (Mod.C)	1		Large bracket sleeve	Each	104
ETI/OHE/P	2110 (Mod.B)	3 to 5	2113 &14 N	G.S.`U` Bolt ϕ 14 mm with Nut & spring washer B 14.	Set of 2 Nos	67
ETI/OHE/P	2120 (Mod.B)	5& 6	2113/1 4 N	`U` Bolt ϕ 14 mm with Nuts and spring washer B 14.	Set of 2 Nos	67
ETI/OHE/P	-do-	4	2124-S 12 NL	Direct catenary clamp stud with S.S. Nut lock nut.	Set of 2 Nos	78
ETI/OHE/P	2130 (Mod.B)	3 to 5	2133 & 14 N	G.S.`U` Bolt ϕ 14 mm with Nut & spring washer B 14.	Set of 2 Nos	67

ETI/OHE/P	2140 (Mod.C)	4	2124-S 14 NL	Direct catenary clamp Stud with S.S. Nut and lock nut	Set of 2 Nos	78
ETI/OHE/P	-do-	5& 6	2133 &14 N	G.S. `U' Bolt ϕ 14 mm with nuts and spring washer B-14.	Set of 2 Nos	67
TI/DRG/OH E/FTGFE/R DSO	00007/1 0/0	1& 2	2151-2 &2152 -2	Standard Register arm Hook (Forged).	Each	338
-do-	-do-	3	16/3 NL	G.S. Bolt M 16X50/38 with nut & lock nut.	Set of 2 nos	19
TI/DRG/OH E/FTGFE/R DSO	00010/1 0/0	1& 2	2161-2 &2162 -2	Large Register Arm hook (Forged).	Each	367

1	2	3	4	5	6	7
-do-	-do-	3	16/3 NL	G.S. Bolt M 16x50/38 with nut & lock nut	Set of 2 Nos	19
-do-	2274-1 (Mod.D)	1	2274-1	Dropper clip(38) for standard Bracket tube	Each	24
-do-	-do-	2 to 5	16/2, 16 LN	G.S. Bolt M 16x40/32 with lock nut, spring washer B 16 & annealed copper split pin 4x32.	Each	11
-do-	2277 (Mod.D)	1	2277	Dropper clip(49) for large bracket tube	Each	24
-do-	-do-	2 to 5	16/2 & 16 LN	G.S. Bolt M 16x40/32 with lock nut, spring washer B 16 and annealed copper split pin 4x32	Each	11
-do-	2341 (Mod.B)	1	2341	Steady Rod piece of length 0.76 m.	Each	197
ETI/OHE/P	-do-	2	2342	Steady Rod piece of length 0.96 m	Each	249
-do-	-do-	3	2343	Steady Rod piece of length 1.16 m.	Each	301
-do-	-do-	4	2344	Steady Rod piece of length 1.36 m.	Each	353
-do-	2352 (Mod.A)	1	2352	Bent Steady Arm swivel	Each	59
TI/DRG/OH E/FTGF/E/R DSO	00016/1 0/0	1	2361-1	25 mm Drop Bracket part (Forged).	Each	352
-do-	-do-	2	10/14 LN	SS Bolt M 10x25/20 with lock nut	Each	22
ETI/OHE/P	2380 (Mod.C)	5 & 7	2113 & 14 N	G.S.`U` Bolt M 14 with nuts & spring washer B 14.	Set.	70
-do-	-do-	6 & 7	2133 & 14 N	G.S.`U` Bolt M 14 with nuts & spring washer B 14.	Set.	70
TI/DRG/OH E/ FTGF/E/ RDSO/	00003/0 0/0	1	2391-1	Steady Arm hook(BFB) (Forged)	Each	130
ETI/OHE/P	2392 (Mod C)	1	2392	BFB Steady Arm Swivel	Each	44
-do-	2402 (Mod.A)	1	2402	Tubular Stay adjuster	Each	116
-do-	2402-1 (Mod.B)	1	2402-1	Tubular stay adjuster (large)	Each	145

TI/DRG/OH E/ FTGFE/ RDSO/	00004/0 3/0	1	2403-2	Tubular stay sleeve (Forged)	Each	141
-do-	2404 (Mod C)	2& 4	2404- 1S &109- S	S.S. Bolt ϕ 10mm with lock nut	Each	26
TI/DRG/OH E/ FTGFE/ RDSO/	00002/0 0/1	1	2422-2	Register Arm Eye piece (25 mm) (Forged)	Each	63
RE/33/P	2432 (Mod.E)	1	2432	Raised Register Arm Adjuster (25mm)	Each	110

1	2	3	4	5	6	7
ETI/OHE/P	2461-1 (Mod.F)	1	2461-1	Dropper clip (34 mm) for register Arm tube	Each	22
ETI/OHE/P	2461-1 (Mod.F)	2 to 4	16/2 LN	G.S. Bolt M 16x40/32 with lock nut, spring washer B 16 and Annealed copper split pin 4x32	Each	11
-do-	2471-1 (Mod.E)	1	2471-1	Dropper clip (25)for Raised Register Arm	Each	22
-do-	-do-	2 to 4	16/2 LN	G.S. Bolt M 16x40/32 with lock nut, spring washer B 16& Annealed Copper Split pin 4 x 32.	Each	11
TI/DRG/OH E/ FTGFE/ RDSO/	00015/1 0/0	1& 2	2491-2 & 2492-2	25 mm Steady Arm clamp (Forged)	Each	254
-do-	-do-	3	14/1 NL	G.S. Bolt M 14x75/34 with nut & lock nut	Each	15
ETI/OHE/P	2520 (Mod.B)	2	2522	Normal Bent Steady arm Eye piece	Each	200
-do-	-do-	3	2523	Normal Bent steady arm Hook	Each	176
ETI/OHE/P	-do-	4	2352	Bent Steady Arm Swivel	Each	59
-do-	2540 (Mod.B)	5	2541	BFB steady arm eye piece	Each	54
-do-	-do-	6	2542	BFB Steady Arm Swivel	Each	44
-do-	2541 (Mod.E)	1	2541	BFB Steady Arm eye piece	Each	56
-do-	2542 (Mod.C)	3	2542-2	BFB Steady Arm swivel	Each	44
ETI/OHE/P	2550- 1/2 (Mod.L)	1,2, 6	2551- 1& 2502	Standard anti -wind clamp and AL. Alloy snap head rivet 4x35	Set	70
-do-	-do-	1,3 & 6	2551-1 & 2503	-do-	Set	96
-do-	-do-	4 to 5	10/20 N	S.S. Bolt M 10x70/26 with nut & Phosphor bronze spring washer B 10	Each	44
-do-	2550-3 (Mod.E)	1,2 & 5	2551-1 & 2504	Anti wind clamp for tram- way OHE (REG) with snap head rivet M 4x35	Set	106
-do-	-do-	3& 4	10/ 20 N	S.S. Bolt M 10x70/26 With nut & Phosphor bronze spring washer B 10	Each	44

-do-	2730 (Mod.A)	3& 4	4032- S, 108-S & 109-S	S.S.`U' Bolt M 10 with nuts, lock nut & Annealed copper split pin 2.5x20	Set	156
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1	2	3	4	5	6	7
-do-	3010 (Mod.C)	1	3011	Double clevis (MCI)	Each	204
-do-	3010 (Rev.C)	2 to 4	262	G.S. Snap Head pin M 20x60 punched washer A 22 and annealed copper split pin 4x40	Set of 2 Nos	37
TI/DRG/OHE / FTGFE/ RDSO/	00005/0 4/0	-	3021-1	Mast fittings for hook insulator (Forged)	Each	276
RE/33/P	3070-1 (Mod.H)	1 to3	3070-1	Mast Bracket fitting assembly (150)	Each	775
-do-	-do-	4 to 7	261	G.S. pin M 20x55(snap head) punched washer A 22, Annealed copper split pin 3.2x25 and Annealed copper split pin 4x40	Each	20
-do-	3070-2 (Mod.D)	1 to3	3070-2	Mast Bracket fitting assembly (200)	Each	846
-do-	-do-	4 to 7	261	G.S. Pin m 20x55 (span Head), Punched washer A 22, annealed copper split pin 3.2 x 25 and Annealed copper split pin 4 x 40.	Each	20
-do-	3071 (Mod.F)	1	3071	Mast Bracket clevis	Each	197
-do-	3071-1 (Mod.B)	1	3071-1	Mast Bracket clevis (Forged)	Each	381
RE/OHE/P	3072 (Mod.A)	1	3072	Mast Bracket clevis pin	Each	20
RE/33/P	3072-1 (Mod.A)	1	3072-1	Mast Bracket clevis pin	Each	20
-do-	3073 (Mod.D)	1	3073	Mast Bracket swivel (150)	Each	578
-do-	3073 (Mod.E)	1	3073-3	Mast Bracket swivel (150)	Each	578
-do-	3074 (Mod.E)	1	3074	Mast Bracket swivel (200).	Each	648
-do-	3074 (Mod.F)	1	3074-3	Mast Bracket swivel (200).	Each	648
ETI/OHE/P	3076 (Mod.C)	1 to8	3076	Standard Backing angle	KG	66
-do-	3231 (Mod.C)	1	3231	Mast Anchor fitting (welded).	Each	273
-do-	3231-2 (Mod.C)	1	-	Mast anchor fitting welded (to be used with cement counter weight assembly)	Each	296

-do-	3232 (Mod.C)	1	3232	Mast guy rod fitting (welded)	Each	310
-do-	3233 (Mod.B)	1	-	Mast Anchor fitting(200).	Each	442
-do-	3234/5 (Mod.B)	1	3234	Mast guy rod fitting (200/150)	Each	832
ETI/OHE/P	-do-	2	3235	Mast guy rod fitting (200/200)	Each	987

1	2	3	4	5	6	7
-do-	3240 (Mod.D)	X	-	Anchor fittings on `K' series mast.	Each	588
-do-	-do-	Y	-	Guy rod fitting	Each	668
-do-	-do-	Z	-	Backing angles	Each	474
-do-	3241-2 (Mod.B)	X	-	Anchor fitting on `K' series mast	Each	588
-do-	-do-	Y	-	Guy rod fitting	Each	668
-do-	4001 (Mod.A)	2 to 4	102-S & 108-S	S.S bolt M 10x35/30 with nut, Phosphor bronze spring washer and Annealed copper split pin 2.5x25	Each	33
-do-	4002 (Mod.A)	2 to 4	102-S & 108-S	S.S. bolt M 10x35/30 with nut, Phosphor bronze spring washer and Annealed copper split pin 2.5x25	Each	33
ETI/OHE/P	5000 (Mod.B)	1	5001	Anchor bolt(length 1.6m)	Each	740
-do-	-do-	2	5001-1	-do- (length 2.1m)	Each	881
-do-	-do-	3	5001-3	-do- (length 0.85m)	Each	197
-do-	-do-	4	5002	Guy rod stirrup	Each	219
-do-	-do-	5	5004	Guy rod M 25mm with nut, lock nut, plain washer and split pin (length 9.3m).	Each	2326
			(OR)			
-do-	9070/1 (Mod.B)	1& 3 to 6	9070	Guy rod dia 20mm	Set	2326
-do-	5000 (Mod.B)	6	5005	Guy rod M 25 (Steel Galv.to IS: 2062-1999) with nut, lock nut, plain washer and split pin (length 9.7m)	Each	2361
ETI/OHE/P	-do-	7	5006-1 (OR)	Short Guy rod M 25mm with nut lock nut, plain washer and split pin (length 5.35m).	Each	1311
-do-	9070/1 (Mod.B)	2& 3 to 6	9071	Guy rod dia 20mm	Set	1311
-do-	5000 (Mod.B)	8	5007-1	Anchor `V' bolt.	Each	183
-do-	-do-	9	5008	B.C. Anchor loop	Each	740
-do-	5020-1	1 to 4	5021,5 023 & 5024	9 Tonne adjuster complete (Eye & clevis type) (Forged)	Each	515

-do-	5020-2	1 to 4	5021- 5024 & 5025	9 Tonne adjuster complete (Double clevis type) (Forged)	Each	564
-do-	5030 (Mod.C)	1	5031	Anchor double strap	Set	59

1	2	3	4	5	6	7
-do-	-do-	2 to 4	261	G.S. pin M 20x55 (Snap head) with washer M 20mm and copper split pin 4x40	Set of 2 Nos	36
TI/DRG/OHE / FTGFE/ RDSO/	00001/0 0/1	1	5041-1	18 mm single clevis (Forged)	Each	141
-do-	-do-	2 to 4	262	G.S. pin M 20 x 60mm with Annealed copper split pin 4x40&G.S flat washer M 20	Each	18
ETI/OHE/P	5060-2 (Mod.C)	9 to 12 & 23	5063-1 & 5067	Standard guide tube assembly	Each	940
-do-	5090 (Mod.C)	1 to 3	5091, 5092 & 5093	Counter weight assembly (Excl. counter weight eye rod with nut and split pin)	Set.	12406
-do-	-do-	4& 5	5094 & 238	Counter weight eye rod, G.S. nut M20, washer and Annealed copper split pin 4x40	Each	254
TI/DRG/OHE /ATD/RDSO/ 0004/00/0	5090-1 (Mod.D)	1 to 3	5091-1 5092-1 5093-1	Trapezoidal counter weight assembly (Excl eye rod)	Set	13921
-do-	-do-	4,7 & 8	5099-1 & 20N & 238	Trapezoidal counter weight eye rod with ϕ 20 G.S nut, Punched washer A-22 and Annealed copper split pin 4x40	Each	345
-do-	-do-	5,9 & 10	5097-3	G.S. bolt M 16x1890/100 both ends threaded, 2 nuts flat washer m 18 & spring washer B-16	Set of 2 Nos.	508
-do-	-do-	6	5096	M.S. Galv. guide plate 100x10 thick 370 long with 2 hooks welded.	Each	296
ETI/OHE/P	5090-3 (Mod.F)	1	5094-1	Counter weight eye rod	Each	148
-do-	-do-	2	5098-1	Counter weight piece	Each	416
-do-	-do-	2A to 4	5098, 5092 & 5091	Counter weights	Set	7754

-do-	-do-	5,5 A & 6	-	G.S. ϕ nut and GI punched washer A-22 and Annealed copper split pin 4x40.	Each	8
ETI/OHE/P	5090-4 (Mod.F)	4& 5	-	Counter weight eye rod with nut, washer, split pin and bolt 12x850/49 with nut, flat washer and split pin 3.2x25	Set	134
-do-	-do-	4A, 5A & 6	-	Counter weight eye rod 650mm long, nut, washer & split pin with bolt ϕ 12x450/49 with nut, flat washer and split pin 3.2x20 & counter weight Piece.	Set.	70

1	2	3	4	5	6	7
-do-	5090-5 (Mod.B)	1 to 4	5091, 5092, 5093 & 5098	Counter weight assembly for 3 pulley type regulating equipment	Set.	20885
ETI/OHE/P	-do-	5 to 8	5099	Counter weight eye rod (1550mm) long with nut, Washer and split pin.	Each	310
-do-	5090-6 (Mod.B)	1 to 4	5091, 5092 & 5098-1 & 5098	Counter weight assembly for 3 pulley type regulating equipment (Tramway type)	Set.	13132
-do-	-do-	5 to 6	5094 & 20 N	Counter weight eye rod with Nut & split pin 4x40	Each	252
-do-	5183 (Mod.C)	1	5183	Double Eye Distance Rod (ø 20mm)	Each	217
-do-	5190-1 (Mod.C)	1	5194	Compensating plate	Set	183
-do-	-do-	2 to 4	261	G.S. Snap Head Pin ø20x55, punched washer A-22 and Annealed copper split pin 4x40.	Set of 3 Nos.	54
-do-	5190-2 (Mod.C)	1	5195	Equalising plate 8mm.	Set	327
-do-	-do-	2 to 4	261	G.S. Snap Head pin ø 20x55 punched washer A-22 and Annealed copper split pin 4x40.	Set of 3 nos.	54
-do-	5191 (Mod.B)	1	5191	Compensating plate	Each	190
ETI/OHE/P	5191- 1/2 (Mod.D)	1	5191-1 or 5191-2	Compensating plate	Each	190
-do-	5192 (Mod.B)	1	5192	Equalising plate	Each	350
-do-	5192- 1/2 (Mod.C)	1	5192-1 or 5192-2	Equalising plate	Each	338
-do-	5193 (Mod.B)	1	5193	Short Equalising plate	Each	148

-do-	5220 (Mod.F)	1	5221	Guy Rod Double strap (100) Assembly	Set	124
ETI/OHE/P	-do-	2	5222	Guy Rod Double strap (150/250)	Set	226
-do-	-do-	3& 4	24/1 LN	Steel Galv. Bolt M-24x70/54 with lock nut and Annealed copper split pin 5x40.	Set of 2 Nos .	72
-do-	6000 (Mod.C)	5& 6	105-S, 108-S & 109-S	S.S. Bolt ϕ 10x65/30, with Nut, lock nut and washer	Each	44
-do-	6030 (Mod.B)	4& 5	6034S, 108S & 109S	S.S. Bolt ϕ 10, Nut, lock nut and washer.	Set of 2 Nos	187

1	2	3	4	5	6	7
-do-	6070-1	4, 6 & 8	-	11 KV Post Insulator cap clamp (jumper), G.S.HEX Bolt M 12x40/30 with spring washer	Set	126
-do-	-do-	5,7 & 8	-	11 KV Post Insulator clamp(Bus bar) G.S. HEX, Bolt M 12x55/30 with spring washer	Set	126
-do-	6075/ 6076 (Mod.C)	1	6075	3 KV Pedestal Insulator cap clamp (Bus bar)	Set of 2 Nos	102
-do-	-do-	2	6076	3 KV Pedestal Insulator cap clamp (jumper)	Set of 2 No.	102
ETI/OHE/P	6094 (Mod.B)	1	6094	Post Insulator jumper clamp	Set of 2 Nos	54
-do-	6095 (Mod.B)	1	6095	Post Insulator Bus bar clamp	Set of 2 Nos	54
-do-	6170 (Mod.C)	2 & 3	101-S & 108-S	S.S. Bolt ϕ 10x35/30 with Nut and Phosphor Bronze spring washer ϕ 10	Each	32
ETI/OHE/P	6181-1 (Mod.D)	1	6181-1	Section Insulator double Strap only.	Set	28
-do-	-do-	2 to 4	-	S.S. Pivot pin with flat washer and Annealed copper split pin 2.5x25	Set of 2 Nos	38
ETI/PSI/P	6480 (Mod.C)	3 & 4	-	S.S. Bolt M12x60/40 with Nut flat washers and Phosphor bronze spring washer	Set of 8 Nos	510
-do-	6490 (Mod.B)	3 & 4	-	S.S. Bolt ϕ 12x60/40 complete with Nut, flat washer and Phosphor bronze spring washer	Set of 8 Nos	510
ETI/PSI/P	6500 (Mod.C)	3 & 4	-	S.S. Bolt M-12x60/30 complete with Nut, flat washer and Phosphor bronze spring washer.	Set of 8 Nos	510
-do-	6510 (Mod.D)	3 & 4	-	S.S. Bolt ϕ 12x60/40 complete with Nut, flat washer and spring washer	Set of 4 Nos	255
ETI/PSI/P	6520 (Mod.B)	4 & 5	-	S.S. Bolt ϕ 12x60/40 complete with Nut, flat washer and Phosphor bronze spring washer	Set of 8 Nos	510
-do-	6530 (Mod.C)	4 & 5	-	S.S. Bolt ϕ 12x60/40 complete with Nut, flat washer and Phosphor bronze spring washer	Set of 8 Nos	510

-do-	6550 (Mod.B)	6 & 7	-	S.S bolt ϕ 12x70/40 complete with nut, flat washer and Phosphor bronze spring washer	Set of 8 Nos	566
-do-	-do-	8	-	G.S stud bolt ϕ 16x30/20 with flat washer and Phosphor bronze spring washer.	Set of 4 Nos	34
-do-	6560 (Mod.B)	3 & 4	-	S.S. bolt ϕ 12x60/30 complete with nut, flat washer and Phosphor bronze spring washer	Set of 12 No	797
-do-	6830-1 (Mod.D)	3 & 4	12/20 N	S.S. Bolt M 12x50/30 with nut, flat washer A 14 and Spring washer B 12	Set of 4 Nos	238
ETI/OHE/P	7021 (Mod.A)	1& 2	7021	Earth electrode	Each	881
RE/33/P	7040 (Mod.E)	1	7040	Earth wire mast clamp.	Each	338

1	2	3	4	5	6	7
RE/33/P	-do-	2 & 3	-	G.S. wire mast clamp hook with ϕ 16 nut, lock nut, washer and bolt ϕ 16x 65/ 38 with nut, lock nut and washer.	Each	37
-do-	7050 (Mod.D)	1 & 2	7050 or 7051-1	Earth wire strain clamp	Each	423
-do-	-do-	3 to 8	218,26 2	G.S. `U' bolt ϕ 16mm,nut, spring washer, snap head pin ϕ 20x60, plain washer ϕ 20 & copper split pin ϕ 4x36	Set	78
-do-	7501 (Mod.F)	-	7501	Typical structural number plate (100mm size)	Each	121
RE/33/P	7511 (Mod.B)	-	-	Typical isolator number Plate	Each	59
ETI/PSI/P	7520 (Mod.B)	-	-	Typical number plate for interrupter and D.P. isolator	Each	59
-do-	7521 (Mod.B)	-	-	-do- Potential Transformer type-1	Each	59
-do-	7522 (Mod.B)	-	-	-do- Booster Transformer	Each	59
-do-	7525	-	-	-do- Auxiliary Transformer	Each	59
ETI/OHE/SK	123 (Mod.D)	2 to 4	-	S.S. Bolt ϕ 12x60/30 with nut, washer and Phosphor bronze spring washer	Set	135
-do-	-do-	2 to 4	-	G.S. Bolt ϕ 16x60/38 with nut, washer & Phosphor bronze spring washer	Set	44
ETI/OHE/SK	130 (Mod.D)	2 to 5	102-S &108-S	S.S. bolt ϕ 10x35/30 with nut, Phosphor bronze .spring washer and copper split pin ϕ 2.5x25 and flat washer.	Each	36
-do-	176 (Mod.D)	1	1161-1	AL. Alloy catenary suspension clamp body (MCI).	Each	331
-do-	-do-	4	SK-205	M.S. sheet Galv. suspension clamp lock plate.	Each	70
-do-	-do-	2,3 & 5 to 7	1162-S	S.S.`U' Bolt M 10mm,G.S pin ϕ 16x 50mm S.S. nut ϕ 10mm, copper split pin 2.5x25mm & G.S. flat washer ϕ 16mm.	Each	135
-do-	205 (Mod.B)	1	-	Double suspension Lock plate (Galvanised M.C.I.)	Each	70

-do-	231 (Mod.D)	2 to 4	12/19 N	S.S. bolt M 12x60/30 with Set nut, flat washer and Phosphor bronze spring washer		135
-do-	-do-	2to 4	16/6N	G.S. bolt M 16x60/38 with nut, flat washer and spring washer.	Set	44
ETI/OHE/SK	333 (Mod.D)	2 to 6	-	S.S. Bolt ϕ 10x35/30 with nut, Phosphor bronze spring washer, copper split pin ϕ 2.5x25, Al- Cu. Bimetallic washer and flat washer.	Each	41
-do-	436 (Mod.B)	3 to 8	AL- 436/2	S.S. `U' bolt ϕ 12 spring washer flat washer, nut, snap head pin ϕ 16 and Split pin 2.5x25	Set	162
-do-	468 (Mod.A)	2& 5	-	S.S. `U' bolt ϕ 10mm with nut	Set	119

1	2	3	4	5	6	7
-do-	-do-	1& 4	1161-1	AL. catenary suspension clamp assembly & lock plate (MCI).	Set.	341
-do-	-do-	3,6 &7	-	G.S. Pin ϕ 16/50mm, copper split pin 2.5x25mm & G.S. Flat washer ϕ 16mm	Each	16
-do-	469 (Mod .A)	1& 2	1171-1 AL- 205	Double suspension clamp assembly body & lock plate (MCI).	Each.	417
-do-	469 (Mod.A)	3& 5	1173 S 108 S	S.S.'U' bolt ϕ 10mm with nuts.	Set. Of 2Nos	136
-do-	-do-	7to 9	-	G.S. pin ϕ 16x50, copper split pin ϕ 2.5x25 and flat washer.	Each.	16
				Galvanised steel wire (19/2.5mm)	Metr	61
				G.I. wire 8 SWG	Metr.	11
				M.S. flats 40x6mm	KG	63
SMALL PART STEEL				Small part steel work of shapes and sizes	MT	66257
TUBES						
RE/33/P	2041(Mod.D)	-	-	Standard bracket tube (ϕ 30/38 mm)	Metr	226
-do-	2081(Mod.E)	-	-	Large bracket tube (ϕ 40/49 mm)	Metr	240
-do-	2401 (Mod.C) 2431 (Mod.D)	-	-	25mm Nominal bore steel tube for stay and Register arms.	Metr	127
EQUIPMENTS						
				S.S. Wire ropes for 3 Pulley type regulating equipment (8M long.)	Each	2996
				S.S. Wire ropes for 3 pulley type regulating equipment (7 M. long)	Each	2673
GALVANISED STEEL BOLTS & NUTS ETC						

ETI/C ⁻	0073 (Mod.A)	-	10/1	Bolt M 10x30/25 mm	Each	3
-do-	-do-	-	10/2	Bolt M 10x35/30 mm	Each	4
-do-	-do-	-	10/3	Bolt M 10x170/32 mm	Each	13

1	2	3	4	5	6	7
-do-	-do-	-	-	Nut for M 10 Bolt	Each	2
	-do-	-	-	Lock nut for M 10 bolt	Each	1
-do-	-do-	-	12/1	Bolt M 12x40/30 mm	Each	5
-do-	-do-	-	12/2	Bolt M 12x45/30 mm	Each	5
-do-	-do-	-	12/3	Bolt M 12x 55/30 mm	Each	5
-do-	-do-	-	12/4	Bolt M 12 x 60/30 mm with hole for split pin	Each	8
ETI/C	0073 (Mod-A)	-	12/5	Bolt M 12x120/36 mm	Each	10
-do-	-do-	-	12/6	Bolt M 12x200/49 mm	Each	13
-do-	-do-	-	12/7	Bolt M 12x240/49 mm	Each	19
-do-	-do-	-	12/8	Bolt M 12x350/49 mm	Each	28
-do-	-do-	-	12/9	Bolt M 12x450/49 mm	Each	36
ETI/C	0073 (Mod.A)	-	-	Nut for M 12 bolt	Each	2
-do-	-do-	-	-	Lock nut for M 12 bolt	Each	3
-do-	-do-	-	14/1	Bolt M 14x75/34 mm	Each	9
-do-	-do-	-	14/2	Bolt M 14x100/34 mm	Each	12
-do-	-do-	-	-	Nut for M 14 Bolt	Each	3
-do-	-do-	-	-	Lock nut for M 14 bolt	Each	3
-do-	-do-	-	16/1	Bolt M 16x30/25 mm	Each	5
-do-	-do-	-	16/2	Bolt M 16x40/32 mm	Each	6
-do-	-do-	-	16/3	Bolt M 16x50/38 mm	Each	6
-do-	-do-	-	16/4	Bolt M 16x50/40 mm	Each	9
-do-	-do-	-	16/5& 16/6	Bolt M 16x60/38 mm with /without hole for split pin	Each	7
-do-	-do-	-	16/7	Bolt M 16x65/38 mm	Each	8
-do-	-do-	-	16/8	Bolt M 16x65/60 mm	Each	11
-do-	-do-	-	16/9	Bolt M 16x75/38 mm	Each	12
-do-	-do-	-	16/10	Bolt M 16x100/38 mm	Each	16
-do-	-do-	-	16/11	Bolt M 16x175/46 mm	Each	22
-do-	-do-	-	16/12	Bolt M 16x210/57 mm	Each	30
-do-	-do-	-	16/13	Bolt M 16x220/57 mm	Each	22
-do-	-do-	-	16/14	Bolt M 16x240/57 mm	Each	34
-do-	-do-	-	16/15	Bolt M 16x260/57 mm.	Each	28
ETI/C	0073 (Mod-A)	-	16/16	Bolt M 16x270/57 mm	Each	38
-do-	-do-	-	16/17	Bolt M 16x300/57 mm	Each	42
-do-	-do-	-	16/18	Bolt M 16x320/57 mm	Each	34
-do-	-do-	-	16/19	Bolt M 16x360/57 mm	Each	35

-do-	-do-	-	16/20	Bolt M 16x370/57 mm	Each	52
ETI/C	0073 (Mod.A)	-	16/21	Bolt M 16x400/57 mm	Each	56
-do-	-do-	-	16/22	Bolt M 16x460/57 mm	Each	64
-do-	-do-	-	16/23	Bolt M 16x500/57 mm	Each	70
-do-	-do-	-	16/24	Bolt M 16x600/57 mm	Each	84
-do-	-do-	-	16/25	Bolt M 16x650/57 mm	Each	91

1	2	3	4	5	6	7
-do-	-do-	-	-	Nut for M 16 bolt	Each	2
-do-	-do-	-	-	Lock nut for M 16 bolt	Each	2
-do-	-do-	-	18/1	Bolt M 18 x 75/42 mm. With hole for split pin	Each	22
-do-	-do-	-	18/2	Bolt M 18 x 80/42 mm. with hole for split pin	Each	23
-do-	-do-	-	-	Nut for M 18 bolt	Each	6
-do-	-do-	-	-	Lock nut for M 18 bolt	Each	5
-do-	-do-	-	20/1	Bolt M 20 x 50/37 mm	Each	13
-do-	-do-	-	20/2	Bolt M 20 x 50/46 mm	Each	15
-do-	-do-	-	20/3	Bolt M 20 x 65/46 mm	Each	15
-do-	-do-	-	20/4	Bolt M 20 x 85/46 mm	Each	19
-do-	-do-	-	20/5	Bolt M 20 x 100/46 mm	Each	20
-do-	-do-	-	20/6	Bolt M 20 x 200/52 mm	Each	46
-do-	-do-	-	20/7	Bolt M 20 x 230/65 mm	Each	39
-do-	-do-	-	20/8	Bolt M 20 x 260/65 mm	Each	45
ETI/C	0073 (Mod-A)	-	20/9	Bolt M 20 x 280/65 mm	Each	49
-do-	-do-	-	20/10	Bolt M 20 x 310/65 mm	Each	51
-do-	-do-	-	20/11	Bolt M 20 x 330/65 mm	Each	54
-do-	-do-	-	20/12	Bolt M 20 x 360/65 mm	Each	59
-do-	-do-	-	20/13	Bolt M 20 x 380/65 mm	Each	84
-do-	-do-	-	20/14	Bolt M 20 x 470/65 mm	Each	104
ETI/C	0073 (Mod.A)	-	20/15	Bolt M 20 x 550/65 mm	Each	86
-do-	-do-	-	20/16	Bolt M 20 x 650/65 mm	Each	97
-do-	-do-	-	20/17	Bolt M 20 x 700/65 mm	Each	113
-do-	-do-	-	-	Nut for M 20 Bolt	Each	2
-do-	-do-	-	-	Lock Nut for M 20 Bolt	Each	2
-do-	-do-	-	24/1	Bolt M 24 x 70/54 mm with hole for split pin	Each	27
-do-	-do-	-	-	Nut for M 24 Bolt	Each	12
-do-	-do-	-	-	Lock Nut for M 24-bolt	Each	5
RE/33/P	250 (Mod.B)	1	2113	'U' Bolt M 14 mm	Each	26
-do-	-do-	2	2133	'U' Bolt M 14 mm	Each	25
-do-	260 (Mod.C)	1	261	Pin ϕ 20 x 55 mm	Each	13
-do-	-do-	2	262	Pin ϕ 20 x 60 mm	Each	13
-do-	-do-	3	263	Pin ϕ 20 x 50 mm	Each	12
STAINLESS STEEL BOLTS & NUTS ETC21						

ETI/C)	0073 (Mod.A)	-	10/14	BOLT M 10 x 25/20 mm	Each	17
-do-	-do-	-	10/15 & 10/16	Bolt M 10 x 35/30 mm with & without hole for split pin	Each	21
-do-	-do-	-	10/17	Bolt M 10 x 40/26 mm	Each	4
-do-	-do-	-	10/18	Bolt M 10 x 55/30 mm	Each	5

1	2	3	4	5	6	7
ETI/C	0073 (Mod-A)	-	10/19	Bolt M 10 x 65/30 mm	Each	30
-do-	-do-	-	10/20	Bolt M 10 x 75/26 mm	Each	33
-do-	-do-	-	108 S	S.S. Nut for M 10 Bolt	Each	6
-do-	-do-	-	109 S	S.S. Lock Nut for M 10 Bolt	Each	5
-do-	-do-	-	12/14	Bolt M 12 x 25/20 mm	Each	26
-do-	-do-	-	12/15	Bolt M 12 x 25/25 mm	Each	3
-do-	-do-	-	12/16	Bolt M 12 x 30/30 mm	Each	3
ETI/C	0073 (Mod.A)	112 S	12/17	Bolt M 12 x 45/30 mm	Each	30
-do-	-do-	-	12/18	Bolt M 12 x 50/50 mm	Each	5
-do-	-do-	-	12/19	Bolt M 12 x 70/40 mm	Each	48
-do-	-do-	-	-	S.S. Nut for M 12 Bolt	Each	10
-do-	-do-	-	-	S.S. Lock Nut for M 12 Bolt	Each	8
-do-	-do-	-	14/14	Bolt M 14 x 75/34 mm	Each	9
-do-	-do-	-	-	S.S. Nut for M 14 Bolt	Each	30
-do-	-do-	-	-	S.S. Lock Nut for M 14 Bolt	Each	21
ETI/OHE/P	2124 (Mod.B)	1	2124 S	Direct catenary clamp stud	Each	21
-do-	1320 (Mod.B)	2	-	'U' Bolt ø 10 mm	Each	54
-do-	150	6	4032- S	'U' Bolt ø 10 mm	Each	53
RE/33/P	160 (Mod.A)	-	161-S	Pin ø 10 x 35 mm	Each	22
-	-	-	-	Pin ø 12 x 45 mm	Each	49
-	-	-	-	Pin ø 16 x 60 mm	Each	102
-do-	-	-	-	Pin ø 18 x 75 mm	Each	102
G.S.'J' Bolts ETI/C/0074(Mod.A)						
-do-	-	-	-	'J' Bolt ø 16 x 120/60	Each	23
-do-	-	-	-	'J' Bolt ø 16 x 175/60	Each	42
-do-	-	-	-	'J' Bolt ø 16 x 200/60	Each	51
-do-	-	-	-	'J' Bolt ø 16 x 220/60	Each	49
-do-	-	-	-	'J' Bolt ø 16 x 240/60	Each	56
-do-	-	-	-	'J' Bolt ø 16 x 250/60	Each	53
-do-	-	-	-	'J' Bolt ø 16 x 300/60	Each	65
-do-	-	-	-	'J' Bolt ø 16 x 340/60	Each	70
-do-	-	-	-	'J' Bolt ø 16 x 345/60	Each	70
-do-	-	-	-	'J' Bolt ø 16 x 400/60	Each	66

SPRING WASHERS	Galv. Steel spring washer ø12 mm	per 100 nos	113
	Galv. Steel spring washer ø 14 mm	per 100 nos	124
	Galv. Steel spring washer ø 16 mm	Per 100 nos	138
	Galv. Steel spring washer ø 20 mm	per 100 nos	197

1	2	3	4	5	6	7
FLAT WASHERS						
				Rustless flat washer ø 10mm	per 100 nos.	529
				Rustless flat washer ø 12mm	per 100 nos.	787
				Rustless flat washer ø 16mm	per 100 nos.	1255
				Galv. Steel flat washer ø14mm	per 100 nos.	176
				Galv. Steel flat washer ø16mm	per 100 nos.	190
				Galv. Steel flat washer ø20 mm	per 100 nos.	204
				Galv. Steel flat washer ø 24 mm	per 100 nos.	254
				Galv. Steel tapered washer ø 16mm	per 100 nos.	740
Steel Structures				Traction masts fabricated from Rolled mild steel beam (BFB) of size 152mm x 152mm x 37.1 Kg/m and galvanised in length 9.5 m or 8.5m long.	MT	45259
				Traction masts fabricated from Rolled mild steel Joist (RSJ) of size 203mm x 152mm x 52.0 Kg/m and galvanised in length 9.5 m or 8.5m long.	MT	42491
				Fabricated and galvanized structures (O,N & R type portals) with necessary components other than masts.	MT	53854
				Structural steel (traction mast) fabricated and galvanised, of type B-150, B-175 & B-200.	MT	45423
				Fabricated & galvanised steel structure other than portals and traction masts covered under item 3(b)(i) & 3(b)(ii).	MT	47703

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SCHEDULE - 3
UNIT PRICES
SECTION - 4(a) (NON-FERROUS)

The rates given below against different items of work in different sections of this schedule are the standard schedule of rates of Jan'06. The rates at which payments are to be made shall be arrived at by loading these rates uniformly for each item with escalation of estimate (% above SOR) and loading of percentage quoted by the tenderer over advertised value of the section.

RAILWAY DRAWINGS			RAILWAY IDENTIFICATION	DESCRIPTION OF EQUIPMENTS COMPONENTS & MATERIALS.	UNIT OF MEASUREMENT	UNIT PRICES AT CONTRACTOR'S DEPOT (in Rs)
SERIES	DRG No & MOD	REF No.				
1	2	3	4	5	6	7
ETI/OHE/P	1010 (Rev.A)	1	1010	Terminal connector (15mm) multiple holes(Bolted type)	Each	916
-do-	1030-2 (Mod.D)	1	1031-2	Contact wire parallel clamp(Large).	Set	155
ETI/OHE/SK	534 (Mod.C)	1&2	SK-534/1 SK-534/2	Parallel Clamp (Large) compression type.	Each	162
			(OR)			
ETI/OHE/SK	535 (Mod.B)	1&2	SK-535/1 SK-535/2	Jumper Clamp (Large) compression type	Each	162
			(OR)			
ETI/OHE/P	1030-3 (Mod.A)	1 to 3	1031-3	Parallel Clamp	Set	187
-do-	1040-2 (Mod.E)	1	1041-2	Contact wire parallel clamp(Small)	Set of 2Nos	135
ETI/OHE/SK	575 (Mod.A)	1&2	SK-534/1 SK-575/2	Parallel Clamp (Small) compression type.	Each	162
			(OR)			
ETI/OHE/SK	576 (Mod.B)	1&2	SK-576/1 SK-535/2	Jumper Clamp (Small) compression type	Each	162
			(OR)			
ETI/OHE/P	1040-3 (Mod.B)	1 to 3	1041-3	Parallel Clamp(90/50)	Set	247
ETI/OHE/P	1050-3 (Mod.A)	1	1051-3	Parallel Clamp Part (150/160)	Set	247
ETI/OHE/P	1070-1 (Mod.B)	1&2	-	Bridle wire clamp (6mm) with lock plate	Each	85
-do-	1080-1 (Mod.B)	1	1081-1	Contact wire splice (toothed type)	Set of 2Nos	705
-do-	1090	1 to 4	1091 to 1094	Catenary splice(65)	Set	261
-do-	1120 (Mod.B)	1 to 3	1121, 1094 & 1092	Catenary Ending Clamp (65)	Each	240
-do-	1130	1, 2 & 3	1131, 1104 & 1102	Feeder Ending Clamp (150)	Set	420
-do-	1140 (Mod.B)	1 to 3	1131, 1143 & 1102	Large span wire ending clamp (130)	Each	409

RE/33/P	1160 (Mod.J)	1,3, 4,6 & 7	1161, 1163 & 161-S	Suspension clamp	Each	376
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1	2	3	4	5	6	7
-do-	-do-	1	1161	Suspension clamp body	Each	204
-do-	-do-	4	1163	Suspension Clamp lock plate.	Set of 2 nos.	10
RE/33/P	1170 (Mod.K)	1,2, 4,& 6 to 9	1171, 1172, 1174, 1163 & 161-S	Double suspension clamp	Each	348
-do-	-do-	1	1171	Double suspension clamp Body	Each	347
-do-	-do-	2	1172	Double suspension lock plate.	Each	68
-do-	-do-	4	1174	Packing saddle	Each	31
-do-	-do-	6	1163	Suspension clamp lock plate	Set of 2 Nos	10
-do-	1180 (Mod.F)	1	1181	Contact wire dropper clip part	Set of 2 Nos.	52
-do-	-do-	2	1182	Locking wire	Each	2
			(OR)			
ETI/OHE/SK	572 Sh-1 (Mod. B)	1 to 3	SK-572/1 SK-572/2	Contact wire dropper clip	Each	Not in use
ETI/OHE/P	1192 (Mod.C)	1	1192	Catenary Dropper clip	Each	19
-do-	1194 (Mod.A)	1	1194	Bridle wire dropper clip	Each	20
RE/33/P	1220 (Mod.E)	1	1221	Contact wire swivel clip part	Set of 2 Nos.	138
-do-	-do-	2	1222	Contact wire swivel clip pin	Set of 2 Nos.	9
-do-	1270-1 (Mod.F)	1	1272	Suspension clevis(18mm)	Each	121
-do-	1280 (Mod.C)	1&2	1281 & 1282	Double contact wire splice	Set	2851
ETI/OHE/P	1310	1	1311	Pull off clamp	Each	37
-do-	-do-	2	1192	Catenary Dropper clip	Set of 2 Nos.	38
-do-	1320 (Mod.B)	1	1321	U' clamp(50/50) body	Each.	148
-do-	1330 (Mod.B)	1	1331	Distance piece `U' clamp saddle.	Each.	68
-do-	-do-	3	4036	`U' Bolt saddle	Each	68
ETI/OHE/P	1350	1	1351	Thimble (10 mm)	Each	37
-do-	1360 (Mod.B)	1 to 3	1131, 1362& 1361	Steel wire Ending clamp (90)	Each	420
-do-	1400 (Mod.C)	1&4	1401, 1174	Short Dropper assembly	Each	37

1	2	3	4	5	6	7
ETI/OHE/P	-do-	2	1402	Variable short dropper clip(cont. wire)	Each	37
-do-	1540 (Mod.D)	1	1541	Parallel clamp part (10/20)	Set of 2 Nos.	268
-do-	-do-	5	-	Bimetallic strip (90x35x1 mm)	Each	56
ETI/OHE/P	1550 (Mod.E)	1	1551	Parallel clamp part(20/20)	Set of 2 Nos.	279
-do-	1560 (Mod.D)	1	1561	Parallel clamp(15/20)	Set of 2 Nos.	268
-do-	-do-	5	-	Bimetallic strip (160 x 50 x 1 mm)	Each	63
-do-	1580 Sh1 (Mod.F)	1&2	1581& 1582	Large suspension clamp20 mm	Each	214
-do-	-do-	10	-	Flat Armour tape	KG	289
-do-	-do-	11	-	Armour tape ferrule	Set of 2 Nos.	51
-do-	1600 (Mod.C)	1&2	1601 & 1602	20 mm Strain clamp	Each	747
-do-	1610-1	1	1610-1	Compression joint	Each	282
-do-	1640	1	1640	Repair sleeve (Compression type)	Each	268
-do-	2064-1 (Mod.A)	2	2064-1	Tube cap 30 mm	Each	19
-do-	2104-1 (Mod.A)	2	2104-1	Tube cap 40 mm	Each	22
-do-	2110 (Mod.B)	1&2	2111 & 2112	Standard Catenary suspension Bracket	Each	392
-do-	2120 (Mod.B)	1&2	2121 & 2122	Standard catenary direct clamp	Each	367
-do-	-do-	3	2123	Direct Catenary clamp Grip	Each	38
-do-	2125 (Mod.B)	1	2125	Bridle wire sleeve	Each	7
-do-	2130 (Mod.B)	1&2	2131 & 2132	Large catenary suspension Bracket	Each	381
-do-	2140 (Mod.C)	1&2	2141 & 2142	Catenary direct clamp(Large)	Each	364
ETI/OHE/P	-do-	3	2123	Direct catenary clamp grip	Each	38
-do-	2345	1	2345	Steady Rod Eye piece	Each	42
-do-	2380 (Mod.C)	1&3	2112 & 2122	Standard Catenary suspension bracket top and bottom	Set	479
-do-	-do-	2&4	2131 & 2142	Large Catenary suspension bracket Top & bottom	Set	374
-do-	2390 (Mod.B)	1	2544-5	BFB Steady Arm only L = 0.69 m	Each	94
-do-	-do-	2	2544-6	BFB Steady Arm only L = 0.89 m	Each	121

1	2	3	4	5	6	7
-do-	-do-	3	2544-7	-do- L = 1.09 m	Each	149
-do-	-do-	4	2544-8	-do- L = 1.29 m	Each	176
-do-	-do-	7	-	Al. Alloy Rivet ø 6x35	Set of 4 Nos	17
-do-	2423-1 (Mod.A)	1	2423-1	Tube cap 25 mm	Each	15
-do-	2520 (Mod.B)	1	2521	Normal Bent Steady arm	Each	152
-do-	-do-	5	-	Al. Alloy Rivet ø 6x50	Set of 4 Nos.	21
-do-	2540 (Mod.B)	1	2544-1	BFB Steady arm only L = 0.72 m.	Each.	98
-do-	-do-	2	2544-2	-do- L = 0.92 m.	Each	127
-do-	-do-	3	2544-3	-do- L = 1.12 m.	Each	153
-do-	-do-	4	2544-4	-do- L = 1.32 m.	Each	179
-do-	2540 (Mod.B)	7	-	Al. Alloy Rivet ø 6x35	Set of 4 Nos.	17
-do-	2540-1	1	2544-9/1	BFB Steady arm only for tramway OHE(Regulated) L = 0.92 m.	Each	127
-do-	-do-	1	2544-9/2	-do- L = 1.12 m	Each	153
-do-	-do-	1	2544-9/3	-do- L = 1.32 m	Each	179
-do-	-do-	4	1221	Contact wire swivel clip	Each	69
-do-	-do-	6	-	AL. Alloy Rivet ø 6x33	Set of 4 Nos.	17
ETI/OHE/P	-do-	5	1222	Contact wire swivel clip pin	Each	5
RE/33/P	2700 (MOD.E)	1&3	2701 & 4036	Vee suspension assembly (Excl. `U' Bolt of 10 mm with nut, lock nut and split pin)	Set	1144
ETI/OHE/P	2710	1 to4	-	Unequal vee suspension assembly	Each	1153
RE/33/P	2721 (Mod.C)	1	2721	Double vee suspension top.	Each.	965
ETI/OHE/P	2730 (MOD.A)	1	2731	Section Insulator support clamp part	Each.	1053
-do-	-do-	2	4036	AL. Bronze `U' bolt saddle	Set of 2 Nos	135
-do-	4001 (Mod.A)	1	4001	Span wire clip (65)	Each	42
-do-	4002 (Mod.A)	1	4002	Span wire clip (130)	Each	49
-do-	6170 (Mod.C)	1	6171	Double Contact wire parallel clamp piece.	Set	68
-do-	6310-1(Rev.A)	1 to 4	6310-1	18 mm Bus Terminal (Multiple Bolt)	Each	888
-do-	6320 (Mod.A)	1 to 4	6320	18 mm Bus Splice	Each	980

1	2	3	4	5	6	7
RE/33/P	6330 (Mod.C)	1 to 4	6330	18 mm bus Tee Joint	Each	2664
-do-	6350 (Mod.B)	1 to 4	-	18 mm Bus Terminating Tee	Each	1804
ETI/PSI/P	6480 (Mod.C)	1, 2, 5& 6	6481 & 6482	36 mm Aluminum Bus Terminal for 25 KV Isolator(Rigid Type).	Each	832
-do-	6490 (Mod.B)	1& 2	6491 & 6482	36 mm Aluminum Bus splice	Each	973
-do-	6500 (Mod.C)	1& 2	6501 & 6482	36 mm Aluminum Bus Tee connector	Each	985
-do-	6510 (Mod.D)	1& 2	6511 & 6482	36 mm Aluminium Tee Terminal	Each	832
-do-	6520 (Mod.B)	1to 3	6521, 6482 & 6523	36/15 mm Tap Connector	Each	839
-do-	6530 (Mod.C)	1to 3	6531, 6482 & 6592	36/20mm Terminal connector.	Each	839
-do-	6550 (Mod.B)	1 to 4	6551, 6482-1 6552 & 6553	36 mm Aluminium Flexible Bus splice	Each	2901
-do-	-do-	5	-	Bimetallic strip	Set of 4Nos	423
-do-	6560 (Mod.B)	1&2	6561 & 6482	36 mm AL. Bus Splice Cum Tee connector	Each	2538
-do-	6830-1 (Mod.D)	1& 2	6831 & 6592	Terminal connector for AL. conductors (Bolted type)	Each	829
ETI/OHE/P	1009 (Mod-A)	1 to 3	1009 & 1009-1	Terminal connector (19mm) multiple hole (Bolted type)	Set	988
-do-	-do-	4	-	Phosphor bronze spring washer dia 12mm	Set of 4Nos	26
ETI/OHE/SK	123 (Mod.D)	1 & 5	AL-123	Bimetallic PG clamp (14/19)	Set of 2Nos	392
-do-	130 (Mod.D)	1	AL-130	AL. Alloy catenary dropper clip.	Each	47
-do-	134 (Mod.D)	1 to 4	AL-134	Catenary splice (cone type) Al. Alloy Catenary.	Each	1100
-do-	231 (Mod.D)	1	AL-231	Parallel groove clamp (18/14).	Set of 2Nos	558
-do-	-do-	5	-	Bimetallic ALCU strip 1 mm thick.	Set of 2Nos	118
ETI/OHE/SK	285 (Mod.C)	-	-	Crimp type Repair Sleeve for AAA Stranded catenary wire.	Each	324
-do-	333 (Mod.D)	1	-	Catenary Dropper clip	Each	54

1	2	3	4	5	6	7	
-do-	436 (Mod.B)	1& 2	AL-436 AL-436/1	Envelope type end fitting assembly size 19/2.79 mm.	Each.	688	
-do-	-do-	8	-	Copper split pin dia 4x32mm	Each	2	
-do-	469 (Mod.A)	4& 6	-	Packing saddle and suspension clamp lock plate	Set	41	
-do-	-do-	10	-	Soft Annealed Al. tape (1.25x7.7mm).	Kg.	268	
BUSBAR				Tubular aluminium bus bar 36 x 28mm.	Metre	186	
				Solid copper bus bar 18mm	Metre	879	
WIRES & FLATS							
					19/7/1.4mm all alluminium jumper.	Metre.	100
EQUIPMENTS							
		Section insulator assembly			Each	14097	
		Copper rivets ø 6 x 50 mm			Per 100 nos.	959	
RIVETS							
		Copper rivets ø 6 x 55 mm			Per 100 nos.	973	
		Al. Alloy snap Head rivets ø 4 x 35 mm			Per 100 nos.	409	
		Al. Alloy rivets ø 6 x 45 mm			Per 100 nos.	519	
		Al. Alloy rivets ø 6 x 50 mm			Per 100 nos.	522	
		Al. Alloy rivets ø 6 x 35 mm			Per 100 nos.	437	
		Al. Alloy rivets ø 6 x 33 mm			Per 100 nos.	423	
SPRING WASHERS							
		Phosphor bronze spring washer ø 10 mm			Per 100 nos.	505	
		Phosphor Bronze spring washer ø 16 mm			Per 100 nos.	980	
		Phosphor Bronze spring washer ø 12 mm			Per 100 nos.	648	
Conductors							
		240 sq mm Spider conductor (R.C.)			Per KM	73100	
		150 sq mm copper cross feeder			Per MT	360780	
		5 and 7 mm hard drawn copper dropper wire			Per MT	326174	
		160 sq mm Large Jumper Wire			Per MT	360007	
		20 sq mm cadmium copper Bridle Wire			Per MT	361454	
		105 sq mm Large Jumper wire			Per MT	361813	
		50 sq mm Small Jumper wire			Per MT	359375	
		Insulated cadmium catenary wire (19/2.10), 65 sq mm			Per KM	1634550	
		130 sq mm Large Span wire			Per MT	362042	
EQUIPMENTS							
		Supply of a Ceramic/beaded Glass Fibre type (PTFE) Short Neutral section assembly			Each	223898	

SCHEDULE - 3
UNIT PRICES
SECTION - 4(b) (NON-FERROUS)

The rates given below against different items of work in different sections of this schedule are the standard schedule of rates of Jan'06. The rates at which payments are to be made shall be arrived at by loading these rates uniformly for each item with escalation of estimate (% above SOR) and loading of percentage quoted by the tenderer over advertised value of the section.

RAILWAY DRAWINGS			UNIT	UNIT
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SERIES	DRG No & MOD	REF No.	RAILWAY IDENTIFICATION	DESCRIPTION OF EQUIPMENTS COMPONENTS & MATERIALS.	OF MEASUREMENT	PRICES AT CONTRACTOR'S DEPOT (in Rs)
1	2	3	4	5	6	7
Conductors			107 Sq MM HDGC Contact Wire		Per MT	3,36,890
			65 sq mm cadmium copper catenary wire		Per MT	3,11,652

FORM - 7
Sheet-26

SCHEDULE - 3

UNIT PRICES

SECTION - 5 (INSULATORS)

The rates given below against different items of work in different sections of this schedule are the standard schedule of rates of Jan'06. The rates at which payments are to be made shall be arrived at by loading these rates uniformly for each item with escalation of estimate (% above SOR) and loading of percentage quoted by the tenderer over advertised value of the section.

RAILWAY DRAWINGS			RAILWAY IDENTIFICATION	DESCRIPTION OF EQUIPMENTS COMPONENTS & MATERIALS.	UNIT OF MEASUREMENT	UNIT PRICES AT CONTRACTORS DEPOT IN (Rs.)
SERIES	DRG No & MOD	REF No.				
1	2	3	4	5	6	7
Stay arm Insulator Assembly				(i) Porcelain (1050 mm CD)	Each	1554.72
				(ii) Composite (1050mm CD)	Each	1498.75
				(iii) Composite (1600 mm CD)	Each	2293.56
Bracket Insulator Assembly				(i) Porcelain (1050 mm CD)	Each	1338.07
				(ii) Composite (1050mm CD)	Each	890.29
				(iii) Composite (1600 mm CD)	Each	2293.56
9 Tonne Insulator Assembly				(i) Porcelain (1050 mm CD)	Each	1962.33
				(ii) Composite (1050mm CD)	Each	1240.61
				(iii) Composite (1600 mm CD)	Each	2293.56
Solid Core 25 kV post Insulator Assembly					Each	3947.00
Sectioning Insulator Assembly					Each	4952.00
Operating Rod Insulator Assembly					Each	2397.00
ETI/OHE/P	6061-3 (Mod.A)	1 to 3	-	Disc Insulator (255 mm) clevis type	Each	423.00
-do-	6070-1	1 to 3	-	11 KV Post Insulator Assembly	Set	423.00

NOTES:

- (1) All prices in Column-7 Schedule-3 are inclusive of all taxes & duties.
- (2) Nuts and lock nuts should be procured from the approved firms and from the same manufacturer who manufactures corresponding bolts, screws etc. The prices for bolts shall include the cost of providing a hole for split pin, wherever required.
- (3) The prices are inclusive of bolts, nuts, locknuts washer and split pins wherever included in the drawings, unless otherwise specified.

- (4) All bolts and nuts below 14 mm dia shall be stainless Steel only which are to be used in live or current carrying parts even if bolts of other material are shown in the concerned drawings.
- (5) The reference can be taken from the actual dimensions of the fasteners as per RDSO drawing No. ETI/C/0073, ETI/C/0074 and ETI/C/0075 (Latest revision as per Annexure-I).
- (6) Wherever IS:226 is referred for materials in schedule-3(OHE), it should confirm to IS:206

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