डेडीकेटेड फ्रेट कोरीडोर

Tender No: DFC-DDU-EL-MAINT-TRD-T012

Maintenance of 2x25 kV OHE/PSI and Miscellaneous OHE/PSI and Testing of PSI equipment in New Pt Deen Dayal Upadhaya Nagar to New Sone Nagar/ New Chiraila Pauthu (SEBN/CPBN) section of DFCCIL including IR link line/Connecting line connection to Indian Railways for a period of **24 (Twenty-Four) months** under CGM DDU Unit.

Single Packet
OPEN E-TENDER

TENDER DOCUMENT
(NOT TRANSFERABLE)

Employer:
DEDICATED FREIGHT CORRIDOR CORPORATION OF INDIA LIMITED
(A GOVERNMENT OF INDIA ENTERPRISE)
UNDER MINISTRY OF RAILWAYS

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PART-I

NOTICE INVITING TENDER

Dedicated Freight Corridor Corporation of India Limited
(A PSU under Ministry of Railways)
Manas Nagar Railway Colony, Near RPF post,
Pt. Deen Dayal Upadhyay Nagar (Mughalsarai), Post Office- Alinagar
District – Chandauli, Pin -232101 Email-cpmmgs@gmail.com

NOTICE INVITING TENDER (NIT)

Chief General Manager /DDU for and on behalf of DFCCIL invites e-tenders on Single packet system on prescribed forms from firms/Companies having requisite experience and financial capacity for execution of the following work: -

S.N.	E-Tender No.	DFC-DDU-EL-MAINT-TRD-T012
1	Name of Work	Maintenance of 2x25 kV OHE/PSI and Miscellaneous OHE/PSI and Testing of PSI equipment in New Pt Deen Dayal Upadhaya Nagar to New Sone Nagar/New Chiraila Pauthu (SEBN/CPBN) section of DFCCIL including IR link line/Connecting line connection to Indian Railways for a period of 24 (Twenty-Four) months under CGM DDU Unit.
2	Estimated Cost of Work	₹8,39,80,766.00/- (Rupees Eight Crore Thirty Nine Lakhs Eighty Thousand Seven Hundred Sixty Six Only) including GST
3	Completion Period	24 Months
4	Tender Fee	₹10,000/- + GST @18% = 11,800/- (Rs. Eleven Thousand Eight Hundred only) to be paid online through payment gateway provided at www.ireps.gov.in
5	Earnest Money	₹5,69,900/- (Rupees Five lakhs Sixty Nine Thousand Nine Hundred Only) to be paid online through payment gateway provided at www.ireps.gov.in .
6	Availability of Bid documents	From 06.02.2025 on www.ireps.gov.in
7	Download bid documents up to	From 06.02.2025 till 27.02.2025 upto 15:30Hrs.
8	Last date & time of online receipt of bid	Bidding will be started from 13.02.2025 upto 15:00 Hrs. of 27.02.2025 on www.ireps.gov.in
9	Date and time of Online opening of bid	15.30 Hrs. of 27.02.2025 on www.ireps.gov.in
10	Validity of offer	120 Days from the date of opening of tender.

11	Security Deposit	5% of Contract value
12	Performance Bank Guarantee	Performance Guarantee (PG) have to be submitted within 21 (twenty-one) days from the date of issue of Letter of Acceptance (LOA), amounting to Five percent (5%) of the contract value in the form as given in clause 16.4 of GCC.
13	Defect Liability Period	12 Months (On Supply item as applicable)
14	Address of Communication	Office of the Chief General Manager, Dedicated Freight Corridor Corporation of India Ltd. Manas Nagar Railway Colony, Near RPF Post, Pt. Deen Dayal Upadhyay, Post Office: Alinagar, Chandauli- 232101, Uttar Pradesh. Website: https://dfccil.com
15	Help Desk for E-Tendering	For any clarification, help and registration for E-Tendering & matter relating to Digital Signature, contact at Help desk of www.ireps.gov.in and phone No.-011-23761525
16	Availability of Tender Documents	The Tender documents can be downloaded from www.ireps.gov.in Tenderer who wishes to view free Notification and Tender Documents can visit www.ireps.gov.in DFCCIL may issue Addendum (s)/Corrigendum (s) to the Tender document, if any, which shall be issued at least 15 days in advance of date of opening of tender and placed on the website www.ireps.gov.in only.

Note-1. Tender documents should be downloaded from the website address www.ireps.gov.in. Payment of Tender Document fee in respect of e-tendering, should accept through net banking or payment gateway only. The Bid Security shall be deposited either in cash through e-payment gateway or submitted as Bank Guarantee bond from a scheduled commercial bank of India or as mentioned in tender documents. Any tender received without Bid Security or cost of tender documents in the form as specified in the tender documents shall not be considered and shall be summarily rejected.

2. Eligibility shall be assessed on applicants, fulfilling the technical capability and competence as well as for financial and organizational resources as specified in clause no. 10 of part III of Preamble & General Instruction to tenders.

3. The Offer shall be valid **for 120 days** from the date of opening of the tender, and extended further if required from time to time. The Contractor cannot withdraw their offer within the period of validity/extended validity The Bid Security of such tenderers shall be forfeited.

4. Notice Inviting Tender (NIT), Tender Document and Corrigendum/Addendum if any, will be posted on the E Tendering website www.ireps.gov.in. Tenderers are advised to complete all submission related work well before Time and Date for Submission of Tender Online. Any request for modification in the time/date of submission of tender due to tenderer's failure to submit his offer, will not be accepted. No request for extension of the Tender Due Date shall be considered.

5. The tender documents shall be submitted in online mode only through website www.ireps.gov.in. Detailed credential as per the requirement of eligibility criteria and all Schedule are to be submitted in online mode.

6. No tender document will be available offline. Downloading tender documents online and submission of tender online is mandatory for this tender.

7. Any further addendum/Corrigendum for this tender will be posted in DFCCIL tendering portal website https://www.ireps.gov.in only. Interested bidders are advised to check website regularly for any Addendum/ Corrigendum.

8. DFCCIL reserves right to cancel the tender before submission / opening of tender, postpone the tender submission / opening date and to accept / reject any or all tenders without assigning any reason thereof. DFCCIL's assessment of suitability as per eligibility criteria shall be final and binding.

9. DFCCIL reserves the right to pre-qualify the bidder(s) provisionally based on the documents submitted by them, subject to their final verification. In the event of any document being found false, the provisional qualification shall stand withdrawn, and the next lower bidder shall automatically come to the position of such disqualified bidder. Action against such disqualified tenderers shall be taken as per above Clause No. 8 of Notice Inviting Tender.

10. Information required as per various Forms to tender document should be submitted by the tenderers without fail strictly as per formats.

Chief General Manager
DFCCIL, DDU

PART-II

Instructions to Bidders for Online Bidding & Check List

A. Instructions to bidders for online bidding

General: -Submission of Online Bids is mandatory for this Notice Inviting Tender. E- Tendering is new methodology for conducting Public Procurement in a transparent and secured manner. Supplier/ Vendors will be the biggest beneficiaries of this new system of procurement. For conducting electronic tendering, DFCCIL has decided to use the portal (www.ireps.gov.in), a Government of India Undertaking. Benefits to Suppliers/ service providers are outlined on the Home page of the portal.

E-tendering site- https://www.ireps.gov.in / its link at www.dfccil.com (Help desk of IREPS: 011 -23761525). The tenderer/bidders must have Class-III Digital Signature Certificate & must be register on IREPS portal. Only registered tenderer/bidders can participate on e-Tendering. All relevant documents must be uploaded at the time of participating in e-Tendering.

Instructions:-

1. **Bidding Methodology:** Online Bid System
2. **Broad outline of activities from Bidders perspective:-**

(a) Procure a Digital Signing Certificate (DSC)
(b) Register on Electronic Tendering System (ETS)
(c) Create Users and assign roles on ETS
(d) View Notice Inviting Tender (NIT) on (ETS)
(e) Download Official copy of Tender Documents from ETS.
(f) Clarification to Tender Documents on ETS - Query to DFCCIL (Optional) - view response to queries posted by DFCCIL through addenda.
(g) Bid Submission on ETS: Prepare & arrange all documents/ papers for submission of bid online.
(h) Attend Public Online Tender Opening Event (TOE) on ETS.
(i) Post TOE clarification on ETS (Optional). Respond to DFCCIL's post – TOE queries.

For participating in this tender online, the following instructions are to be read carefully. These instructions are supplemented with more detailed guidelines on the relevant screens of the ETS.

3. **Digital Certificate:**

For integrity of data and its authenticity/ non repudiation of electronic records and to be compliant with IT Act 2000, it is necessary for each user to have a Digital Certificate (DC) also referred to as Digital Signature Certificate (DSC) of class III issued by a Certifying Authority (CA) licensed by Controller of Certifying Authority (CCA) (refer http://www.cca.gov.in).

4. The Tender documents can be downloaded from the website:

ireps.gov.in and to be submitted in the e - format, before the schedule date & time of submission of the tender otherwise the Bid will not be considered.

5. Physical copy of the tender documents would not be sold /accepted.

6. List of Contact persons for this tender details of DFCCIL

DFCCIL Contact- 1	**Sh. Pradeep Kumar Gupta**
Telephone/Mobile No.	**7355049757**
E-mail ID	**pkgupta1@dfcc.co.in**

DFCCIL Contact- 2	**Sh. Randhir Singh**
Telephone/Mobile No.	**7897587779**
E-mail ID	**rsingh3@dfcc.co.in**

7. Modification / Withdrawal of bids:

(i) The Bidder may modify/ withdraw its e- bid after submission prior to the Bid Due Date & time. No Bid shall be modified / withdrawn by the Applicant on or after the Bid Due Date & time.

(ii) Any alteration/ modification in the Bid or additional information supplied subsequent to the Bid Due Date, unless the same has been expressly sought for by the Authority, shall be disregarded.

(iii) For modification of e-bid, applicant has to detach its old bid from e-tendering portal and upload / resubmit digitally signed modified bid.

(iv) For withdrawal of bid, applicant has to click on withdrawal icon at e-tendering portal and can withdraw its e-bid.

8. DFCCIL may issue addendum(s) / corrigendum(s) to the tender documents. In such cases the addendum(s)/corrigendum(s) shall be placed on ireps.gov.in and www.dfccil.gov.in. The tenderer who have downloaded the tender documents from the website before issue of addendum(s)/ corrigendum(s) must visit the website and ensure that such addendum(s) / corrigendum (s) (if any) is also downloaded by them. Such addendum(s) / corrigendum (s) (if any) shall also be submitted duly stamped and signed along with the submission of tenders.

9. Other instructions

a) It is recommended that the Tenderer/vendor should visit the portal (www.ireps.gov.in), peruse the information provided under the relevant links and login to it and upload documents of bid.

b) DFCCIL reserves right to cancel the tender before submission / opening of tender, postpone the tender submission / opening date and to accept / reject any or all tenders without assigning any reason thereof. DFCCIL's assessment of suitability as per eligibility criteria shall be final and binding.

B. Check list: -

CHECK LIST			
Check List of Items To Be Complied By Tenderer(S)s Before Submitting Their Tenders. The Tenderer(S) Shall Ensure That The Following are compiled Before Submitting The Tender Document:-			
S. N	Clause in tender document	Documents	Done or Not
1.	Para 1.8 of Part III	Tender form (Annexure no. I)	
2.	Para 2.14 of Part-III	Format for certificate to be submitted / uploaded by tenderer along with the tender documents (Annexure no V)	
3.	Para 5 of Part-III	Bid security in accordance with Para 5 with Part –III of Preamble and General Instructions to Tenderers. (Bid security) bank guarantee bond from any scheduled commercial bank of India. (Annexure –VIA)	
4.	Tender Document	Applicant's party information form (Form no-2C)	
5.	Tender Document	ECS/ NEFT / RTGS mandate form (Form no-3)	
6.	Tender Document	Pre contract integrity pact (Form no-5)	
7.	Tender Document	Anti-profiteering declaration to whomsoever it may concern (Form no-6)	
8.	Para- 4 Part-III	Certificate for provision for medium & small enterprises (MSE) (If applicable)	
9	Para-14 of Part-III	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.	
10.	Para 10 & 11 of part III	Relevant documents as per para 11 of part III of Preamble and General Instructions to Tenderers.	
11.	Para 10.1 (b)	Electrical Contractor License	
12.	Tender Document	Scanned copy of proof of money deposited against Earnest money & Tender Document Cost.	
13.	-	GST Registration Certificate	
14.	All the Annexures & Forms properly filled up and relevant documents attached and indicated in Forms, (If applicable).		
15.	Rates to be quoted on rate sheet online only		

PART - III

PREAMBLE & GENERAL INSTRUCTIONS TO TENDERERS

PART-III
PREAMBLE & GENERAL INSTRUCTIONS TO TENDERERS

1.0 Dedicated Freight Corporation of India (DFCCIL) is a Public Sector Undertaking under the administrative control of Government of India (Ministry of Railways) for construction, maintenance and operation of the Dedicated Rail Freight Corridors. At present the company is undertaking construction of Eastern & Western corridors and has its corporate office at New Delhi and Field Units at various cities.

Ministry of Railways (MOR), Government of India has planned to construct Dedicated Freight Corridor (DFC) covering about 3338 route Kilometres on Eastern and Western Corridors. The coverage of Eastern Corridor is from Ludhiana to Dankuni and Western Corridor is planned from Jawaharlal Nehru Port, Mumbai to Rewari /Tughlakabad /Dadri near Delhi. There will be a linkage between two corridors at Dadri.

1.1 Dedicated Freight Corridor

Eastern DFC Route will be approximately 1839 Km long from Dankuni to Ludhiana via Dankuni – Asansole – Dhanbad – Gaya – Sonnagar - Mughalsarai - Allahabad - Kanpur - Tundla - Aligarh - Khurja - Bulandshahr – Meerut – Saharanpur – Ambala - Ludhiana.

Western DFC Route will be approximately 1520 Km long from Dadri to JNPT via Rewai – Iqbalgarh - Vadodara- JNPT.
Proposed alignment of DFC has been generally kept parallel to existing Indian Railway line except provision of detours at some stations where the existing yards /cities are congested. Level Crossings (LC's) are generally unsafe locations and also a congestion points for road/rail's users. These LC's are operational bottlenecks for Railways /DFCCIL in terms of loss in punctuality and reduction in line capacity. Construction of ROB(s)/ RUB(s) is financially and operationally beneficial apart from the fact that it improves the safety of Rail / Road users.

1.2 Scope of Work

On behalf of President of India, Chief General Manager, Dedicated Freight Corridor Corporation of India Ltd. Manas Nagar Railway Colony, Near RPF Post, Pt. Deen Dayal Upadhyay, Post Office: Alinagar, Chandauli- 232101, Uttar Pradesh, India herein after referred to as 'DFCCIL' is inviting e-tenders from Firms/ Companies/Joint Ventures having requisite experience and financial capacity for execution of the following work:

"Maintenance of 2x25 kV OHE/PSI and Miscellaneous OHE/PSI and Testing of PSI equipment in New Pt Deen Dayal Upadhaya Nagar to New Sone Nagar/New Chiraila Pauthu (SEBN/CPBN) section of DFCCIL including IR link line/Connecting line connection to Indian Railways for a period of 24 (Twenty-Four) months under CGM DDU Unit."

1.3 The tenderer shall be governed by General Conditions of Contract (GCC 2022), Preamble and General Instructions to Tenderers (ITT) and Special

Conditions of Contract (SCC). Wherever, there is a conflict in any condition between GCC and Special Conditions of Contract mentioned in the tender documents, the condition mentioned in Special Conditions of Contract will prevail. However, Engineer's decision in this connection shall be final and binding. Tender document contains General Conditions of Contract and Special Conditions of Contract specific to this work and shall be applicable in the contract.

1.4 Location- From Pt Deen Dayal Upadhaya Nagar to Sone Nagar/Chiraila Pathau in the section between DDU-CPBN/SEBN falling in the state of Uttar Pradesh and Bihar. The work shall be executed under supervision of authorized representative of CGM/DDU or PM/GM/EL/DDU. If required by DFCCIL any other station/Site may be included under Schedule of work and no additional charges shall be given for this. However, DFCCIL reserves right to change the site of work anywhere in adjacent / adjoining area of the work, the contractor shall be bound to execute the work without any extra cost.

1.5 Drawings for the Work: The Indicative Drawing for the work can be seen in the office of the Chief General Manager/ DFCCIL/DDU at any time in working hours during working days. The drawings are only for the guidance of Tenderer(s). Detailed working drawings (if required) based on the indicative drawing to be prepared by the successful Tenderer.

(As per Clause No. 2 of tender form 2nd sheet Annex. I Part-I of GCC APRIL-2022, with up to date correction slip.)

1.6 Quantum of work and materials: The indicative schedule of quantities of various items of works is included in Form No.-1 of the tender documents.

1.7 Schedule of Prices mentioned in Form No.-1 (tender Annexures & Forms) of BID DOCUMENTS lists out the Schedule of Prices for various items. Based on these, the total tender value has also been worked out.

1.8 Instructions to Tenderers and Conditions of Tender: The following documents form part of Tender / Contract:

(a) Tender Forms – First Sheet

(b) Special Conditions (enclosed)

(c) Bill(s) of quantities (enclosed)

(d) Standard General Conditions of Contract (GCC 2022) and Standard Specifications (Works and Materials) of DFCCIL/ Indian Railways as amended/corrected upto latest correction slips, copies of which can be seen in the office of Chief General Manager/ DFCCIL/DDU or obtained from the office of the Chief General Manager/ DFCCIL/ DDU 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 office of Chief General Manager/ DFCCIL/ DDU or obtained from the office of the Chief General Manager/ DFCCIL/ DDU 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.

(As per Clause No. 1 of tender form 2nd sheet Annex. I Part-I of GCC APRIL-2022, with up to date correction slip.)

1.9 Cost of Tender documents downloaded from internet

For submitting the tender, the Tender documents and Amendment(s), if any, is/are available on www.ireps.gov.in and the same can be downloaded and used as tender documents for submitting the offer. The cost of the tender document is indicated in NIT. The cost of the tender document shall be deposited through e-payment mode at www.ireps.gov.in only. In case, the cost of the tender document as detailed above is not deposited, tender will be summarily rejected.

1.10 Complete tender documents must be submitted online duly completed in all respect upto the scheduled date and time mentioned in the Notice Inviting E-Tender. 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. Any modified date and time for submission of tenders shall be uploaded on DFCCIL website https://dfccil.com and www.ireps.gov.in.

2.1 Form of Tender - The Tender documents shall be in Single packets viz:- "containing All tender papers & Schedule of Prices. Detailed credentials as per the requirement of eligibility criteria and all tender papers including Summary of Prices and Schedule of Prices are to be submitted in "BID".

2.2 Tender Bid - The Tender Bid shall be submitted through online only on website www.ireps.gov.in as Eligibility/Qualifying element of the Tender Bid along with other documents mentioned in tender document.

2.3 Single Packet Tender-: In case of tenders costing less than Rs. 10 Crore single packet tender system will be followed and technical & financial offer of the tenderer/s shall be opened and evaluated at the same time.

2.4 Two Packets System of Tendering (Not Applicable for this tender): With a view to assess the tenders technically without being influenced by the financial bids, 'Two Packets System of tendering' shall be adopted wherein tender documents provide for the same.

(As per Clause No. 7A of Part-I of GCC APRIL-2022, with up to date correction slip)

2.5 Pre-Bid Conference (Not Applicable for this tender): Intenders having advertised value more than Rs 50 Crore or as mentioned in the tender document, DFCCIL/Railways shall conduct Pre-Bid Conference(s) with the prospective bidders.

(As per Clause No. 7B of Part-I of GCC APRIL-2022, with up to date correction slip)

2.6 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.

(As per Clause No. 7D of Part-I of GCC APRIL-2022, with up to date correction slip)

2.7 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.

(As per Clause No. 4 of tender form 2nd sheet Annex. I Part-I of GCC APRIL-2022, with up to date correction slip.)

2.8 All communication between the Employer and the tenderer shall be in writing. For the purposes of seeking clarification, the Employer's address is: **Chief General Manager, Dedicated Freight Corridor Corporation of India Ltd. Manas Nagar Railway Colony, Near RPF Post, Pt. Deen Dayal Upadhyay, Post Office:Alinagar, Chandauli- 232101, Uttar Pradesh, India** Telephone: +91-141-3103235, Fax number: +91-141-3103200. mail address: pkgupta1@dfcc.co.in and rsingh3@dfcc.co.in

2.9 **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.

(As per Clause No. 4 of Part-I of GCC APRIL-2022, with up to date correction slip)

2.10 Conditional tenders are liable to be rejected straightway. DFCCIL reserves the right to reject such tenders summarily without assigning any reasons whatsoever. In case tenderer/s still decides to have conditional offer, all such conditions are required to be listed separately and shall be supplemented by the details of exact financial implications, if applicable. DFCCIL will not take cognizance of any other conditions / variations from the tender stipulations mentioned at any other place in the tender documents.

2.11 The bidder shall submit only one bid in the capacity of an individual or sole proprietor, partnership firm or company. Violation of this condition is liable to disqualify the tender in which bidder has participated and Bid Security of all such tenderers shall stand forfeited.

2.12 **Withdrawal of Tender**: No tender can be withdrawn after scheduled date and time of submission and during tender validity period.

2.13 **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 DFCCIL/Railways 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 DFCCIL/Railways 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 DFCCIL/Railways \ 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.

(As per Clause No. 6 of Part-I of GCC APRIL-2022 with up to date correction slip)

2.14 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.** Non submission of above 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 is qualifying the Qualifying Criteria mentioned in the Tender Document.

(As per Clause No. 6.1 of Part-I of GCC APRIL-2022, with up to date correction slip)

2.15 **Right of DFCCIL/Railways to Deal with Tenders:** The DFCCIL/Railways reserves the right of not to invite tenders for any of DFCCIL/Railways 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 DFCCIL/Railways administration, Letter of Acceptance shall be issued as counter offer to the Tenderer, which shall be subject to acceptance by the Tenderer.

(As per Clause No. 7 of Part-I of GCC APRIL-2022, with up to date correction slip)

3.0 Opening of Tender:

(a) Tender will be opened at the scheduled date and time mentioned in the Notice Inviting E-Tender.

(b) After the opening of tender documents of all the tenderers, these bids shall be scrutinized and analyzed. If found necessary by the Employer, the tenderers shall be asked to furnish clarifications and the Employer may also hold discussions with the tenderers after giving due notice. The names of the tenderers whose bid are considered complete and meet eligibility criteria shall be short listed.

(c) The earnest money of non-qualifying tenderers will be returned back within a reasonable period.

3.1 Preliminary examination of bids

a) The DFCCIL shall examine the bids to determine whether they are complete, whether any computational errors have been made, whether the documents have been properly signed and whether the bids are generally in order.

b) Arithmetical errors shall be rectified on the following basis if found. If there is a discrepancy between the unit price and the total price, which is obtained by multiplying the unit price and quantity, or between subtotals and the total price, the unit or subtotal price shall prevail, and the total price shall be corrected.

c) The rates should be quoted in figures as well as in words. If there is variation between rates quoted in figures and in words, the rate quoted in shall be taken as correct. If more than one or improper rates are tendered for the same item, the tender is liable to be rejected.

d) Prior to the detailed evaluation, DFCCIL shall determine whether each bid is of acceptable quality, is generally complete and is substantially responsive to the bidding documents. For purposes of this determination, a substantially responsive bid is one that conforms to all the terms, conditions and specifications of the bidding documents without material deviations, objections, conditionality or reservation. A material deviation, objections, conditionality or reservation is one:

3.2 Evaluation and comparison of tenders: In case of open tenders, bids, which are determined as substantially responsive, shall be evaluated based on criteria as given in Eligibility Criteria" and as given in Notice inviting E - Tender. The tenderer must submit all necessary authentic data with necessary supporting certificates of the various items of evaluation criteria failing which his tender is liable to be rejected.

3.3 Clarification of Bids: To assist in the examination, evaluation & comparison and pre-qualification of the Tender, the DFCCIL/Railways 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 DFCCIL/Railways shall not be entertained or considered. The DFCCIL/Railways request for clarification and the response of the bidder in this regard shall be in writing.
However, if a Bidder does not provide clarification of its bid by the date and time communicated in the DFCCIL/Railways request for clarification, the bid shall be evaluated as per the documents submitted along with the bid.

(As per Clause No. 7E of Part-I of GCC APRIL-2022, with up to date correction slip)

3.4 **Validity of Tender:-** Tenderer shall keep his offer open for a minimum period of **120 days** from the date of opening of the tender or as mentioned in the Tender Notice.

3.5 **Tenderer's Address**

The tenderer should state in the tender his postal address legibly and clearly. Any communication sent in time, to the tenderer by post at his said address shall be deemed to have reached the tenderer duly and in time. Important documents should be sent by registered post.

3.6 Right of DFCCIL to Deal with Tenders

(a) The DFCCIL reserves the right of not to invite tenders for any of DFCCIL 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 to reject any tender or all tenders without assigning reasons for any such action.

(b) The authority for the acceptance of the tender will rest with the DFCCIL. It shall not be obligatory on the said authority to accept the lowest tender or any other tender and no tenderer(s) shall demand any explanation for the cause of rejection of his/their tender nor the DFCCIL undertake to assign reasons for declining to consider or reject any particular tender or tenders.

3.7 The entire work is required to be completed in all respects within **12 months** from the date of issue of the acceptance letter. Time is the essence of contract. The contractor shall be required to maintain steady and regular progress to the satisfaction of the Engineer to ensure that the work will be completed in all respects within the stipulated time.

3.8 If the Tenderer/s deliberately gives any wrong information about credentials/documents in his/ their tenders and thereby create(s) circumstances for acceptance of his/their tender, DFCCIL reserves the right to reject such tender at any stage, besides, shall suspend business with such tenderer. The EMD of such tenderers shall also be forfeited.

3.9 Employer not bound to accept any tender: The employer shall not be bound to accept the lowest or any tender or to assign any reason for non-acceptance or rejection of a tender. The employer reserves the right to accept any tender in respect of the whole or any portion of the work specified in the tender papers or to reduce the work or to accept any tender for less than the tendered quantities without assigning any reason whatsoever.

3.10 Negotiation: Should DFCCIL decide to negotiate with a view to bring down the rates, the tenderer called for negotiations should furnish the following form of declaration before commencement of negotiations? "I. ..... do declare that in the event of failure of contemplated negotiations relating to Tender No..... dated ..... my original tender shall remain open for acceptance on its original terms and conditions".

3.11 **Site Inspection:** Tenderers are requested to inspect the site and carry out careful examination to satisfy them as to the nature of work involved and facilities available at the site. They should note carefully all the existing structures and those under construction through other agencies. They should also study the suitability of utilizing the different equipment and the machinery that they intend to use for the execution of the work. The tenderers should also select suitable sites for the purpose of locating their store yard, laboratory, staff quarters etc., and satisfy themselves with regard to the feasibility of transporting the girders, etc. from the yard to the final site of placement etc.

3.12 **Canvassing**

No tenderer is permitted to canvass to DFCCIL on any matter relating to this tender. Any tenderer found doing so may be disqualified and his bid may be rejected.

3.13 **Award of Contract**

1. DFCCIL shall notify the successful tenderer through auto-generated Email by IREPS that his tender has been accepted.
2. Letter of Acceptance after it is signed by the Contractor in token of his acceptance shall constitute a legal and binding contract between DFCCIL and the contractor till such time the contract agreement is signed.

3.14 **Security Deposit on Acceptance of Tender:**

The security deposit / rate of recovery / mode of recovery on acceptance of tender shall be as per the Para 16(1) to 16(3) Of General Conditions of Contract (GCC).

3.15 Execution of Contract Document: The Tenderer whose tender is accepted shall be required to appear in person at the office of Chief General Manager, Dedicated Freight Corridor Corporation of India Ltd. Manas Nagar Railway Colony, Near RPF Post, Pt. Deen Dayal Upadhyay, Post Office: Alinagar, Chandauli- 232101, Uttar Pradesh, 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 DFCCIL/Railways 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 DFCCIL/Railways

only after submission of valid Performance Guarantee by the Contractor. In such cases the DFCCIL/Railways may determine that such tenderer has abandoned the contract and there upon his tender and acceptance thereof shall be treated as cancelled and the DFCCIL/Railways 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.
(As per Clause No. 8 of Part-I of GCC APRIL-2022, with up to date correction slip)

3.16 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)

(a) 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.

(As per Clause No. 9 & 9B of Part-I of GCC APRIL-2022, with up to date correction slip)

3.17 Understanding and Amendments of Tender Documents:

1. The bidder must own all responsibilities and bear all cost for obtaining all the information including risks, contingencies & other circumstances in execution of the work. It shall also carefully read and understand all its obligations & liabilities given in tender documents.
2. The bidder is advised to visit and examine the site where the work is to be executed and its surroundings or other areas as deemed fit by the bidder and should obtain at his own cost all information that may be necessary for preparing the bid and execution of the contract. The cost It is a condition of the tender that the tenderer is deemed to have visited the site and satisfied himself with all the conditions prevailing including any difficulties for executing the work.
3. At any time prior to the deadline for submission of bids, DFCCIL may for any reason whether at its own initiative or in response to any request by any prospective bidder amend the bidding documents by issuing Amendment, which shall be part of the Tender documents.
4. DFCCIL may at its discretion extend the deadline for submission of the bids at any time before the time of submission of the bids.

4.0 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.
(As per Clause No. 7C of Part-I of GCC APRIL-2022, with up to date correction slip)

4.1 Provision for medium & small enterprises (MSE): As mandated by Railway Board Letter No. 2010/RS (G)/363/1 dated 05.07.2012 (RBS No. 4/2012), in

compliance to public procurement policy, following provisions are included for Medium & Small Enterprises (MSE) in the tender document:

1. Tender sets shall be provided free of cost to MSEs registered with the listed agencies for the item tendered.
2. MSEs registered with the listed agencies for the item tendered will be exempted from payment of Earnest Money.
3. (I) MSEs who are interested in availing themselves of these benefits will enclose with their offer, the proof of their being MSE registered with any of the agencies mentioned in the notification of Ministry of MSME indicated below:
   (i) District industries Centers
   (ii) Khadi and Village Industries Commission
   (iii) Khadi and Village Industries Board
   (iv) Coir Board
   (v) National Small Industries Corporation
   (vi) Directorate of Handicraft and Handloom
   (vii) Any other body specified by Ministry of MSME.

   (II) The MSEs must also indicate the terminal validity date of their registration.

   Falling (I) & (II) above, such offers will not be liable for consideration of benefits detailed in MSE notification of Government of India dated 23.03.2012.

4. Definition of MSEs owned by SC/ST is as give below:
   (i) In case of proprietary MSE, proprietors (s) shall be SC/ST.
   (ii) In case of partnership MSE, the SC/ST partners shall be holding at least 51% shares in the unit.
   (iii) In case of Private Limited Companies at least 51% share shall be held by SC/ST promoters.
5. All bidders registered under Micro, Small and Medium Enterprises (MSMEs) shall have to satisfy the eligibility criteria at par with other bidders. There shall not be any relaxation in eligibility criteria/tender process or other tender requirements and L-1 price.
6. The above facilities shall not be applicable for the items for which they are not registered.
7. The tenderer (s) shall submit copy of current and valid MSMEs registration certificate inclusive of all the pages showing the category of entrepreneur whether the registered firm is owned by General or SC/ST entrepreneurs, monetary limit of their registration for the items tendered to avail the benefits under the Policy. The MSMEs shall also submit a copy “Entrepreneur’s Memorandum (Part-II)” of the concerned district centre where the unit is established.
8. Registration of Udyog Aadhar Memorandum (UAM): All Micro, Small and Medium Enterprises (MSMEs) bidders are required to declare UAM Number on CPPP / https://www.ireps.gov.in failing which such bidders will not be able to enjoy the benefits as per Public Procurement Policy for tenders invited electronically through CPPP / https://www.ireps.gov.in.

5. Bid Security:

(1) (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:

Value of the Work	**Bid Security**
For works estimated to cost up to 1 crore	2% of the estimated cost of the work
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

Note:

(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.

(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 to the DFCCIL/Railways.

(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 DFCCIL/Railways shall not be responsible for any loss or depreciation that may happen thereto while in their possession, nor be liable to pay interest thereon.

(2) The Bid Security shall be deposited either in cash through e-payment gateway or submitted as Bank Guarantee bond from a scheduled commercial bank of India or as mentioned in tender documents. The Bank Guarantee bond shall be as per **Annexure-VIA** and shall be valid for a period of **90 days** beyond the bid validity period.

(3) **In case, submission of Bid Security in the form of Bank Guarantee, following shall be ensured:**

i. A scanned copy of the Bank Guarantee shall be uploaded on e-Procurement Portal (IREPS) while applying to the tender.

ii. The original Bank Guarantee should be delivered in person to the official nominated as indicated in the tender document within 5 working days of deadline of submission of bids.

iii. Non submission of scanned copy of Bank Guarantee with the bid on e-tendering portal (IREPS) and/or non-submission of original Bank Guarantee within the specified period shall lead to summary rejection of bid.

iv. The Tender Security shall remain valid for a period of 90 days beyond the validity period for the Tender.

v. The details of the BG, physically submitted should match with the details available in the scanned copy and the data entered during bid submission time, failing which the bid will be rejected

vi. The Bank Guarantee shall be placed in an envelope, which shall be sealed. The envelope shall clearly bear the identification "**Bid for the ***** Project**" and shall clearly indicate the name and address of the Bidder. In addition, the Bid Due Date should be indicated on the right hand top corner of the envelope.

vii. The envelope shall be addressed to the officer and address as mentioned in the tender document.

viii. If the envelope is not sealed and marked as instructed above, the Authority assumes no responsibility for the misplacement or premature opening of the contents of the Bid submitted and consequent losses, if any, suffered by the Bidder.

(As per Clause No. 5 of Part-I of GCC APRIL-2022, with up to date correction slip)

6.(a) Subject to exemptions provided under para 5(1) (a) of Part-III (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.

(b) The Tenderer(s) shall keep the offer open for a minimum period of 60 days (in case of two packet system of tendering 90days) 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 Railway/DFCCIL. 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 DFCCIL.

(c) If his tender is accepted,

(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 fulfillment of the contract in terms of Clause 16 of the Standard General Conditions of Contract;

(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 fulfillment of the contract in terms of Clause 16 of the Standard General Conditions of Contract.

(iii)The Bid Security of other Tenderers shall, save as herein before provided, be returned to them, but the DFCCIL 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.

(d) In case Contractor submits the Term Deposit Receipt/Bank Guarantee Bond towards either the Full Security Depositor the Part Security Deposit equal to or more than Bid Security, the DFCCIL shall return the Bid Security so retained as per sub para(c) above, to the Contractor.
(As per Clause No. 6 of tender form 2nd sheet Annex. I Part-I of GCC APRIL-2022, with up to date correction slip.)

7. Rights of the DFCCIL to deal with Tender: The authority for the acceptance of the tender will rest with the DFCCIL. 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 DFCCIL to assign reasons for declining to consider or reject any particular tender or tenders.

(As per Clause No. 7 of tender form 2nd sheet Annex. I Part-I of GCC APRIL-2022, with up to date correction slip.)

8. 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 DFCCIL reserves the right to reject such tender at any stage.

(As per Clause No. 8 of tender form 2nd sheet Annex. I Part-I of GCC APRIL-2022, with up to date correction slip.)

9. If any partner(s) of a partnership firm expires after the submission of its tender or after the acceptance of its tender, the DFCCIL 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 DFCCIL shall deem such tender as cancelled / contract as terminated under clause 61 of the Standard General Conditions of Contract.**(As per Clause No. 9 of tender form 2nd sheet Annex. I Part-I of GCC APRIL-2022, with up to date correction slip.)**

10. Eligibility Criteria:

10.1 Technical Eligibility Criteria:

(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:

(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.

Definition of Similar nature of work: "Rehabilitation/Maintenance/design supply erection testing & commissioning of at least one 132 kV or Higher Grid Substation."

Or

"Rehabilitation/Maintenance/design supply erection testing & commissioning of 25/2X25 kV AC Traction Substation/Switching Stations."

Or

"Rehabilitation/Maintenance/Design Supply Erection Testing & Commissioning of 25/2X25 kV AC OHE System."

(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 fulfilment 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 Chief 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 DFCCIL.*

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 Chief Engineer 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. Organization, 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.
(As per Clause No. 10 of tender form 2nd sheet Annex. I Part-I of GCC APRIL-2022, with up to date correction slip.)

(b) ELECTRICAL CONTRACTOR LICENSE—

(i) The Contractor should have valid A-Class Electrical license to be submitted along with tender failing which tender would be consider ineligible (i.e. not eligible).
(ii) The work shall be carried out by the contractor, having valid Electrical Contractor`s License for carrying out installation work under the direct supervision of the persons holding valid certificates of competency issued by the State Government.
(iii) The successful tenderer shall furnish the names and particulars of the certificate of competency of supervisor and workmen to be engaged for carrying out this work.

10.2. Financial Eligibility Criteria: The tenderer must have minimum average annual contractual turnover of V/N or 'V' whichever is less; where

V= Advertised value of the tender in crores of Rupees
N= Number of years prescribed for completion of work for which bids have been invited.

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.
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**.**
(As per Clause No. 10.2 of tender form 2nd sheet Annex. I Part-I of GCC APRIL-2022, with up to date correction slip.)

10.3 Bid Capacity: The tender/technical bid will be evaluated based on bid capacity formula detailed as Annexure-VI. **(Not applicable for this Tender)**

(As per Clause No. 10.3 of tender form 2nd sheet Annex. I Part-I of GCC APRIL-2022, with up to date correction slip.)

10.4 No Technical and Financial credentials are required for tenders having advertised value up to Rs 50 lakh.

(As per Clause No. 10.4 of tender form 2nd sheet Annex. I Part-I of GCC APRIL-2022, with up to date correction slip.)

10.5 Credentials if submitted in foreign currency shall be converted into Indian currency i.e., Indian Rupee as under:

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.

[*Explanation for Para 10 of the Tender Form (Second Sheet) including Para 10.1 to 10.5 - Eligibility Criteria:*

1. *Substantially Completed Work means an ongoing work in which payment equal 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 (above)), 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*0.2*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 becoming a partner of the firm AB shall not be added in partnership firm AB.

14. In case a tenderer is LLP, the credentials of tenderer shall be worked out on above lines similar to a partnership firm.

15. In case company A is merged with company B, then company B would get the credentials of company A also.]

(As per Clause No. 10.5 of tender form 2nd sheet Annex. I Part-I of GCC APRIL-2022, with up to date correction slip.)

11. Tenderer Credentials:

Documents testifying tenderer previous experience and financial status should be produced along with the tender.
Tenderer(s) who is/are not borne on the approved list of the Contractors of DFCCIL/Railway shall submit along with his / their tender:

(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. 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 DFCCIL 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 DFCCIL, 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 DFCCIL shall not relieve the bidder of its obligations or liabilities hereunder nor will it affect any rights of the DFCCIL there under.

(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 up to five years.

(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 DFCCIL 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.

(As per Clause No. 11 of tender form 2nd sheet Annex. I Part-I of GCC APRIL-2022, with up to date correction slip.)

12. Non-compliance with any of the conditions set forth therein above is liable to result in the tender being rejected.

(As per Clause No. 12 of tender form 2nd sheet Annex. I Part-I of GCC APRIL-2022, with up to date correction slip.)

13. **Execution of Contract Documents:** The successful Tenderer(s) shall be required to execute an agreement with the President of India acting through the Chief General Manager/DFCCIL/ DDU 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 DFCCIL as amended/corrected upto latest correction slips, mentioned in tender form (First Sheet).

(As per Clause No. 13 of tender form 2nd sheet Annex. I Part-I of GCC APRIL-2022, with up to date correction slip.)

14. Documents to be Submitted Along with Tender

(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.

(ii) Following documents shall be submitted by the tenderer:

(a) Sole Proprietorship Firm:

(i) All documents in terms of Para 10 of part III 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 part III above.

(c) Partnership Firm:

(i) All documents as mentioned in para18 of the part III.

(d) Joint Venture (JV): All documents as mentioned in para 17 of the part III.

(e) Company registered under Companies Act2013:

(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 part III 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 DFCCIL/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. Concealment / wrong information in regard to above shall make the contract liable for determination under Clause 62 of the Standard General Conditions of Contract.

(v) All other documents in terms of Para 10 of the part III.

(g) Registered Society & Registered Trust:

(i) A copy of Certificate of Registration

(ii) A copy of Memorandum of Association of Society/Trust Deed

(iii) A copy of Power of Attorney in favour of the individual to sign the tender documents and create liability against the Society/Trust.

(iv) A copy of Rules & Regulations of the Society

(v) All other documents in terms of Para 10 of the part III above.

(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.

(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 DFCCIL's record/office files etc. will be taken for consideration of the tender, if no such mention is available in tender offer submitted.

(v) A tender from JV shall be considered only where permissible as per the tender conditions.

(vi) The DFCCIL 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. DFCCIL may, however, recognize such power of attorney and changes after obtaining proper legal advice, the cost of which will be chargeable to the Contractor.

(As per Clause No. 14 of tender form 2nd sheet Annex. I Part-I of GCC APRIL-2022, with up to date correction slip.)

15. 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 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.

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.

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 Appostille certificate.

(As per Clause No. 15 of tender form 2nd sheet Annex. I Part-I of GCC APRIL-2022, with up to date correction slip.)

16. Employment/Partnership etc. of Retired DFCCIL Employees:

(a) Should a tenderer

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 DFCCIL/Railways owned and administered by the President of India for the time being, OR

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

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

AND

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

THEN

the tenderer will give full information as to the date of retirement of such 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.

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 DFCCIL/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.

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 DFCCIL, then the tenderer at the time of submission of tender, will inform the authority inviting tenders the details of such persons.

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.

(As per Clause No. 16 of tender form 2nd sheet Annex. I Part-I of GCC APRIL-2022, with up to date correction slip.)

JOINT VENTURE (JV) IN WORKS TENDERS
(Not applicable for this tender)

17.0 Participation of Joint Venture (JV) in Works Tender: This para shall be applicable for works tenders wherein tender documents provide for the same.

17.1 Separate identity/name shall be given to the Joint Venture.

17.2 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%.

17.3 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.

17.4 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.

17.5 Bid Security shall be submitted by JV or authorized person of JV either as:

(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.

17.6 A copy of Memorandum of Understanding (MoU) duly executed by the JV members on a stamp paper, shall be submitted by the JV alongwith 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.

17.7 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 observe/comply with this stipulation, the full Bid Security shall be liable to be forfeited.

17.8 Approval for change of constitution of JV shall be at the sole discretion of the DFCCIL. 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.

17.9 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.

17.10 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.

17.11 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 along with the tender, shall be got registered before the Registrar of the Companies under 'The Companies Act -2013' (in case JV entity is to be registered as Company) or before the Registrar/Sub-

Registrar under the 'The Indian Partnership Act, 1932' (in case JV entity is to be registered as Partnership Firm) or under 'The LLP Act 2008' (in case JV entity is to be registered as LLP). A separate PAN shall be obtained for this entity. The documents pertaining to this entity including its PAN shall be furnished to the DFCCIL/Railways 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 DFCCIL shall be entitled to forfeit the full amount of the Bid 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 DFCCIL 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 DFCCIL/Railways 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 DFCCIL in respect of the said tender/contract.

17.14 Documents to be enclosed by the JV along with the tender:

17.14.1 In case one or more of the members of the JV is/are partnership firm(s), following documents shall be submitted:

(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 DFCCIL/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.

17.14.2 In case one or more members is/are Proprietary Firm or HUF, the following documents shall be enclosed:

(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.

17.14.3 In case one or more members of the JV is/are companies, the following documents shall be submitted:

(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 the individual**,** to sign the tender, sign MOU/JV Agreement on behalf of the company and create liability against the company

17.14.4 In case one or more members of the JV is/are LLP firm/s, the following documents shall be submitted:

(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 DFCCIL/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 In case one or more members of the JV is/are Society/s or Trust/s, the following documents shall be submitted:

(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 All other documents in terms of Para 10 Part III above.

17.15 Credentials & Qualifying Criteria**:** Technical, financial eligibility and Bid capacity of the JV shall be adjudged based on satisfactory fulfillment of the following criteria:

17.15.1 Technical Eligibility Criteria ('a' or 'b' mentioned hereunder)**:**

(a) For Works without composite components

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'.

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.

(b) For works with composite components

The technical eligibility for major component 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 other component(s) 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'.

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.

Note for Para 17.15.1:

a) 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.*

b) 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.

17.15.2 Financial Eligibility Criteria

The JV shall satisfy the requirement of "Financial Eligibility" mentioned at para 10.2 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.

The arithmetic sum of individual "financial capacity" of all the members shall be taken as JV's "financial capacity" to satisfy this requirement.

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.

17.15.3 Bid Capacity

The JV shall satisfy the requirement of "Bid Capacity" requirement mentioned at para 10.3 above. The arithmetic sum of individual "Bid capacity" of all the members shall be taken as JV's "Bid capacity" to satisfy this requirement.

(As per Clause No. 17.0 to 17.15.3 of tender form 2nd sheet Annex. I Part-I of GCC APRIL-2022, with up to date correction slip.)

18.0 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 DFCCIL 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 DFCCIL/Railways and the tenderer shall have no claims what-so-ever. Any change in the constitution of Partnership firm after 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.

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 DFCCIL 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.

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 shall be furnished by all the partners through a notarized affidavit, before signing of contract agreement.

(a) Joint and several liabilities:
The partners of the firm to which the Letter of Acceptance (LOA) is issued, shall be jointly and severally liable to the DFCCIL 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 DFCCIL during the course of execution of the contract or due to non-execution of the contract or part thereof.

(b) Duration of the partnership deed and partnership firm agreement:
The partnership deed/partnership firm agreement shall normally not be modified/altered/ 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 DFCCIL, shall constitute a breach of the contract, liable for determination of the contract under Clause 62 of the Standard General Conditions of Contract.

(c) Governing laws: The partnership firm agreement shall in all respect be governed by and interpreted in accordance with the Indian laws.

(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 DFCCIL.

18.10 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:

(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 DFCCIL/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 above.

18.11 **Evaluation of eligibility of a partnership firm:**

Technical and financial eligibility of the firm shall be adjudged based on satisfactory fulfillment of the eligibility criteria laid down in Para 10 above.

(As per Clause No. 17.0 to 18.11 of tender form 2nd sheet Annex. I Part-I of GCC APRIL-2022, with up to date correction slip.)

19.0 Advances to Contractor – (Not applicable for this Tender)

If specifically provided in Tender Documents of tender having advertised value more than Rs 50 Crores, DFCCIL shall make payment, as an Interest bearing advances, as per Contractor's request. These advances shall carry a simple interest _____ as indicated in the Tender documents. The payment and recovery of such advances shall be made as per manners prescribed in Clause 46.4 of the Standard General Conditions of Contract.

(Signature)

(Designation)

Signature of Tenderer(s) _____

DFCCIL

Date _____ Date _____

(As per Clause No. 19 of tender form 2nd sheet Annex. I Part-I of GCC APRIL-2022, with up to date correction slip.)

Part IV
STANDARD GENERAL CONDITIONS OF CONTRACT

The Standard General Conditions of Contract April 2022 of the Indian Railway/DFCCILs shall be followed with its latest correction slips and amendments issued from IndianRailway/DFCCILs.

The Standard General Conditions of Contract (GCC April 2022) of the Indian Railway/DFCCILs, along with its latest correction slips and amendments, will form part of the tender/contract documents.

In case, there is an ambiguity in any definition, the decision of DFCCIL regardingthe interpretation shall be final and binding.

Wherever there is conflict in any condition between GCC and special condition of contract mentioned in tender documents. The condition mentioned in special condition of contract will prevail. However, DFCCIL decision in this connection shall be final and binding.

A copy of the book-let incorporating the above "Standard General Conditions of Contract (GCC April-2022)" may be perused in the Office of CGM/DDU or respective division.

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Chapter V

SPECIAL CONDITIONS OF CONTRACT

A. GENERAL

1.0 This Tender shall be governed by Preamble and General instructions to tenderers, General condition of Contract, Special conditions of contract, Technical Specifications, Additional Technical specifications (if any), Drawings, Forms, Annexures, etc.

1.1 If there are varying or conflicting provisions in the documents forming part of the contract, Engineer shall be deciding authority with regard to the intentions of the provision and decision of Engineer will be final and binding on the contractor.

1.2 **Scheme of work:** - Within a period of 10 days beginning from the date of issue of Letter of Acceptance of Tender, the Contractor shall submit the detailed time schedule for execution of work and various documents enumerated in tender papers to the employer.

1.3 Quality Assurance Plan for Substructure and foundation

All materials used in the work shall be of the best quality as per codes. Quality Assurance Plan shall include for materials used and for workmanship of work. The contractor shall submit Quality Assurance Plan for the substructure and foundation. The contractor shall also ensure that the Employer's prescribed Quality Assurance Standards are rigidly followed in for the construction of substructure and foundation. These are to be approved from the client / DFCCIL

1.4 Quality Assurance Plan for Superstructure

(a) All materials used in the work shall be of the best quality as per codes / Specifications

(b) The contractor shall ensure quality at all necessary points, whether at manufacturer's works, or in his depot or at work site as well as during erection through Quality Assurance Plan.

(c) The Contractor shall adopt a suitable Quality Assurance Programme according to approved instructions, drawings, specifications, etc.

1.5 **Expenses of Employer' Representative** – All the expenses of Engineer's representative shall be borne by the Employer whether the inspected material is finally utilised in work or not.

1.5.1 The decision of the Engineer shall be final in respect of acceptability or otherwise of any material, fittings, component or equipment required for the work.

1.6 This programme of the Contractor shall generally cover the followings: -

1.6.1 The organization to manage and implement the Quality Assurance programme.

1.6.2 The documentation control system:

(i) Basic control system.

(ii) Adopted at manufacturer's work

(iii) Adopted at the Contractor Depot and work site.

1.6.3 Procedure adopted for:

(i) Source Inspection.

(ii) Incoming raw material inspection.

(iii) Verification of material purchased.

(iv) Fabrication Controls.

(v) Site erection controls.

1.6.4 **I**nspection and Test Procedure for:

(i) Manufacture and quality control procedure.

(ii) Field activity.

1.6.5 System of handling and storage.

1.6.6 System of quality audit.

1.6.7 System of maintenance of records.

1.7 For the purpose of obtaining 'On Account Payment', the Contractor shall submit along with the invoice, the documents indicated in the prescribed quality Assurance standards which should inter alia cover the following as may be applicable .

(i) Inspection Plan with reports of the inspection Plan check points as applicable.

(ii) Factory test results as required under the specification as applicable.

1.8 Work By Other Agencies

(a) Any other works undertaken at the same time by the Engineer direct or through some other agency at the same time or section where the contractor is carrying out his work will not entitle the contractor to prefer any claim regarding any delays or hindrances, he may have to face on this account but the Employer shall grant a reasonable extension of time to the contractor. The contractor shall comply with any instruction which may be given to him by the Employer in order to permit simultaneous execution of his own works and those undertaken by other contractors or the DFCCIL without being entitled on this account on any extra charge.

(b) The contractor shall not be entitled to any extra payment due to hindrance resulting from normal Railway operations, such as delay on account of adequate number of and duration of blocks not being granted, operational delay in movement of work trains extension of time to the contractor.

1.9 Infringement of patents:

(a) The Contractor is forbidden to use any patents or registered drawings, process or pattern in fulfilling his contract without the previous consent in writing of the owner of such patent, drawing, pattern or trade mark, except where these are specified by the Employer himself. Royalties where payable for the use of such patented processes, registered drawings of patterns shall be borne exclusively by the Contractor. The contractor shall advise the Employer of any proprietary right that may exist on such processed drawings or patterns which he may use of his own accord.

(b) In the case of patent taken out by the Contractor of the drawings or patterns registered by him, or of those patents, drawings, or patents for which he holds a licence, the signing of the Contract automatically gives the Employer the right to repair by himself the purchased articles covered by the patent or by any person or body chosen by him and to obtain from any sources he desires the component parts required by him in carrying out the repair work. In the event of infringement of any patent rights due to above action of the Employer, he shall be entitled to claim damages from the contractor on the grounds of any loss of any nature which he may suffer e.g. in the case of attachment because of counterfeiting.

(c) **Indemnification by contractor:-** In the event of any claim or demand being made or action being brought against the Employer for infringement of later patent in respect of any equipment, machine, plant, work or thing used or supplied by the

Contractor under this contract or in respect of any methods of using or working by the Employer of such equipment machine, plant work or thing, the contractor shall indemnify the employer and keep him indemnified and harmless against all claims, costs, charges and expenses arising from or incurred by reason of such claim provided that the Employer shall notify the contractor immediately any claim is made and that the contractor shall be at liberty, if he so desires with the assistance of the Employer if required but at the Contractor's expense, to conduct all negotiations for the settlement of the same or any litigation that may arise there from and provided that no such equipment, machine, plant work or thing, shall be used by the Employer for any purpose or in any manner other than that for which they have been supplied by the Contractor and specified under this contract.

1.10 Insurance (CAR Policy) -

Before commencing of works, it shall be obligatory for the contractor to obtain, at his own cost, insurance cover (CAR policy) in the joint name of the contractor and employer from reputed companies under the following requirements:

(a) Liability for death of or injury to any person/ employer's staff / animals or things or loss of or damage to any property / things / the work of other contractor (other than the work) arising out of the performance of the Contract.

(b) Construction Plant, Machinery and equipment brought to site by the Contractor.

(c) Any other insurance cover as may be required by the law of the land.

The contractor shall provide evidence to the employer / Engineer before commencement of work at site that the insurances required under the contract have been effected and shall within 60 days of the commencement date, provide the insurance policies to the Employer/Engineer, the contractor shall, whenever, called upon, produce to the engineer or his representative the evidence of payment of premiums paid by him to ensure that the policies indeed continue to be in force.

The Contractor shall also obtain any additional insurance cover as per the requirements of the Contract.

The Employer/Engineer shall not be liable for or in respect of any damages or compensation payable to any workman or other person in the employment of the Contractor or his sub-contractor or petty contractor / other contractor working there. The Contractor shall indemnify and keep indemnified the employer / Engineer against all such damages and compensation for which the contractor is liable.

The Policies of the contractor shall remain in force throughout the period of execution of the works and till the expiry of the defect liability period except for any specific insurance covers necessary for shorter period.

If the Contractor fails to effect or keep in force or provide adequate cover as acceptable to the engineer in the insurance policies mentioned above, then in such cases, the engineer may effect and keep in force any such insurance or further insurance on behalf of the Contactor. The recovery shall be made at the rate of 1.5 times the premium/premiums paid by the engineer in this regard from the payment due to the Contractor or from the contractor's Performance security. However, the Contractor shall not be absolved from his responsibility and /or liability in this regard.

1.11 Accident:-

(a) The contractor shall, in respect of all staff engaged by him or by his sub- contractor, indemnify and keep the employer at all times indemnified and protected against all claims made and liabilities incurred under Workman's Compensation Act, the Factories Act and the Payment of Wages Act, and rules made there under from time to time or under any other labour and Industrial Legislation made from time to time.

(b) The contractor shall indemnify and keep the employer indemnified and harmless against all actions, suits, claim demands, costs, charges or expenses arising in connection with any death or injury sustained by any person or persons sustained due to the acts or omission of the contractor, his sub-contractors, his agents or his staff during the executions of this contract irrespective of whether such liability arises under the Workman's Compensation Act, or Fatal Accident Act or any other statute in force for the time being.

(c) The contractor' liability to meet third party claims of the type outlined above will be applicable only in cases where accidents have been caused by workmanship, material, execution or negligence on the part of the contractor and further the liability of the contractor will be limited to Rs.5 lakh for any one accident.

(d) The contractor shall be responsible for all repairs and rectification of damages to completed works or works under execution due to DFCCIL accidents, thefts, pilferage or any other cause, without delay to minimize or to avoid traffic detentions, in a section until the installation are provisionally handed over to the employer.

1.12 Safety Measures:-

(a) The contractor shall take all precautionary measures in order to ensure the protection of his own personnel moving about or working on the railway premises, but shall then conform to the rules and regulations of the Railway 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 flagman or look out men for protection of such persons. The employer 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.

(b) Blasting of rocks for foundation work shall be done only after due notice is given to the employer and time/s and date /s for blasting operations agreed to by the employer. Blasting, if required to be done in the vicinity of the track, shall not be undertaken until the Employer's flagmen on duty take necessary step 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.

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

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

(e) If safety of track or track drainage etc. is affected as a consequence of works undertaken by the contractor, the contractor shall take immediate steps to restore normal conditions. In case of delay, the employer shall, after giving due notice to the contractor in writing, take necessary steps and recover the costs from the contractor.

1.13 Guarantee / Defect Liability Period:- (On Supply Items as applicable)

(a) The Contractor shall guarantee that the works (as applicable) executed under this contract shall be free from all defects and faults in material, workmanship and manufacture and shall be of acceptable standards for the contracted work and in full conformity with the technical specifications, drawings and other contract stipulations, **for a period of 12 months from the date of taking over by the Employer**

(b) During the period of guarantee the Contractor shall keep available an experienced engineer / man power to attend to any defective works / installations resulting from defective erection and/or defect in the installation supplied by the Contractor. This engineer shall not attend to rectification of defects which arise out of normal wear and tear and come within the purview of routine maintenance work. The contractor shall bear the cost of modifications, additions or substitutions that may be considered necessary due to faulty materials or workmanship for the satisfactory working of the equipment. The final decision shall rest with the Engineer his successor(s)/Nominee.

(c) During the period of Guarantee the Contractor shall be liable for the replacement at site of any parts which may be found defective in the executed work whether such parts / structural elements of his own manufacture or those of his sub-contractor / supplier whether arising from faulty materials, workmanship or negligence in any manner on the part of the Contractor provided always that such defective parts as are not repairable at site are promptly returned to the Contractor if so required by him at his (Contractor's) own expenses. In case of parts of executed work detected during guarantee period, contractor should replace all such items irrespective of the fact whether all such items have failed or not. The Contractor shall bear the cost of repairs carried out on his behalf by the Employer at site. In such a case, the contractor shall be informed in advance of the works proposed to be carried out by the Employer.

(d) If it becomes necessary for the Contractor to replace or renew any defective portion of the structural elements until the expiration of six month from the date of such replacement or renewal or until the end of the above mentioned period whichever is later.

Such extension shall not apply in case of defects of a minor nature, the decision of the Chief General Manager or his successor/nominee being final in the matter.
If any defect be not remedied within a reasonable time during the aforesaid period the Employer may proceed to do work at the Contractor's risk and expense, but without prejudice to any other rights and remedies which the Employer may have against the Contractor in respect of such defects or faults.

(e) The repaired or renewal parts structure shall be delivered / supplied and erected / executed on site free of charge to the employer.

(f) Any materials, fittings, components or equipment/structure supplied under items for supplying / providing and fixing in schedule shall also be covered by the provisions of this paragraph. The liability of the Contractor under the guarantee will be limited to re-supply of components / structure installation and fittings.

1.14 Final Acceptance:-

(a) The final acceptance of the entire work executed shall take effect from the date of expiry of the period of guarantee / Defect Liability period as defined in paragraph 1.13 above of the expiry of the last of the respective periods of guarantee, provided in any case that the Contractor has complied fully with his obligations under clause 1.13, provided also that the attention has been paid by

way of maintenance by the Employer.

(b) If on the other hand the contractor has not so complied with his obligation under Para 1.13 above in respect of any work, the Employer may either extend the period of guarantee in respect of that work until the necessary works are carried out by the Contractor or carry out those works or got them carried out suo moto on behalf of the Contractor at the Contractor's expenses. After expiry of the period of guarantee for each work, a certificate of final acceptance for the section shall be issued by the Employer 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 Employer.

(c) The Employer 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.

Notwithstanding the issue of final acceptance certificate the Contractor and the Employer (subject to sub-clause as above) shall remain liable for fulfilment 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.

1.15 Payment:-

Payment will be governed by the terms specified in accordance with accepted schedule of prices, read with relevant para of the other parts and Chapters of the Tender Papers. The employer retains the right to withhold money due to the contractor arising out of this contract for any default of the contractor.

(i) The Contractor shall, whenever required, produce or cause to be produced for examination by the Employer any quotation / invoice, cost of other account, book of account, voucher, receipt letter, memorandum paper or 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 anyway relating to the execution of this contract or relevant for verifying or ascertaining the cost of the execution of this Contract (the decision of the employer on the question of relevancy of any documents, information or return being final and binding on the parties). The Contractor shall similarly produce vouchers etc., if required, to prove to the Employer that materials supplied by him are in accordance with the specifications laid down in the contract.

(ii) If any portion of the work be carried out by a sub-contractor or any subsidiary or allied firm or company the Employer shall have power to secure the books of such sub-contractor or any subsidiary or allied firm or company, through the Contractor, and such books shall be open to his inspection. The Contractor should seek prior permission from the employer for subletting whole and/or part of the work to any sub-contractor.

(iii) The obligations imposed by sub-clause (i) and (ii) above are without prejudice to the obligation of the Contractor under any statute, rules or order binding to the Contractor or other conditions of the contract.

(iv) It is an agreed term of the contract that the employer reserves t h e right to carry out post-payment Audit and/or technical examination of the works and the final bill, including all supporting vouchers, abstracts etc. and to make a claim on the Contractor for the refund of any excess amount paid to him if as a result of such examination any over payment to him is discovered to have been made in respect of any work done or alleged to have been done by him under the contract.

1.16 All payments in respect of the contract during the currency of the contract shall be made through Electronic Clearing System (ECS) / National Electronic Funds Transfer (NEFT/RTGS). The successful tenderer on award of contract must submit ECS/NEFT/RTGS Mandate Form complete in all respects as detailed at Form No. 8 of the tender document. However, if the facility of ECS/NEFT/RTGS is not available at a particular location, the payments shall be made by cheque.

1.17 Performance Guarantee:-

(i) The Bank Guarantee for performance Guarantee shall remain valid until a date 60 days (or as specified in the Contract) after expiry of Defects Liability Period.

(ii) The Bank Guarantee for performance Guarantee shall be submitted invariably in the format given in the bidding document.

(iii) The performance Guarantee shall be released 21 days after issue of performance certificate.

1.18 ***GST***

Contractor should bear the fact in mind while quoting the rates that GST is inclusive in schedule of rates i.e. GST will not be paid extra.

1.19 ***PERMITS, FEES, TAXES & ROYALTIES***

Unless otherwise provided in the contract documents, the contractor shall secure and pay for all permits, Government fees and licenses necessary for the execution and completion of the works.

The DFCCIL authorities will not take any responsibility of refund of such taxes/fees. Any violation, in the legal provision of taxes, duties, permits and fees, carried out by the Contractor and detected subsequently shall be sole responsibility of the Contractor and his legal heirs.

1.20 ***STATUTORY INCREASE IN DUTIES, TAXES ETC***

Tenderers will examine the various provisions of the central Goods and services Tax Act, 2017 (CGST)/ Integrated goods and service 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. Tenders will ensure that full benefit of input Tax Credit (ITC) likely to be availed by them is duly considered while quoting rates.

All the taxes and duties levied by the State and Central Govt. and by Local Bodies at the prevailing rates applicable on the date of receipt of tender shall be fully borne by the Contractor and shall not be reimbursed to him on any account.

Further DFCCIL shall not honour any claim arising out of any increase in any of the prevailing statutory duties, taxes, levies, octroi, etc **except GST**. At the time of quoting/bidding contractor should bear the above fact in mind. 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 DFCCIL 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.

1.21 ***EXCISE DUTY OR ANY OTHER TAXES/DUTIES****:*

The contractor shall bear full taxes /duties other than GST duties levied by state

government and / or Central Government/ Local bodies from time to time. This would be entirely a matter between the contractor and the State / Central Government/ Local bodies. No claim, what so ever, on this account shall be entertained by DFCCIL.

1.22 ***ROAD TAX CHARGES****:*

Road Tax/Charges levied by Government for movement of vehicles of contractor, used in transportation, shall be borne by the contractor and no re-imbursement on this account will be made by the DFCCIL.

1.23 ***FOREIGN EXCHANGE REQUIREMENTS****:*

Any demand of foreign exchange for importing of equipment's and materials shall not be accepted.

1.24 ***ANTI PROFITEERING CLAUSE***.

The contractor should adhere to anti profiteering provisions as per section 171 of the CGST Act. Where due to change in the rates GST/Change in law, the contractor gets any credits/benefits, the same shall be passed on to DFCCIL by way of reduction in prices.

1.25 ***INTEGRITY PACT:-***

As per office memorandum no F.No DPE/13(12)/11-Fin Dated 09.09.2011 issued by Ministry of Heavy Industries (DPE) all PSU should enter into Integrity pact in the required proforma in their procurement transaction/ Contracts with suitable changes specific to the situation in which the pact is to be used. The pact, entering into which would be a preliminary qualification for any bidder, essentially envisages an agreement between the prospective vendors / bidders and the DFCCIL, committing the persons/ officials on both sides not to resort to any corrupt practices in any aspect / stage of the contract.

A copy of pre contract integrity pact is enclosed as form no. 20 for signature of bidder as acceptance, as and when Independent External monitor is appointed.

B. SAFETY PRECAUTIONS

1.0 MEASURES TO BE ENSURED PRIOR TO START OF WORK

1.1 The contractor shall not start any work without the presence of DFCCIL supervisors at site.

1.2 The methodology in detail for execution of the work at site shall be approved by engineering in charge of the organization executing the work and copies of the same shall be available with contractor's supervisor, DFCCIL supervisor of the section in whose jurisdiction the work falls.

1.3 Before permitting the execution of any OHE/PSI works, DFCCIL engineer-in-charge (APM/DPM/PM/Dy. CPM) of the section shall ensure that he received the prior intimation/confirmation of the following aspects from representative of contractor.

1.4 Name and address of the contract assigned to execute the work.

(i) Name of the Contractor's supervisor

(ii) Name of the supervisor/assistant engineer/assistant officer of the construction organization/other organizations who are going to be site in charge/in charge of work site.

(iii) List of the number(s) of individual vehicle(s)/ machineries, names and license particulars of the driver(s) proposed to be used by contractor.

(iv) Information regarding location, duration and timings during which the vehicles/machinery are planned to be plied/worked.

(v) The supervisors and operators of the contractor proposed to be deployed at work site which is close to the running track, shall be imparted training by the DFCCIL trainer at contractor own cost about the safety measures to be adopted while working in the vicinity of running track. Further competency certificate to the individual supervisors/operator shall be issued as in Annexure-A by a DFCCIL officer not below the rank of Assistant level officer who is in charge of site. No supervisor/operator of the contractor shall work or allowed to work in the vicinity of running track who is not possession of valid competent certificate.

(vi) Survey of site by supervisor of contractor and DFCCIL to assess the precautions to be taken at site for working of trains and materials required for protection.

(vii) Written advice to sectional APM/DPM about the detailed planning of work including protection of track and safety measures proposed to be adopted.

(viii) A copy of the approved methodology (to be approved by engineer in charge) proposed to be adapted by the contractor with a view to ensure safety of trains passengers and workers.

(ix) Assurance that the methods and arrangements are actually available at site before start of the work and the contractors supervisors and the workers have clearly understood the safety aspects and requirement to be adapted/followed while executing the work.

(x) An assurance register has been kept at site duly signed by both DFCCIL supervisor as well as by the contractor supervisor as a token of their having understood the safety precautions to be observed at site.

(xi) No work shall which is to be done near running track shall commence unless permitted by sectional APM/DPM/PM/Dy.CPM

(xii) Supplementary site specific instructions, wherever considered necessary shall be issued by the Engineer in Charge

(xiii) Standard Check list on Safety at Work Sites shall be used to ensure that all the requisite measures have been taken before start of work.

2.0 PLYING OF ROAD VEHICLES AND WORKING OF MACHINERIES CLOSE TO RUNNING TRACKS

(i) Normally, the road vehicles shall be run or machinery shall be worked so as not to come closer than 6.0m from center line of nearest running track.

(ii) The land strip adjacent to running tracks, where road vehicle is to ply or machinery is to work, shall be demarcated by lime in advance in consultation with the DFCCIL's Supervisor. Wooden pegs at interval not exceeding 75mts shall be provided along the line marking as permanent marks. The road vehicles shall ply or machinery shall work so as not to infringe the line of demarcation.

(iii) If a road vehicle or machinery is to work closer to 6.0m due to site conditions or requirement of work, following precautions shall be observed.

a. In no case the road vehicle shall run or machinery shall work at distance less than 3.5m from center line of track.

b. Demarcation of land shall be done by bright colored ribbon/nylon cord suspended on 120 cm high wooden/bamboo posts at distance of 3.5 m from center line of nearest running track.

c. Presence of an authorized DFCCIL's representative shall be ensured before plying of vehicle or working of machinery.

d. DFCCIL's Supervisor shall issue suitable caution order to Drivers of approaching train about road vehicles plying or machineries working close to running tracks. The train drivers shall be advised to whistle freely to warn about the approaching train. Whistle boards shall be provided wherever considered necessary.

e. Lookout men shall be posted along the track at a distance of 800m from such locations who will carry red flag and whistles to warn the road vehicle/machinery users about the approaching trains. Lookout man shall be deputed for Safety at Work Sites.

f. On curves where visibility is poor, additional lookout men shall be posted.

(iv) If vehicle/machinery is to be worked closer to 3.5m from running track.

Under unavoidable conditions, if road vehicles is to ply or machinery is to work closer to 3.5m due to site conditions or requirement of work, following precautions shall be observed:

a. Plying of vehicles or working of machinery closer to 3.5m of running track shall be done only under protection of track. Traffic block shall be imposed wherever considered necessary. The site shall be protected as per provisions of Para No. 806 & 807 of P-Way Manual as case may be.

b. Presence of a DFCCIL's Supervisor shall be ensured at worksite.

c. DFCCIL's Supervisor shall issue suitable caution order to Drivers of approaching train about road vehicles plying or machineries working close to running tracks. The train drivers shall be advised to whistle freely to warn about the approaching train.

(v) Precaution to be taken while reversing road vehicle alongside the track.

The location where vehicle will take a turn shall be demarcated duly approved by DFCCIL's representative. The road vehicle driver shall always face the DFCCIL track during the course of turning/reversing his vehicle. Presence of an authorized DFCCIL representative shall be ensured at such location.

(vi) Road vehicle shall not be allowed to run along the track during night hours generally. In unavoidable situations, however, vehicles shall be allowed to work during night hours only in the presence of an authorized DFCCIL's representative and where adequate lighting arrangements are made and where adequate precautions as mentioned earlier have been ensured.

(vii) Road vehicles/machinery/plant etc. when stabled near running tracks shall be properly secured against any possible roll off and always be manned even during off hours.

3.0 **EXECUTION OF WORKS CLOSE TO OR ON RUNNING LINES**

Any work close to or on running tracks shall be executed under the presence of a DFCCIL's Supervisor only.

(i) Precaution to be taken to ensure safety of trains while execution of work close to the running line or on running lines.

(a) Contractor has deputed trained supervisors in required number at worksites duly certified by APM/DPM/PM/Dy. CPM in charge of the works.

(b) Drivers of vehicle/operators of the machines have been briefed about the safety and precautions to be taken while moving / working close to traffic.

(c) Contractor shall ply road vehicles/working of machinery only between sunrise and sunset. In case of emergency where it is necessary to work during night hours sufficient lighting shall be ensured in the complete work area for the safety of public and passengers. Also additional staff shall be posted as necessary for night working and taking safety precautions.

(d) The contractor shall not change the approved vehicle/machinery and driver/operator for working at site. Contractor shall not induct any new vehicle/machinery and driver/operator without prior written approval of APM/DPM and the list of such changes with numbers of individual vehicle, name and license particulars of the driver shall be given to APM/DPM/PM/Dy. CPM of the section.

(e) Contractor shall ensure that road vehicle/machinery ply/work in a way so that these do not infringe the line of demonstration.

(f) Lookout men with required safety equipment shall be posted where necessary.

(g) In unusual circumstances, where operator apprehends danger to track while working truck/machinery near running track, following action shall be taken.

a) The contractor/supervisor/vehicle operator immediately advice the situation to DFCCIL official/officials of the organization executing the work and assist him/them in protecting the track.

b) Protection shall be done as done for other emergencies

(h) Individual vehicle/machinery shall not be left unattended at site of work. If it is unavoidable and becomes necessary to stable the road vehicle/machinery at site near the running track, these shall be properly secured against any possible roll off and always be manned even during non-working hours. In addition the road vehicle / machinery should be stabled parallel to track only so that incase of failure of any securing arrangement, it may not roll towards the track.

(i) All temporary arrangements required to be made during execution of work shall be made in such a manner that moving dimensions do not infringe. Necessary checks shall be exercised by site in charge from time to time.

(j) During the hours of night, lamps of temporary indicators which are not of reflective type should be lit at sun-set and kept burning till sun rise, where trains run at night.

(ii) Precaution to be taken to ensure safety of electrical/signal/ telephone cables while excavating near tracks.

(a) Particular care shall be taken to mark the locations of buried electrical/signal/telephone cables on the plans jointly with S & T/Electric supervisor and also at site so that these are not damaged during excavation

(b) Copy of the cable plan should be given to the contractor's authorized representative before handing over the site to start the work.

(c) Due care shall be taken to ensure that any part of the equipment or machinery or temporary arrangement does not come close to cables while working.

(iii) Precaution to be taken during execution of works requiring traffic blocks.

a) Any work, which infringes the moving dimensions or causes discontinuity in the track any activity making the existing track unsafe for passage of trains etc. Shall be started only after the traffic block has been imposed, DFCCIL servant in charge of the work is present at the worksite, engineering signals are exhibited at specified distance and flagmen are posted with necessary equipment to man them etc

b) Before closing the work, the track shall be left with the proper track geometry so that the trains run safely and flagmen are kept in the night with safety and track protection equipment to patrol the stretch and take action to protect the track, if so warranted and inform the DFCCIL supervisors.

c) After completion of work the released sleeper and fittings should be properly stacked away from the track to be kept clear of moving dimensions.

d) Block shall be removed only when all the temporary arrangement, machineries, tools, plants etc. have been kept clear of moving dimensions.

(iv) Precaution to be taken during execution of works during night. The work close to running line, generally, shall be carried out only during day hours. At locations, however, where night working is unavoidable, proper lighting arrangement should be made. The engineering indicator boards shall be lighted during night hours as per the provisions of IRPWM. The staff deputed for night working should have taken adequate rest before deploying them in night shift. We can specify duration of night shift from 20.00 hrs to 04.00 hrs. All other safety precautions applicable for day time work should be strictly observed during night working.

(v) Precautions to be taken to ensure safety of workers while working close to running lines.

a) Any work close to or on running tracks shall be executed under the presence of a DFCCIL's supervisor only.

b) Precaution to be taken to ensure safety of trains while execution of work close to the running line or on running lines.

(i) Such works shall be planned and necessary drawings particularly with regard to infringement to moving dimensions shall be finalized duly approved by competent authority before execution of work. The work shall be executed only as per approved procedure and drawings.

(ii) All temporary arrangements required to be made during execution of work shall be made in such a manner that moving dimension do not infringe.

(iii) Suitable speed restriction shall be imposed or Traffic block shall be ensured as required.

(iv) The site shall be protected as per provisions of Para No. 806 & 807 of P.Way Manual as case may be.

(v) Necessary equipment for safety of trains during emergency shall be kept ready at site.

c) A 'first aid kit' shall always be kept ready at site.

(vi) Precaution shall be taken for safety of public or passengers, while executing works at locations, used by passengers and public,. The worksite shall be suitably demarcated to keep public and passengers away from work area. Necessary signage boards such as "Work in progress. Inconvenience is regretted" etc. shall be provided at appropriate locations to warn the public/ passengers. Adequate lighting arrangement of worksite wherever required shall be done to ensure safety of public/passengers during night.

(vii) Precaution to be taken before stacking materials alongside the track to ensure that safety of trains is not affected. The following precautions shall be taken before stacking the materials along the track for stacking of ballast, rails, sleepers etc.

a) The sites for material stacking should be selected in advance in such a manner as to ensure that no part of the material to be stacked is infringing the Standard Moving Dimensions. A plan of proposed stacking locations be made and signed jointly by an authorized DFCCIL's representative and contractor's representative.

b) The selected locations shall be marked by lime in advance.

c) Presence of an authorized DFCCIL's representative while unloading and stacking shall be ensured.

d) The material shall be stacked in such a height so as to not to infringe SOD in case of accidental roll off.

(viii) <u>SAFETY ASPECTS TO BE OBSERVED WHILE WORKING IN OHE AREA</u>

(a) No electrical work close to running track shall be carried out without permission of DFCCIL representative.

(b) A minimum distance of 2m has to be maintained between live OHE wire and body part of worker or tools or metallic supports etc.

(c) No electric connection etc. can be tapped from OHE.

(d) Authorized OHE staff should invariably be present when the relaying work or any major work is carried out.

(e) Power block is correctly taken and 'permit to work' is issued.

(f) The structure bonds, track bonds, cross bonds, longitudinal rail bonds are not disturbed and

(g) If disconnected for the work, they are reconnected properly when the work is completed.

(h) The track level is not raised beyond the permissible limit during the work.

4.0 PROTECTION OF TRACK DURING EMERGENCY

(i) **Action to be taken when a contractor's supervisor or vehicle operator apprehends any unusual circumstances likely to infringe the track and endanger safe running of trains.** At any time if a contractor's supervisor or vehicle operator observes any unusual circumstances likely to infringe the track and apprehend danger to safe running of track, he shall take immediate steps to advise a DFCCIL official of such danger and assist him in protection of track.

The track shall be protected as under. One person shall immediately plant a red flag (red lamp during night) at the spot and proceed with all haste in the direction of approaching train with a red flag in hand (red lamp during night) and plant a detonator on rail at a distance of 600m from the place of obstruction of BG track after which he shall further proceed for not less than 1200m from the place of obstruction from BG track and plant three detonators at 10m apart on rails. After this he shall display the red flag (red lamp during night) at a distance of 45m from the detonators.

Attempts shall also be made to send an advice to nearest DFCCIL station about the incident immediately.

(ii) **Action to be taken if train is seen approaching to site of danger and there is no time to protect the track as per guidelines mentioned above.**

In such a case the detonators shall be planted on rails immediately at distance away from place of danger as far as possible and attention of driver of approaching train shall be invited by whistling, waving the red flag vigorously, gesticulating and shouting.

(iii) **Action to be taken if more than one track is obstructed.**

a) In case of single line protection as above shall be done in both the directions from place of danger.

b) In case of double line or multiple lines, if other tracks are also obstructed, the protection as above shall be done for other track also.

The protection shall be done in that direction and on that track first on which train is likely to arrive first.

c) The Contractor's Supervisors, Operators and lookout men shall be properly explained about the direction of trains on running tracks.

(iv) **Equipment required for protection of track.**

Minimum compliment of protection equipment i.e. 10 detonators, 4 red hand flags, 4 red hand lamps, 4 banner flags and whistles etc. shall always be kept ready at worksites for use in case of emergency. DFCCIL will arrange to provide detonators, whereas Contractor shall arrange other equipment at his own cost.

(v) **Arrangement of lookout men and competency required for lookout man to warn labour about approaching train.**

a) Contractor will provide lookout men

b) The lookout men shall be properly trained in warning to staff at worksite about approaching train.

c) Only those lookout men shall be provided at site who have been issued with a competency certificate by the DFCCIL's Supervisor.

d) In case, it is felt necessary to provide lookout men by DFCCIL, the charges for the same as fixed by DFCCIL Administration shall be recovered from Contractor.

5.0 TRAINING TO SUPERVISORS AND OPERATORS OF CONTRACTOR

The Supervisors and Operators of the contractor proposed to be deployed at work site, which is close to the running track, shall be imparted mandatory training by the DFCCIL at site free of cost about the safety measures to be adopted while working in the vicinity of running track. Engineer-in charge of the work shall decide the scale, extent & adequacy of training. In case training is imparted at a recognized DFCCIL training institute, the charges for the same, as decided by DFCCIL, shall be recovered from contractor. A competency certificate to this effect to the individual Supervisor/ Operator shall be issued as given below by a DFCCIL Officer not below the rank of Project Manager. No Supervisor/Operator of the Contractor shall work or allowed to work in the vicinity of running track that is not in possession of valid competency certificate.

All the labour, materials, tools, plants etc. except detonators, required for ensuring safe running of trains shall be provided by Contractor at his own cost. Wherever lookout men are provided by DFCCIL, charges at the rate of Rs. 500/- per man day shall be recovered from Contractor.

6.0 SPECIAL CONDITIONS FOR WORKING OF ROAD CRANES

To ensure safe working of road cranes used in works in connection with provision of ROB/RUB/Subways, following items shall invariable be ensured before putting the cranes to use:-

(i) No machine shall be selected to do any lifting on a specific job until its size and characteristics are considered against the weights, dimensions and lift radii of the heaviest and largest loads.

(ii) The contractor shall ensure that a valid Certificate of Fitness is available before use of Road Cranes.

(iii) Contractors should utilize the services of any competent person as defined in Factories Act, 1948 and approved by Chief Inspector of Factories.

(iv) The laminated photocopies of fitness certificate issued by competent persons, the operators' photo, manufacturer's load chart and competency certificate shall always be either kept in the operator cabin or pasted on the visible surface of the lifting appliances.

(v) All lifting appliances including all parts and gears thereof, whether fixed or movable shall be thoroughly tested and examined by a competent person once at least in every six months or after it has undergone any alterations or repairs liable to affect its strength or stability.

7.0 Contractor shall indemnify DFCCIL against any loss/damage to public property, travelling public, DFCCIL or his own staff due to his (contractor's) negligence. In case there is any mishap, a fact finding inquiry will be conducted by DFCCIL. A show cause notice will be issued to the contractor, in case he is prima-facie held responsible. Contractor's reply to show cause notice will be considered by the Engineer in Charge before taking final decision. In case contractor is found responsible for the mishap, recovery from him will be affected for only tangible direct losses.

Annexure-A

Competency Certificate

Certified that Shri _____ Supervisor/Operator of M/s. _____ has been trained and examined in safety measures to be followed while working in the vicinity of running DFCCIL track for the work

_____. His knowledge has been found satisfactory and he is capable of supervising the work safely.

This certificate is valid only for the work mentioned in this certificate only.

The validity of this certificates will be up to ……

Signature and designation of the officer

C. GENERAL WORK PROCEDURE

1. Maintenance work to be carried out as per DFCCIL OHE/PSI manuals.

2.0 Further Drawing and Instructions:

(i) Chief General Manager, DFCCIL shall have full power to make and issue further drawings or instructions or direction from time to time as may appear necessary and proper to the contractor for efficient construction, completion and maintenance of the works. The contractor shall be bound by the same as fully as be if they had been mentioned or referred to in the contract, and the contractor shall not be entitled to any extra payment in respect of any work or materials shown or directed to be done supplied by such further drawings or instructions required for completion of unless the Chief General Manager, DFCCIL have given an extra order for the same in writing. The contractor shall be responsible for close scrutiny of the drawings.

(ii) If the works are required to be done in DFCCIL Yards and Tracks are to be crossed, the tenderer shall inspect the site and make himself thoroughly acquainted with site condition and quote rate considering these aspects.

(iii) The work shall have to be done in such a manner that the normal working of the Railway within the railway yard does not get disturbed. No material/temporary structures should be kept adjacent to the running track which may infringe rail traffic. The contractor shall take necessary precaution to prevent/cause damage to the DFCCIL/Railway property & staff during the execution of the work.

(iv) All the work to be executed as per approved drawings and no any extra payment shall be considered for protection etc. except Engineer's prior written instructions for the same approved by Chief General Manager, DFCCIL

2.9 Commencement of the construction work at site:

The contractor shall commence the construction work when and as soon as, but not until, he receives instructions from Engineer to do so. On such order being given, possession of site/authority shall be given to the contractor of such portion or portions of the site as the Engineer may determine.

2.10 Contractor to Study Drawing & Specification etc. and His Liability:

The contractor shall be responsible for close scrutiny of the approved drawings supplied by the DFCCIL, For any discrepancies, error or omission in the drawings or other particulars indicated therein, the contractor shall approach the DFCCIL immediately for rectification of indicated therein, the contractor shall approach the DFCCIL immediately for rectification of such discrepancies, errors and omission. If any dimension/figure/features etc. on approved drawings or plans differ from those drawings or plans issued to the contractors at the time of calling the tender, the dimensions as figured upon the approved drawings or plans shall be taken as correct.

2.11 Contractor to Submit his Time Table:

The contractor shall submit a monthly progress of work done during the month by the 4th day of the following month. He will also give the programme of coming month by 25th of each month. The programme will be subject to alteration at the discretion of the DFCCIL officials.

2.12 Any Doubted Points to be referred to the Chief General Manager, DFCCIL**:** Should there be any doubt or obscurity as to anything to be done or not to be done

by the contractor or as to these instructions or as to any matter or thing, the contractor must set forth such doubt or obscurity in writing and submit the same to Chief General Manager DFCCIL. Only such reply as the said Chief General Manager, DFCCIL may be in writing given shall be taken as the authoritative interpretation of the point in doubt or obscurity.

2.13 Contractor'(s) Liability:

Any fitting, accessory or apparatus which may not have been mentioned in this specification or the drawings, but which are usual or necessary in the execution of such work, are to be provided by the Contractor without extra payment. The whole work must be completed in all details, whether mentioned in this specification or not, with the exception of such work as has been specified in the schedule of items to be separately provided for in the Contract.

Notwithstanding the specifications and conditions stated in the contract, the contractor shall keep the Engineer/ Employer authority fully indemnified and free from all liabilities and risks consequential to any lapse on his part in respect of material quality, standard of workmanship, accuracy of fabrication and the like. He shall provide all labour and material required for execution of the work as per all standards and specifications.

2.14 DFCCIL desires that successful contractor should establish (at his own cost) the fabrication workshop near the site only for close monitoring of all the quality aspects of this contract work. Contractor's request for establishing workshop/using workshop proposed/located away from the bridge site shall require prior approval.

2.15 Contractor shall establish fully equipped laboratory for all the tests required on materials/processes/products as per provisions of the contract, Specifications and the direction/approval of the Engineer. Costs of these are deemed to be included in the quoted rates. Prior approval of the engineer shall be obtained for non-installation of such testing equipments which cannot be installed in normal course due to any reason. However, engineer's decision (for installation and non-installation) in this regard shall be final binding and conclusive.

2.16 Site Facilities by the Contractor:

Contractor shall provide Transportation of his staff / office / site facilities at the approach site / other locations for ensuring smooth and efficient communication and work execution. Cost of these facilities deemed to be included in the quoted rates and nothing extra shall be paid for this item.

Contractor shall (at his own cost) depute / nominate safety officers(s) for supervising safety aspects of all works/process including enabling arrangements for execution and inspection of the work. Safety systems/arrangements should be made for each activity of fabrication/erection and its inspection and same should be certified by nominated safety officer.

TRANSPOTATION (MOVEMENT OF Contractor's staff to different work site for regular maintenance and to attend emergency at site) will be the responsibility of Contractor. To ensure this, Contractor has to mandatorily to depute minimum 03 nos. MUV suitable vehicle (01 at IMD, 01 no. at each IMSD = Total 03 nos. vehicle) in 24x7 mode during entire currency of contract for movement of his gang to different work sites. DFCCIL will not facilitate any road vehicle for contractor's staff movement and only provide Tower Wagon as per avaliability. Contractor should quote his offer considering above requirement.

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TECHNICAL CONDITIONS OF CONTRACT

1.0 INTRODUCTION

Dedicated Freight Corporation of India (DFCCIL) is a Public Sector Undertaking under the administrative control of Government of India (Ministry of Railways) for construction, maintenance and operation of the Dedicated Rail Freight Corridors. At present the company is undertaking construction of Eastern & Western corridors and has its corporate office at New Delhi and Field Units at various cities associated with CGM unit.

CGM /DDU unit have jurisdiction from Pd Deen Dayal Upadhaya Nagar to Sone Nagar/Chiraila Pauthu (DDU-CPBN/SEBN) and connecting line with IR.

2.0 Definitions

2.1 In the Conditions of Contract, the following terms shall have the meanings assigned here under except where the context otherwise requires:

i) "RAILWAY" shall mean the President of the Republic of India or the Administrative Officers of the Railway/DFCCIL or of the successor Railway authorized or any other officer of DFCCIL authorized to deal with any matters which these presents are concerned on his behalf.

ii) "CHIEF GENERAL MANAGER" shall mean the officer in administrative in-charge of (New DDU– CPBN/SEBN) and shall mean and include their successors, of the successor DFCCIL.

iii) "DEPUTY CHIEF PROJECT MANAGER" shall mean the officer in charge of lot wise or department /S&T/Electrical/Finance wise (Engineering department) of the DFCCIL include their successors of and shall mean and the successor DFCCIL.

iv) PROJECT MANAGER/ DEPUTY PROJECT MANAGER/ASSISTANT PROJECT MANAGER shall mean the officer department wise (Engineering /S&T/ Electrical/ Finance Department) of the DFCCIL and shall mean and include their successors of the success of DFCCIL.

v) "TENDER or BID" means the offer (Technical and/or Financial) made by individual, firm, Company, corporation, or Consortium for the execution of the works.

vi) "TENDERER" shall mean the person/ the firm or company whether in corporate or not who tenders for the work with a view to execute the works on contract with DFCCIL and shall include their personal representatives, successors and permitted assigns.

vii) "WORKS" shall mean the works contemplated in scope and schedules set forth in the tender forms and required to be executed according to terms and condition mentioned.

viii) "Bill of Quantities (B.O.Q.)"/ "Schedule of Rates" means list of items of work, their quantities and rates as accepted and forming part of contract agreement.

ix) "EMPLOYER" means the Dedicated Freight Corridor Corporation of India Limited, A Govt. of India Undertaking (DFCCIL in abbreviation) acting through its Managing Director or any other authorized officer and shall include their legal successors in title and permitted assignees.

xi) "CONTRACT" shall mean and include the Agreement or Letter of Acceptance, the accepted Bill of Quantities and Rates, the General Conditions of Contract, Special Conditions of Contract, Appendix to Tender, Form of Bid, and Instructions to the Tenders and other Tender Documents.

xii) "CONTRACTOR" shall mean the person or firm, company, corporation, whether incorporated or not who enters into the contract with DFCCIL and shall include legal representatives of such individual or persons comprising such firm or company or successors of such firm or company as the case may be such individual, or firm or company.

xiii) "ENGINEER OR ENGINEER IN CHARGE" means the Chief General Manager of DFCCIL/ DDU (Employer), or any other officer authorized by the Employer to act on his behalf and for the purpose of operating the contract. "Engineers Representative" shall mean officer authorized by DFCCIL in direct charge of works.

xv) "ACCEPTING AUTHORITY" shall mean the Chief General Manager /DDU of DFCCIL or any other officer authorized for dealing with the works for the purpose of this tender/Contract.

xvi) Definitions mentioned in these tender documents elsewhere will be followed. In Case there is an ambiguity in any definition, the decision of Chief GENERAL MANAGER /DDU / DFCCIL regarding the interpretation shall be final and binding.

3.0 GENERAL DESCRIPTION OF SITE AREA & CLIMATIC CONDITIONS

3.1 The tenderer/s are requested to visit the area of work and ascertain himself/themselves with the proposed works / services, surroundings and prevailing law & order conditions.

4.0 SCOPE OF WORK -

4.1 Maintenance of 2x25 kV OHE/PSI and Miscellaneous OHE/PSI and Testing of PSI equipment in New Pt Deen Dayal Upadhaya Nagar to New Sone Nagar/New Chiraila Pauthu (SEBN/CPBN) section of DFCCIL including IR link line/Connecting line connection to Indian Railways for a period of 24 (Twenty-Four) months under CGM DDU Unit.

The work requires high degree of planning and execution.

i. Preventive/breakdown Maintenance of given under assets shall be done by contractor :-

a) 2x25 kV A.C. Traction Overhead Equipment on main line, 25kV OHE in loop lines and connecting chords, Maintenance of Power Supply Installation (PSI) etc. in New Pt Deen Dayal Upadhaya Nagar to New Sone Nagar/New Chiraila Pauthu (SEBN/CPBN) section of DFCCIL

b) 2x25 kV A.C. Traction PSI Equipment between of New DDU – CPBN/SEBN.
There are 07 nos. of station Yard in the Section

02 nos. TSSs each at Karwandia (02 nos. traction transformer) & New Durgawati (02 no power transformer, 01 no. traction transformer) in which transformers are in Scott connection each of 60(ONAN)/84(ONAF)/100 (OFAF) MVA and power transformer 220kV/132 kV of 75/105/150 MVA, Auto Transformers (8 MVA) 4 nos. at each KWDN/TSS and 12 MVA at Durgawati/TSS along with requisite Circuit Breakers, Isolators, C&R Panel, C.T., P.T., auxiliary transformers and all other associated accessories inside TSS

(i) 02 nos. SP each having 4 nos. auto transformers of capacity 8MVA ONAN at Kudra and 12 MVA at Chandauli along with associated circuit breaker, switchgear control & relay panel etc.

(ii) 07 nos. SSP without auto transformers along with associated circuit breaker, switchgear control & relay panel etc.

c) To maintain these, DFCCIL has established 01 no. IMD (Integrated Maintenance Depot) at New Sone Nagar and 02 nos. IMSD (Integrated Maintenance Sub Depot) at New Durgawati & New Karwandia.

d) The consumable material for the maintenance and replacement for the defective parts generally provided by the Employer which is not in Scope of Contractor. The material required for the maintenance shall be issued by authorized representative of CGM/DDU available at IMD/IMSD. **Rest all other required tools and plants for maintenance shall be arranged by contractor.**

Organization	Work/location	Quantum of assets to be maintained.	Boundary of overlap or SI/Isolator feeding from OHE to be Maintained.
DFCCIL	New Deen Dayal Upadhaya to New Sone Nagar/Chiraila Pauthu (SEBN/CPBN) section of DFCCIL	2x25 kV A.C. Traction Overhead Equipment of 125/129 sq. mm Copper-Cd Catenary and 150 sq. mm. grooved Copper-Ag Contact wire on Main & Loop Lines (approx. 293 TKM) anfd 11 Nos PSI (02 TSS, 02 SP and 07 SSP) locations	

Schedule of quantities requires Preventive/breakdown Maintenance of 2x25 kV A.C. Traction Overhead Equipment in the above section by the contractor's personnel round the clock for the configuration given at **"Schedule of Rates".**

ii. Special Checks & Preventive maintenance of the 2x25 kV A.C. Traction Overhead Equipment including negative feeders under Power Block activities but strictly under the supervision of competent representatives of DFCCIL and with their time to time instructions only, in accordance with the Standard Maintenance Instructions issued by the DFCCIL.

iii. Immediate attention for any breakdown in the 2x25 kV A.C. Traction Overhead Equipment & Power Supply Installation Equipment and quick restoration.

iv. Explanatory notes on the schedule items.

Explanatory notes are given below for all items given in schedule of prices for the guidance of tenderer.

: GENERAL:

a)	Wherever an item of work covers erection, such item shall include all bolts, nuts and washers of GI/SS etc. as per DFCCIL latest specification & drawing. No separate payment for fabrication of materials for using in maintenance / replacement purpose is admissible.
b)	Erection of any item of equipment, which is supplied by the contractor, will include testing, commissioning and bringing the equipment into operation to the entire satisfaction of the purchaser.
c)	The basic quantity of components and materials required to make up a unit of work for the selected items are indicated for guidance only. There may be minor variation to suit erection but no adjustment in prices shall be made on that account. Prices quoted shall be inclusive of all incidental charges viz. freight, handling, taxes, duties, insurance if any as applicable and GST shall be extra
d)	Generally OHE& PSI components are supplied by the DFCCIL for maintenance.
e)	All works shall be carried out strictly in accordance to the DFCCIL drawings, specifications and guidelines if any. However, any modified arrangement if in vogue in DFCCIL or suggested by CGM/DDU Unit, the work shall be executed accordingly without any alteration in accepted rates
f)	Explanatory note for various items of works in the Schedule of item, quantities and prices are given below. The Checking and maintenance of all items of 2x25kV OHE & PSI including AOH & POH as case may be shall be carried out in line with maintenance manual and as per Latest SMIs if any during contract period OR as per the Procedure in vogue in TRD organization of respective sections. No additional payment will be made for any additional man power deployment in attending to latest maintenance instructions if any. In- case of disputes between above standards if any, the decision of concerned CGM/DDU unit is the final and contractor is bound to act accordingly.
g)	Contractor shall get tested each insulators for tensile strength at DFCCIL's testing machine based on maintenance manual of DFCCIL. However, no charge will be levied for usage of machine for testing. All tested insulator shall marked "T" with date with "RED" paint.
h)	The special condition & Technical specifications for schedule items are enclosed and Tenderer shall go through them thoroughly before submitting offer.
i)	Power cum Traffic block for various maintenance activities shall be arranged by DFCCIL either in daytime / night time as per slot available in the section. No additional payment will be made for night working.
k)	The D-form against sales tax will not be issued. Service Tax/GST if claimed by the contractor will be processed separately after finance concurrence and sanctioned by the competent authority. Claim of service tax/GST should be supported by deposit receipt from service tax/GST department, without documentary proof the claim shall not been entertained by the DFCCIL Authority.
l)	All the safety precautions for men and material working within Railway premises should be taken by the contractor. The contractor shall be responsible in all respect, if any of their workmen meets with an accident due to non-observation of the safety precautions. Tenderer shall indemnify Railway against any or all claims which may arise because of any reason under any circumstances / incident / accident.

PARTICULARS OF SCHEDULE OF ITEMS & EXPLANATRORY NOTE

Schedule 1: Regular Maintenance Activity

Sch.1 Sl. No. 1	Checking & Maintenance of Cantilever assembly

The Checking and Maintenance of Cantilever assembly shall be carried out in line with Maintenance Manual/Approved drawings (As Build Drawings)/Specifications of DFCCIL with its latest correction slips, if any

The price shall cover checking & maintenance of Cantilever assembly including all components, Stay & Bracket insulators, dropper wires and copper wires include small parts steelwork and carrying out periodic over hauling work of cantilever along with Zylo testing of non-ferrous parts. However, this does not include the anti-creep arrangement at masts / structures. Check and adjust heights and staggers on the basis of setting distance and rail level marked. Close coordination with Permanent Way Inspectors is required for keeping the permanent way at the correct location. Checking of RRA clamps and contact wire at double cantilevers. Checking of all OHE parameters at the cantilever assembly

Price shall also cover erection of new cantilever assembly including Stay & Bracket insulators. Price shall cover measurement and recording of all OHE parameters, make, Sr.No., batch no. etc. of various OHE components. Cantilever Maintenance sheets to be signed by both DFCCIL and contract representatives. The work shall be carried out as and when required by Engineer in-charge during the contract period.

The Joint Report/Maintenance sheets to be signed by Engineer in-charge and Contractor's representative which will be submitted by contractor to DFCCIL centralized office.

Sch.1 Sl. No. 2	Checking & Maintenance of 25kV OHE Conductors

The Checking and maintenance of 2x25kV OHE Conductors and feeder wire shall be carried out in line with Maintenance Manual/Approved drawings (As Build Drawings)/Specifications of DFCCIL with its latest correction slips, if any.

The job shall include checking of 2x25kV OHE Masts, Portal structures, Super Mast Bridge masts, Special masts if any etc., OHE Conductors for final adjustment & inspection of OHE stagger, removal of kinks and knots, adjustment of OHE as per SED annually. Tower wagon and ladder trolleys, as and when required, will be provided by DFCCIL.

The job shall include Checking and adjustment of contact wire parallel clamp, contact wire dropper clip, catenary wire dropper clip complete with bolts, nuts etc., feeder wire and super mast, catenary ending clamp, large span wire clamp, adjuster, anchor double strap assembly, compensating plate / equalizing plate, caution boards, number plates etc.

The job shall also include (For Contact catenary and feeder wire)

i. Ensure smooth passage of pantograph.
ii. Recording of contact wire height and staggers, and adjust to be done if required.
iii. Checking and tightening of all kinds of PG clamp available.
iv. Contact & Catenary splices are to be provided if required. (This part is covered separately in the schedule)

v. Checking of in span droppers and if found no load taken are to replaced.
vi. Replacement of catenary and dropper clips if required.
vii. Checking for availability of split pin & U pin in catenary and contact wire dropper clip.

The Joint Report/Maintenance sheets to be signed by Engineer in-charge and Contractor's representative which will be submitted by contractor to DFCCIL centralized office.

Sch.1 Sl. No. 3	Checking & Maintenance of all types of 25kV OHE Jumpers

The Checking and maintenance of 25kV OHE Jumpers shall be carried out in line with Maintenance Manual/Approved drawings (As Build Drawings)/Specifications of DFCCIL with its latest correction slips, if any.

The job shall cover checking and maintenance of all types of 2x25kV OHE Jumpers not covered in other items including special arrangement at support & terminal fittings for conductors including adjustable and Jumper wires. The job shall cover adjustment of all components including PG clamp and Jumper wires on the OHE & shaping etc. Job shall also cover replacement of any jumper assembly complete if required (material will be supplied by DFCCIL), and no extra payment will be made for this replacement.
All kinds of Jumpers with broken strands should be invariably replaced (material will be supplied by DFCCIL). Broken strands are most likely at the point of entry into PG clamps, possibly due to sharp edges in the clamp. PG clamps should have properly rounded off edges to prevent the cutting of strands. The clamps should be checked for signs of overheating and proper tightness..

The Joint Report/Maintenance sheets to be signed by Engineer in-charge and Contractor's representative which will be submitted by contractor to DFCCIL centralized office.

Sch.1 Sl.No. 4	Checking & Maintenance of Overlaps (IOL/UIOL)

The Checking and maintenance of Overlaps (IOL/UIOL) shall be carried out in line with Maintenance Manual/Approved drawings (As Build Drawings)/Specifications of DFCCIL with its latest correction slips, if any.

The price shall cover checking and maintenance of all components and fittings with fasteners installed at Overlaps (insulated or uninstalled) including overlaps for jumper connections between two sets of overhead equipment conductor at a overlaps or neutral section good length of sweeping zone to be achieved. The price shall also cover checking and maintenance of all materials including different types of jumpers, insulator and all adjustments required at crossing, overlaps and neutral section whenever required. The price shall cover checking of potential equalizer jumpers at insulated overlaps. The price shall also cover replacement of different types of jumpers complete, if required and no extra payment will be made for this replacement.
The job shall include

i. Check height and stagger of OHE in the overlap section.
ii. Check whether the normal minimum clearance of 500mm is available between the two OHEs in an insulated overlap and 200 mm in an un-insulated overlap.
iii. Check whether the lifting of out-of-run OHE is correct.
iv. Check that parallel running of contact wires in the overlap for a minimum 2m in the panto sweep region.
v. Check for the spark free condition on OHE in sweeping zone of IOL/UIOL.

The Joint Report/Maintenance sheets to be signed by Engineer in-charge and Contractor's representative which will be submitted by contractor to DFCCIL centralized office.

Sch.1 Sl. No. 5	Checking & Maintenance of Anti creep arrangement

The Checking and maintenance of Anti creep arrangement shall be carried out in line with Maintenance Manual/Approved drawings (As Build Drawings)/Specifications of DFCCIL with its latest correction slips, if any.

The price shall cover checking and maintenance of all materials for anti-creep including adjusters, mast anchor fittings with bolts & nuts etc. at its termination on either side on structures ending clamps, Guy rod assembly and other fitting viz. single clevis assembly, anchor double strap assembly, double suspension clamp, double eye distance rod and 9 ton insulator, anti-creep wire. The price shall also cover checking/cleaning of muffing of anchor block of guy rod assembly.
The job shall include

i. Check the tightness of double suspension clamps U bolts.
ii. Check the healthiness of double suspension clamps.
iii. Ensure availability of saddle plate in suspension clamp.
iv. Check the tightness of PG clamp
v. Check the condition of jumper
vi. Check the condition of ending clamp at both ACA

The Joint Report/Maintenance sheets to be signed by Engineer in-charge and Contractor's representative which will be submitted by contractor to DFCCIL centralized office.

Sch.1 Sl. No. 6	Checking & Maintenance of 25kV Isolator (SP/DP) including earthing heel arrangement if any

The Checking and maintenance of Isolator assembly shall be carried out in line with Maintenance Manual/Approved drawings (As Build Drawings) /Specifications of DFCCILs with its latest correction slips, if any

The price shall cover checking and maintenance of 2x25kV Isolator (SP/DP) switch complete with post insulators, bus bar and related small part steel, operating rod, operating rod guides and operating rod insulator, mounting base, arcing horns, integral lock etc. including earthing heel arrangement and motorized unit if any. The earthing heals provision if any or earth electrode, including all fastenings at both ends. Inspection of earths pits, watering of all earth pits and recording earth resistance. Earths having resistance of over 10 ohms should be attended to as per the provisions made in maintenance manual of DFCCILs with its latest correction slips if any. The required coke, crushed coal and salt will be supplied by DFCCILs at no cost to the contractor.

The price shall include for making jumper connection with OHE, if required. The price shall also cover erection of the new 2x25kV Isolator (SP/DP) assembly complete on OHE mast / structure gantries including erection of jumper, bus bar, if required and no extra payment will be made for this replacement.
The job shall also include

i. Check number plates for cleanliness and security.
ii. Check correctness of operation, alignment of contacts and arcing horns.
iii. Check earth continuity where applicable.
iv. Lubricate moving parts and locks.

v. Check interlocks where ever provided.
vi. Check that the distance between male and female contacts in open position is 380 mm to 500 mm depending upon the type of isolator.
vii. Checking of all insulators (Pedestal & Tie rod)

The Joint Report/Maintenance sheets to be signed by Engineer in-charge and Contractor's representative which will be submitted by contractor to DFCCIL centralized office.

Sch.1 Sl.No. 7	Checking & Maintenance of 25kV OHE at Turnouts

The Checking and maintenance of 25kV OHE at Turnouts shall be carried out in line with Maintenance Manual/Approved drawings (As Build Drawings) /Specifications of DFCCILs with its latest correction slips, if any

The price shall cover checking and maintenance of all components and fittings with fasteners installed in 25kV OHE at turnouts including knuckle or crossing equipment at a turnout and parallel clamps for jumper connections between two sets of overhead equipment conductor at a turnout. The price shall also cover maintenance of jumper wire and all adjustments required at turnouts, crossing whenever required. Turnouts Maintenance sheets to be signed by both Railway and contract representatives.

The job shall include

i. With OHE Inspection Car running on main line checkup if pantograph glides smoothly under the loop line OHE. (Take off)
ii With OHE Inspection Car running on loop line checkup if pantograph glides smoothly under the main line OHE. (Take on)
iii. Check stagger of both the OHEs at turn outs.
iv. Check that the main line OHE of overlap type turn out is about 50mm below that of the turnout OHE.
v. Checkup cross contact bar, if any, for displacement and distortion.
vi. Check up for hit marks, if any (Implantation).
vii. Checkup rail level and setting distance of the obligatory mast.
viii. Check up for hard spots near rigid droppers, if any.

The Joint Report/Maintenance sheets to be signed by Engineer in-charge and Contractor's representative which will be submitted by contractor to DFCCIL centralized office.

Sch.1 Sl.No. 8	Checking & Maintenance of 25kV OHE on a crossover

The Checking and maintenance of 25kV on a crossover shall be carried out in line with Maintenance Manual/Approved drawings (As Build Drawings) /Specifications of DFCCILs with its latest correction slips, if any

The price shall cover checking and maintenance of all components and fittings with fasteners installed in 25kV OHE on a crossover including knuckle or crossing equipment at both side turnouts or a diamond crossing and parallel clamps for jumper connections between two sets of overhead equipment conductor. The price shall also cover maintenance of jumper wire, section Insulator assembly on crossover and all adjustments required at both turnouts of cross over, crossing whenever required. Cross over Maintenance sheets to be signed by both

DFCCIL and contract representatives.

i With OHE inspection car running on main line checkup if pantograph glides smoothly under the loop line OHE.

ii With OHE inspection car running on loop line checkup if pantograph glides smoothly under the main line OHE.

iii Check stagger of both the OHE‟s at turn outs (it shall not normally exceed 300mm)

iv Check that the main line OHE of overlap type turn out is about 50mm below that of the turnout OHE.

v Check cross contact bar, if any for displacement and distortion.

vi Check up for hit marks, if any.

vii Check up rail level and setting of the obligatory mast.

viii Check up for hard spots near rigid droppers, if any

The Joint Report/Maintenance sheets to be signed by Engineer in-charge and Contractor's representative which will be submitted by contractor to DFCCIL centralized office.

Sch.1 Sl.No.9	Checking & Maintenance of Section Insulator assembly

The Checking and maintenance of Section Insulator assembly shall be carried out in line with Maintenance Manual/Approved drawings (As Build Drawings) /Specifications of DFCCILs with its latest correction slips, if any.

The price shall cover checking and maintenance of all components including the core insulating rod installed section insulator assembly including special arrangement at support & terminal fittings for conductors including adjustable dropper wire. The price shall cover adjustment of all components including 9 ton insulator on the catenary & leveling of runners etc. Price shall also cover replacement of section insulator assemble complete, if required and no extra payment will be made for this replacement.

The job shall include

i. Clean insulators and replace chipped or cracked insulators,
ii. Check runners for flash-marks, hit marks and proper adjustment,
iii. Check for excessive contact wire wear near anchor clamps,
iv. Check the level of the assembly and adjust if necessary,
v. Tighten PG clamps of droppers and stiffeners.
vi. Checking for smooth passage under SI without fitting
vii. Checking for both the runners to be in contact with pantograph during passing of AC loco

The Joint Report/Maintenance sheets to be signed by Engineer in-charge and Contractor's representative which will be submitted by contractor to DFCCIL centralized office.

Sch.1 Sl.No. 10	Checking & Maintenance of Auto Tensioning Device (ATD)

The Checking and maintenance of Auto Tensioning Device (ATD) shall be carried out in line with Maintenance Manual/Approved drawings (As Build Drawings) /Specifications of DFCCILs with its latest correction slips, if any.

The price shall cover checking and overhauling of Auto Tensioning Device (ATD) provided in the section including 9 ton adjuster with double strap assembly and normal/anti-theft guide tube assembly, stainless steel wire rope, Guy rod assembly and small parts of steel works and also replacement of bearing if ATD jammed including transportation. Price shall also cover

adjustment of "X & Y" value either by mechanism provided or by cutting of conductors, if required. The price also covers adjustment of the entire regulating equipment. The price shall also cover cleaning of muffing of Anchor block of Guy Rod. The work shall be carried out as and when required by Engineer, in-charge during the contract period.
The job shall include

i. Check 'X' and 'Y' dimensions in the case of pulley block type equipment against prescribed values for the temperature at the time of checking. Make use of turn- buckles to adjust as required.

ii. Check that the compensating plate is vertical. If not, adjust as required.

iii. Lubricate pulleys (if required as per maintenance instructions) and other moving parts.

iv. Check if 20 mm wide bands in black colour are painted (Paint will be provided by Railways) on the mast to indicate upper and lower limits of movement of counter weight.

v. Check condition of stainless steel wire rope for any signs of corrosion and breakage of strands.

vi. Check free movement of ATD

vii. Check for free siding at L- angle of ATD rod

The Joint Report/Maintenance sheets to be signed by Engineer in-charge and Contractor's representative which will be submitted by contractor to DFCCIL centralized office.

Sch. 1 Sl.No.11	Checking & maintenance of all type of bonds & Electrode Earthing connection including cleaning of muffs at OHE mast

The price shall cover Checking & Maintenance of Bonds of various types structure bond, cross bond, continuity bond, impedance bond & rail bond etc. and bond connection required for connecting a traction mast or structures to the nearest non-track circuited rail, or earth electrode, including all fastenings at both ends.

The price shall include cutting, shaping, painting and drilling of the bond and erection of all materials including the bond. The price shall also cover the drilling of the hole to rail for fixing the bond with suitable GI bolts and nuts, washer etc. and provision of PVC insulating sleeve over the portion of bond passing under the tract circuited rail of length 350mm each wherever required. Price also covers cleaning of area of around muff of OHE/portal by removing the vegetation and condition of structure muff are to be checked once in month & also recasting of damaged muff with white wash. Recasting of new muff, disconnection of structure bond, drilling of hole in mast/portal and reconnection/replacement of bonds wherever the muff height needs to be raised. Price also covers transportation of release bond to the concerned OHE depot.

The Joint Report/Maintenance sheets to be signed by Engineer in-charge and Contractor's representative which will be submitted by contractor to DFCCIL centralized office.

Sch.1 Sl.No.12	Removal of & Re erection of bonds of various type during track machine working or Erection of missing/new bonds (Paint etc.)

The work shall include the erection of the bond in place of the any missing bond or removal of during track machine working.

The Joint Report/Maintenance sheets to be signed by Engineer in-charge and Contractor's representative which will be submitted by contractor to DFCCIL centralized office.

Sch.1 Sl. No. 13	Checking & Maintenance of leaning of OHE mast till a new mast erected

The job covers checking and maintenance of leaned masts till a new mast is erected and erection of new mast if required. The job shall also cover packing and ramming with pieces of stone and strengthening by pouring cement concrete (Price is covered in Foundation). Job shall cover for OHE foundation casting (Price is covered in foundation) including drilling of hole in mast/portal as per the directives of engineer and after recasting of foundation (Price is covered in foundation), muff shall be provided including white wash (material provided by DFCCIL). A temporary structure or guy as convenient / as per railway requirement to be provided (material to be provided by railway). The work must be so done that when the Tirfor is released the mast remains reasonably vertical with the allowance of reverse deflection as required. The job includes releasing & reloading of OHE load from / to the OHE mast.

Note: To eliminate excess/abnormal leaning mast suitable foundation to be cast and new mast to be provided.(which is covered separately in the schedule)

Sch.1 Sl.No.14	Checking & Maintenance of PTFE type neutral section

The Checking and maintenance of this item shall be carried out in line with Maintenance Manual/Approved drawings (As Build Drawings)/Specifications of DFCCILs with its latest correction slips if any as per instruction of DFCCIL representative.

The price shall covers checking and maintenance of PTFE rod, bracket of neutral section, insulating rod, arching horns, length of skid' bulb, turnbuckles, condition of adjuster, earthing jumper, splices, lock nut pins& droppers etc.

The price shall also cover cleaning, adjustment, checking of tightness and replacement, if required at any stage.

The Joint Report/Maintenance sheets to be signed by Engineer in-charge and Contractor's representative which will be submitted by contractor to DFCCIL centralized office.

Sch.1 Sl.No.15	Checking & Maintenance of Portal boom, drop arms and fabricated Masts free from foreign body including Bird Nests

The Checking and maintenance against this item shall be carried out in line with Maintenance Manual/Approved drawings/Specifications of DFCCILs with its latest correction slips if any as per instruction of DFCCIL representative.

The price shall cover Checking & Maintenance of Portal boom, drop arms and fabricated masts free from Bird Nests and removal of bird nest as identified by foot patrolling staff / during other inspection. Requirement of power block will be jointly decided by the contractor and the sectional DFCCIL supervisor, Necessary power block will be obtained from authorized DFCCIL's representative and no extra payment will be made for this removal of bird nests under Power block.

Sch.1 Sl.No.16	Trimming of tree branches to maintain minimum 5 to 6 meter clearance from OHE

The price shall cover trimming of tree branches as identified by foot patrolling staff / during other inspection / checking. No part of the tree shall be nearer than 4 meters from the nearest live conductor. Requirement of power block will be jointly decided by the contractor and the sectional DFCCIL supervisor. Necessary power block will be obtained from authorized DFCCIL's representative only for trimming of tree branches. The accountal & disposal of trimmed braches will be the responsibility of DFCCIL department.

Sch.1 Sl.No.17	Erection of 25 kV overhead equipment as per requirement

The Price shall cover erection of 25kV overhead equipment's and fabrication of cantilever assembly of different size & tubes including catenary, contact, dropper, cut in insulator & jumper wires. The price shall also cover erection of all components and wires / conductors including contact wire, catenary wire, cut in insulator droppers, jumpers and terminating wire, if any but excluding small part steel work if any. The price shall also include erection of structure identification plates/number plates with bolt & nut with GI fasteners and also include replacing/attending the damaged /bent/faded plates by the contractor with the cost of cleaning & painting the setting distance of mast or structures.

The price shall cover erection of 25kV caution boards, 25 kV caution notice board and warning board in Hindi & English language wherever required with mild steel galvanized clamps, required washers and bolts & nuts etc. The price shall include GI fasteners with GI fixtures for erection of enameled number plates, contact height, rail level and location of emergency sockets on mast / structures. No additional payment will be made for manual stringing of conductor viz. catenary, contact wire etc.
The Joint Report/Maintenance sheets to be signed by Engineer in-charge and Contractor's representative which will be submitted by contractor to DFCCIL centralized office.

Sch.1 Sl. No. 18	Checking and compilation of hotspot of OHE using Thermo vision camera by a skilled Engineer.

The Checking and compilation of hotspot of OHE using Thermo vision camera by a skilled Engineer shall be carried out in line with Maintenance Manual/Approved drawings/Specifications of DFCCILs with its latest correction slips if any.

The job shall cover checking and compilation of the images of terminal connectors, jumpers, splices and other joints if any in OHE & bus bar, Connectors, SP, and SSP & TSS. The Thermo vision camera checking of TSS will be treated as checking of 1 TKM for measurement. Similarly SP/SSP will be treated as 0.25TKM for measurement. The measurement shall preferably be done during the period when electric trains are working in the section. The entire section including TSS to be covered once in 6 months.

Sch.1 Sl.No.19	Stenciling/Painting of rail level, implantation, MRL, ERL & location number etc. SED Parameters

The job shall cover checking the clearance of all over line structures before taking the stenciling work during the maintenance period of subject agreement and compare the values with the as erected drawings, if any difference are found shall inform to the DFCCIL official to take corrective action as required. It is to be done annually.

The job shall cover painting of OHE mast with Aluminum paint upto a height of 1 meter from the muff. Also the job shall cover painting of SED parameters on OHE mast / Structures such as ERL, MRL, implantation, symbols of emergency sockets etc., with black lettering on yellow back ground including erasing of old details by covering aluminum painting as advised by site supervisor if required. The job shall cover all costs toward required various sizes of paint brushes and labour etc.

The job shall also cover painting of Location number on OHE mast / Structures such as KM number & Location number etc., with black lettering on yellow back ground including erasing of old details by covering aluminium painting as advised by site supervisor if required. The job shall cover all costs toward required various sizes of paint brushes and labour etc. The paint and other consumables shall be arranged by Contrcator.

Sch.1 Sl.No.20	Painting of counter weight of ATD & guy rod assembly including marking of Y value.

The price shall cover painting of Counter Weight of ATD & Guy Rod Assembly including

marking of „Y" Value for 15°C, 35°C& 45°C in the ATD anchored MAST/Structure. Painting shall be with 2 coats of aluminum paint including stenciling of location number on counter weights as directed by DFCCIL"s Engineer-in charge of work. ISI mark good quality paint shall be used and the same to be supplied by the Contractor.

Sch.1 Sl.No.21	Checking and maintenance of Feeder Termination & AEC Termination

The job shall cover checking and maintenance of a 25KV feeder/return conductor (along or across track) annually made of a single all aluminum bare, hard drawn conductors 288 sq. mm ACSR zebra conductor. Job shall also cover checking of all components including insulators and replacement of insulators (covered separately in the schedule) and ferrule if required. The job shall also cover checking and maintenance all materials required for the termination of all aluminium 25KV feeder including Guy rod assembly, appropriate mast anchor fittings, adjuster, strain clamp and end fitting and splices as required. The job shall also cover cleaning the muffing of anchor block of Guy Rod.

Sch.1 Sl.No.22	Supply and erection of OHE Retro reflecting number plate including plate fixing.

The price shall cover providing and fixing of OHE Retro reflecting number plate including plate fixing with all complete accessories.

Sch.1 Sl. No. 23	Supply and erection of caution board.

The price shall cover providing and fixing of caution board including with all complete accessories.

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Sch.1 Sl. No. 24	Providing and replacing of DO Fuse at Auxiliary Transformer of 1 A/ 5A as per requirement.

The price shall cover the Providing and replacing of DO Fuse at Auxiliary Transformer of 1 A/ 5A as per requirement.

Sch.1 Sl. No. 25	Maintenance of Auxiliary Transformer at Station and ALH, EI and DH Locations

The job shall cover checking & maintenance of AT (Quarterly) as mentioned below,

A. Auxiliary Transformer (Quarterly)

1. Clean externally the tank, conservator, bushings.
2. Check oil level in conservator.
3. Check silica-gel breather. If silica-gel is pink, replace it with new dry silica-gel and recondition the old silica-gel. Makeup oil if required.
4. Check for proper condition and alignment of dropout fuse element and assembly.
5. Check and record arcing horn gap settings.

B. Auxiliary Transformer (Half yearly)

1. Do all the test as indicated in schedule A.
2. Measure and record insulation resistance of all windings to earth with 2.5 kV megger along with temperature of winding and ambient temperature.
3. Test Oil samples for BDV.
4. Check foundation and structure assembly for proper conditions and tightness.

C. Auxiliary Transformer (Yearly)

1. Do the entire test as indicated in schedule A& B.
2. Test oil sample for acidity.

3. Measure and record earth resistance. Take remedial action if earth resistance is above the prescribed limits.

The Schedule of Maintenance to be followed as per DFCCIL Maintenance Manual.

Sch.1 Sl. No. 26	Checking and maintenance of 25 kV OHE feeder & AEC conductors excluding termination arrangement

The Checking and maintenance of 25kV OHE Feeder & AEC Conductors shall be carried out in line with Maintenance Manual/Approved drawings (As Build drawings)/Specifications of DFCCIL with its latest correction slips, if any.

Schedule 02: Emergency & Other maintenance activities

Sch.2 Sl .No. 01	Loading, unloading of DFCCIL supplied material to places directed by Engineer in-charge (i.e. From station to tower wagon, station to station etc.) (applicable for material more than 2 MT)

Price shall cover loading and unloading activity for transportation of all DFCCIL supplied materials for execution of the work and dismantled materials to consignee's depot. Also safe handling and shifting of DFCCIL materials during the breakdown. Price shall also cover collection of materials from store depot, loading and unloading of materials from depot to site and site to depot.

Sch. 2 Sl.No.02	Erection of Catenary wire splicing or Contact wire splicing.

The Checking and maintenance against this item shall be carried out in line with Maintenance Manual/Approved drawings (As Build Drawings) /Specifications of DFCCILs with its latest correction slips if any as per instruction of DFCCIL representative.

Price shall cover erection of catenary wire splicing with fasteners to splice existing OHE with newly laid OHE and adjustment there of as per requirement.

The Joint Report/Maintenance sheets to be signed by Engineer in-charge and Contractor's representative which will be submitted by contractor to DFCCIL centralized office.

Sch. 2 Sl. No. 03	Replacement / Re-erection of various types of insulators

The job shall cover replacement of insulators of various types with all components required for the insulators assembly including small parts steel work with bolts & nuts etc. as per the relevant DFCCIL drawings. The insulators are replaced when they are heavily flashed, petticoat broken, breakage of insulator etc. Insulator and SPS will be supplied by DFCCIL.

Sch. 2 Sl.No.04	Breakdown attention by a gang for restoration of 25 kV OHE during accidents/ unusual occurrence for checking OHE Parameters - (one gang consisting of 7 staff)

The price shall cover Supply of Man Power for restoration of 2x25kV OHE during Break down round the clock on hourly basis for all restoration of 2x25kV OHE during Break down. The Contractor is required to deploy one Supervisor, Three Technicians and Three Helpers who were conversant with rules and procedures of working on 2x25 kV A.C. Traction Overhead Equipment installations and medically fit for DFCCIL's working circumstances.

The Joint Report/Maintenance sheets to be signed by Engineer in-charge and Contractor's

representative which will be submitted by contractor to DFCCIL centralized office.

The price against this item is applicable for Supply of Man Power on hourly basis consisting of the above staff in one Gang.

Note: The contractor should deploy additional gangs as per the requirement of DFCCIL for restoration of 2x25kV OHE during Break down.

Sch. 2 Sl. No. 05	Erection of traction masts & portal other than boom

The materials required in this part of work shall be supplied by DFCCIL.

Erection of Mast: The job shall cover manual erection, alignment and setting before grouting of individual traction mast including dwarf mast. Erection of traction mast also includes painting with cold galvanizing paint in rusted area if any in the mast supplied by Railways. The masts released may also have to be reused.

For erection, the contractor can use his own road crane duly transporting the structures to the site. Transporting and Crane price are covered separately in the schedule. Temporary bonding of structure by means of 2 nos. of 8 SWG wire shall be done before boom erection, where proper bonding arrangement is not available.

Erection of Portal other than boom: The job shall cover erection, alignment and setting before grouting, wherever required, the portals, gantries, 2/3 tracks cantilever structures. The job shall also include erection of galvanized bolts, nuts washers etc. Wherever required as per approved designs and drawings. In case of road approach is not available, the transportation of mast by Tower wagon may be allowed by the DFCCIL.

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Sch. 2 Sl. No. 06	Transfer of OHE equipment from one mast or support to another.

The job 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 or support and consequent adjustment to overhead equipment required such as re-spacing of droppers, levelling etc. The foundation and steel work and bracket assembly for the new mast or structure will be paid for under appropriate items

Schedule -03 Foundation item

Sch. 3 Sl. No. 01	Casting of all types of foundation (The rate includes supply of the material- ballast, sand, cement, mixture & reinforcement etc.)

There are 2 types of foundation in DFCCIL in which RDSO foundation PCC type and Circular foundation RCC type. The volume of RDSO type foundation is higher than circular type foundations which are reinforced. There will be liberty with the contractor to cast any type of foundation. The applicable volumes and drawings shall be provided in the drawing as part of CSD. In case the contractor opts for circular foundation the required steel for the reinforcement shall be supplied by the DFCCIL.

The RDSO type foundation shall be cast in M-15 grade and the Circular type foundation shall be cast in M-20 grade. The price shall cover the supply of the cement, sand, water, ballast, mixing, curing, arrangement of scroll, grouting and muffing the mast with required shuttering as per maintenance manual.

The Joint Report/Maintenance sheets to be signed by Engineer in-charge and Contractor's representative which will be submitted by contractor to DFCCIL centralized office.

Schedule -04 Additional OHE work

Sch. 4 Sl. No. 01	Supply and maintenance of petrol operated telescopic pole pruner model no. HT 75 of STIHL or equivalent model of FISKAR make for tree trimming purpose

The price shall cover for supply and maintenance of petrol operated telescopic pole pruner model HT.75 of STIHL make or equivalent model of FISKAR make 5 nos. per depot/TW. Price includes its necessary fueling, availability of good conditioned saw/blade and one year maintenance of said machine.

Sch. 4 Sl. No. 02	Supply and fixing of Splicing Clamp Assembly For 150 sq. mm Contact Wire (Crocodile Type)

The price shall cover for Supply and fixing of Splicing Clamp Assembly for 150 sq. mm Contact Wire (Crocodile Type) including all accessories.

Sch. 4 Sl. No. 03	Supply and fixing Catenary Wire Splice 125/129 Sq. mm.

The price shall cover for Supply and fixing Catenary Wire Splice 125/129 Sq. mm including all accessories.

Sch. 4 Sl. No. 04	Supply and fixing Feeder wire splice for 288 sq. mm AAAC conductor.

The price shall cover for Supply and fixing Feeder wire splice for 288 sq. mm AAAC conductor including all accessories.

Sch. 4 Sl. No. 05	Supply and fixing Aerial Earth wire splice for 93.3 sq. mm ACSR conductor.

The price shall cover for Supply and fixing Aerial Earth wire splice for 93.3 sq. mm ACSR conductor including all accessories.

Sch. 4 Sl. No. 06	Erection of Cantilevers

The price shall cover on a flat rate basis for erection of any bracket assembly on a traction mast or support or drop arm and shall include those on high/low 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 erection of all components including galvanized steel tube, dropper wires and small parts steel work complete with bolts and nuts etc., if any. The price shall cover erection of all components including solid core insulators and dropper wires, small parts steel work, if any. However, this does not include the anti-creep arrangement at masts/ structures.

Sch. 4 Sl. No. 07	Erection of material for solid core cut in insulator

The price shall cover for Erection of material for solid core cut in insulator as per DFCCIL drawing.

Sch. 4 Sl. No. 8	Erection of material for suspension insulator

The price shall cover for Erection of material for suspension insulator as per DFCCIL drawing.

Sch. 4 Sl. No. 9	Erection of structure bonds.

The price shall cover for Erection of structure bonds as per DFCCIL drawing.

Sch. 4 Sl. No. 10	Supply of material for single earth electrode.

The price shall cover for Supply of material for single earth electrode as per DFCCIL drawing. The price shall cover supply of an earth electrode in all types of soil except hard soil/soft rock. The price shall cover the provision of a protective concrete box with removable cover as shown in the drawing. The price shall include the testing of earth value and painting the particulars on the box.

Sch. 4 Sl. No. 11	Erection of material for single earth electrode.

The price shall cover for erection of material for single earth electrode as per DFCCIL drawing. The price shall cover erection of an earth electrode in all types of soil except hard soil/soft rock. The price shall cover the provision of a protective concrete box with removable cover as shown in the drawing. The price shall include the testing of earth value and painting the particulars on the box.

Sch. 4 Sl. No. 12	Slewing of OHE.

The price shall cover for Slewing of OHE as per DFCCIL requirement in all respect & site condition.

Sch. 4 Sl. No. 13	Preparation of design and drawing for overhead equipment and verification as per plan.

The price shall cover for Preparation of design and drawing for overhead equipment and verification as per plan for DFCCIL requirement. The price shall cover preparation and submission of overhead equipment plans indicating location of structures in stages, and preparation of all drawings and designs relevant to the tendered works and required to be finalized by the Contractor in the format approved by Engineer along with 3 paper copies of the drawings for approval. The price shall include the following:

(i) Preparation and submission of pegging plans layout plans incorporating span, height, chainage, curves, gradients, type of masts/portals, foundations, ATD locations, stagger, location of cut-in-insulators, signal locations etc., making minor modifications with the approval of the Employer/Engineer to the layout of the structures and overhead equipment, if necessary.

(ii) Preparation and submission 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

(iv) Preparation and submission of long section drawings of overhead equipment where such drawings are required including detailed study of over line structures such as foot over bridges, road over bridges, track over bridges, overhead Pipelines etc. for maintaining the specified height of contact wire and requisite clearances.

(v) Preparation and submission 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 LT Supply Transformer stations, design and drawings of OHE structures for bridges etc.

(vi) Preparation and Supply of Bonding Plan drawings and buried rail earthing drawings.
(vii) Design, preparation and submission of switching station drawings including survey, investigation of soil bearing pressure from National Test House or at any other laboratory approved by the Engineer-in-charge, 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 Employer/Engineer, suitable concrete plinths for equipment and drawings for equipment's, components, fitting and materials supplied by the Contractor. The price shall include supply of six number of copies of all drawings, including completion drawings.
(viii) Preparation, supply and fixing of Sectioning / Schematic / TSWR diagram boards for stations / Cabins / SWS / RCC/ Section Controller and 25 KV AC Traction Station Working Rule instructions including supply & fixing of shock treatment chart etc as directed and approved by Engineer.
(ix) Supply of soft copy (in Auto Cad drg. format) and requisite eight (8) number of hard copies, one copy on non-tearable tracing (Engineering matte film of 75 micron or more thickness) of all drawings including completion/approved/as erected drawings for OHE and Switching stations. In addition one copy in RTF to be given of all completion/As erected drawings. Soft copy to be given in DVD(R).

Sch. 4 Sl. No. 14	Erection of rolled / fabricated and galvanized traction mast, TTC, Portals, AT Mast, Feeder Mast, bridge mast etc.

The Price shall cover erection of fabricated galvanized OHE structure with necessary components. The prices shall also cover the cost of erection, alignment and setting before grouting of individual traction masts and main masts of switching station, dwarf Masts, Portals, TTC and masts for LT supply transformer stations whether rolled or fabricated including those for head spans. These structures will be grouted in already cast foundation. The contractor shall carry out the erection in presence of authorized Railway representative.

Sch. 4 Sl. No. 15	Erection of material for Guy rod/Guy Wire assembly

The price shall cover for Erection of material for Guy rod/Guy Wire assembly as per DFCCIL drawings. The price shall cover erection of a guy rod assembly of various lengths for traction masts/Portals/TTC, feeder line towers or supports etc. complete with mast guy rod fittings, guy rod with adjustments and part/s to be grouted in the anchor block.

Sch. 4 Sl. No. 16	Erection of large span wire

. The price shall cover erection of all components including large span wire, adjusters, terminal fittings and mast attachments required to attach a large span wire or a Head span wire or Cross span wire or Steady span wire or a Support span wire for supporting contact wire only, at both ends, to traction masts/structures or special brackets, solid core insulators. The price shall cover erection of all components including mounting arrangements, span wire, 9 Ton solid core insulators and all small part steel work if any. The price shall cover for Erection of large span wire as per DFCCIL drawings

Sch. 4 Sl. No. 17	Erection of material for Regulating Equipment (ATD)

The price shall cover for Erection of material for Regulating Equipment (ATD) as per DFCCIL drawings. The price shall cover supply and erection of a 3-Pulley type counter weight assembly suitable for 2400 kgf tension (3:1 ratio) as per the Employer's requirement including 9 ton adjuster with double strap assembly and normal/anti-theft guide tube assembly, the supply of regulating equipment, provision of adequate length pipe on Hex-Tie rod at crossovers and short tension length ATDs wherever required and stainless steel wire rope required for the regulating equipment, anti-slipping device assembly, forged fittings (mast

bracket clevis 3071-1, clevis pin 3072) and small part steel work, if any. Wherever applicable, fittings shall be forged type The price shall also cover adjustment of the entire regulating equipment.

Sch. 4 Sl. No. 18	Erection of Material for termination of single/double conductor of overhead equipment

The price shall cover for Erection of Material for termination of single/double conductor of overhead equipment as per DFCCIL drawings. The price shall cover erection all material necessary for the yoked termination of two overhead equipment conductors on a traction mast or structure, including all SPS such as appropriate mast anchor fittings, clevis assembly , two adjusters, ending clamps for catenary and contact wires, anchor double strap assembly, equalizing/compensating plates, and double eye distance rods (if required) and fittings and terminating wire ,if any including 9-ton insulators assembly The price shall also cover erection of all materials with 9 ton insulator.

Sch. 4 Sl. No. 19	Erection of Anti creep wire

The price shall cover erection of all materials for an anti-creep including adjusters, galvanized steel wire, mast anchor fittings at its terminations on either side of structures, ending clamps, fittings and including 9- ton insulators assembly conforming to DFCCIL specification.
The price shall cover erection of all materials including 9- ton insulator assembly with small parts steel work, if any.

Sch. 4 Sl. No. 20	Erection of Section Insulator assembly and associate Fittings & fasteners.

The price shall cover erection and adjustment of all components required for a standard section insulator assembly (serving both the overhead equipment conductors) including 9 ton insulator, bar insulator special droppers etc. for supporting the equipment and all terminal fittings for conductors and the section insulator assembly, dropper wires as required as per DFCCIL drawings.

Sch. 4 Sl. No. 21	Erection of PTFE neutral section assembly and associate Fittings & fasteners.

The price shall cover erection and adjustment of PTFE type short neutral sections assembly as per latest DFCCIL specification. The price shall also cover supply and erection of, all fittings for contact and catenary wire as necessary including supply of required dropper wire.

Sch. 4 Sl. No. 22	Erection of 25 kV DP Isolator with all material as required.

The price shall cover erection of a double pole isolator 1250/1600 Amp capacity complete with mounting base, operating rod, operating rod guides required for the operation of the isolator, jumper connectors. The price shall also cover erection of aluminium- copper strips, a pad–lock, integral lock and interlock if required, a number plate of approved design for each isolator, erection of small parts steel works for support of isolators and for support of operating rods on gantries masts including erection of 25 KV Solid Core Post and Operating rod insulator.

The price shall also cover erection of an earth contact assembly in the isolator. The price shall cover the cost of supply and erection of 3 x 25 mm copper connections between earth contact assembly and the structures. The price shall cover erection of an interlocking mechanism on an isolator along with small parts steel if any, to permit working of two or more isolators. The price excludes provision of pipe electrode earthing.

Sch. 4 Sl. No. 23	Erection of 25 kV SP Isolator with all material as required.

The prices shall cover erection of isolator switches of approved make 1250 Amp capacity, complete with arcing horns, operating rods, operating rod guides, and mounting base including erection of 25 KV Solid

Core Post and Operating rod insulator.
The price shall also cover erection of a number plate of approved design and erection of small parts steel work complete with bolts and nuts etc. for support of each isolator and for support of operating rods on gantries/ masts, jumper connectors and post insulator to support jumper. The price shall also cover erection of pad lock, integral lock and interlock if required. The price excludes provision of pipe electrode earthing.

Sch. 4 Sl. No. 24	Dismantling of traction structure, Portals, TTC and associate SPS by cutting

The price shall cover on flat rate basis dismantling of OHE structures or portals by cutting the same below ground/formation level to the required depth and handing over the same to the nominated person at nominated place as directed by Engineer. The price shall also include dismantling of drop arms and booms of the portal and their all-associated fittings like SPS, bonds etc. Crane charges for the purpose are included in the flat rate

Sch. 4 Sl. No. 25	Supply and Erection of Retro-reflective type boards- 25KV AC OHE danger board/danger board for height gauge, public, staff caution board and special boards.

The payment under this item shall cover supply and erection of **Retro-reflective type boards-** 25 KV AC danger board, danger board for height gauge, public/ staff caution boards **and special boards** on uniform basis as decided by the engineer. Purchaser will advise the requirement of the various types of boards and location to contractor. The above payment shall also include supply of necessary clamps, nuts, and bolts etc., required for the erection of the boards. Caution boards shall be made in bi/Tri-lingual languages i.e Hindi/English and vernacular language, where ever required and same will be advised to contractor. The various types of above boards to be supplied shall be as per the standard size and standard specification of Railways/DFCCIL.
This item shall also cover special caution boards to be provided on all departmental vehicles, track machines, platform shelters as per Railway board letter No. 2009/RE/161/4 FTS-748 dtd.26-08-14 as per directions of the engineer.

Schedule-05 Additional OHE items

Sch. 5 Sl. No. 01	Supply of spares, tools & equipment's required during maintenance & break downs for a period of 2 years- As per Appendix-A

The List of Items to be required as in spare, tools, equipment is mention in the Schedule of work. The Item should be RDSO/CORE approved or as per DFCCIL specification. The Item shall be provided as per instruction & requirement of DFCCIL Representative in day to day maintenance work.

PART-B PSI Maintenance Activity

Schedule 6 Maintenance of Traction Sub Stations

Item no. 01- Monthly Maintenance of 132/ 220 kV/55kV, 60/84/100 MVA Traction Power Transformer (Scott) and 220/132 kV,150MVA Power transformer..

The job shall cover checking & Monthly maintenance of 132/ 220 kV/55kV, 60/84/100 MVA Traction Power Transformer (Scott0 and 220/132 kV ,150 MVA Power transformer shall be carried out in line with Maintenance Manual/Approved drawings (As Build Drawings)/Specifications of DFCCIL with its latest correction slips, if any.
The Joint Report/Maintenance sheets to be signed by Engineer in-charge and Contractor's representative which will be submitted by contractor to DFCCIL centralized office.

Item no. 02-Half Yearly Maintenance of 132/ 220 kV/55kV, 60/84/100 MVA Traction Power Transformer and 220/132 kV, 150 MVA Power transformer

The job shall cover checking & Half Yearly maintenance of 132/ 220 kV/55kV, 60/84/100 MVA Traction Power Transformer and 220/132 kV, 150 MVA Power transformer shall be carried out in line with Maintenance Manual/Approved drawings(As Build Drawings)/Specifications of DFCCIL with its latest correction slips, if any.

The Joint Report/Maintenance sheets to be signed by Engineer in-charge and Contractor's representative which will be submitted by contractor to DFCCIL centralized office.

Item no. 03 -Yearly Maintenance of 132/ 220 kV/55kV, 60/84/100 MVA Traction Power Transformer & and 220/132 kV, 150 MVA Power transformer

The job shall cover checking & Yearly maintenance of 132/ 220 kV/55kV, 60/84/100 MVA Traction Power Transformer and 220/132 kV, 150 MVA Power transformer shall be carried out in line with Maintenance Manual/Approved drawings (As Build Drawings)/Specifications of DFCCIL with its latest correction slips, if any.

The Joint Report/Maintenance sheets to be signed by Engineer in-charge and Contractor's representative which will be submitted by contractor to DFCCIL centralized office.

Item no. 04 - Monthly Maintenance of 132/220kV TP SF-6 Circuit Breaker.

The job shall cover checking & Monthly maintenance of 132/220kV TP SF-6 Circuit Breaker shall be carried out in line with Maintenance Manual/Approved drawings (As Build Drawings)/Specifications of DFCCIL with its latest correction slips, if any.

The Joint Report/Maintenance sheets to be signed by Engineer in-charge and Contractor's representative which will be submitted by contractor to DFCCIL centralized office.

Item no. 05 - Half Yearly Maintenance of 132/220kV TP SF-6 Circuit Breaker

The job shall cover checking & Half Yearly maintenance of 132/220kV TP SF-6 Circuit Breaker shall be carried out in line with Maintenance Manual/Approved drawings (As Build Drawings)/Specifications of DFCCIL with its latest correction slips, if any. The Joint Report/Maintenance sheets to be signed by Engineer in-charge and Contractor'srepresentative which will be submitted by contractor to DFCCIL centralized office.

Item no. 06 - Yearly Maintenance of 132 kV/220kV TP SF-6 Circuit Breaker

The job shall cover checking & Yearly maintenance of 132/220kV TP SF-6 Circuit Breaker shall be carried out in line with Maintenance Manual/Approved drawings (As Build Drawings)/Specifications of DFCCIL with its latest correction slips, if any.

The Joint Report/Maintenance sheets to be signed by Engineer in-charge and Contractor's representative which will be submitted by contractor to DFCCIL centralized office.

Item no. 07 - Three Yearly Maintenance of 132/220kV TP SF-6 Circuit Breaker

The job shall cover checking & Three Yearly maintenance of 132/220kV TP SF-6 Circuit Breaker shall be carried out in line with Maintenance Manual/Approved drawings (As Build Drawings)/Specifications of DFCCIL with its latest correction slips, if any. The Joint Report/Maintenance sheets to be signed by Engineer in-charge and Contractor's representative which will be submitted by contractor to DFCCIL centralized office.

Item no. 08 - Monthly Maintenance of 132/220kV Current Transformer

The job shall cover checking & Monthly maintenance of 132/220kV Current Transformer shall be carried out in line with Maintenance Manual/Approved drawings (As Build Drawings)/Specifications of DFCCIL with its latest correction slips, if any.
The Joint Report/Maintenance sheets to be signed by Engineer in-charge and Contractor's representative which will be submitted by contractor to DFCCIL centralized office.

Item no. 09 - Half Yearly Maintenance of 132/220kV Current Transformer

The job shall cover checking & Half Yearly maintenance of 132/220kV Current Transformer shall be carried out in line with Maintenance Manual/Approved drawings (As Build Drawings)/Specifications of DFCCIL with its latest correction slips, if any.
The Joint Report/Maintenance sheets to be signed by Engineer in-charge and Contractor's representative which will be submitted by contractor to DFCCIL centralized office.

Item no. 10 - Yearly Maintenance of 132/220kV Current Transformer

The job shall cover checking & Yearly maintenance of 132/220kV Current Transformer shall be carried out in line with Maintenance Manual/Approved drawings (As Build Drawings)/Specifications of DFCCIL with its latest correction slips, if any.
The Joint Report/Maintenance sheets to be signed by Engineer in-charge and Contractor's representative which will be submitted by contractor to DFCCIL centralized office.

Item no. 11 - Three Yearly Maintenance of 132/220kV Current Transformer

The job shall cover checking & Three Yearly maintenance of 132/220kV Current Transformer shall be carried out in line with Maintenance Manual/Approved drawings (As Build Drawings)/Specifications of DFCCIL with its latest correction slips, if any.
The Joint Report/Maintenance sheets to be signed by Engineer in-charge and Contractor's representative which will be submitted by contractor to DFCCIL centralized office.

Item no. 12 - Half Yearly Maintenance of 132/220kV Potential Transformer

The job shall cover checking & Half Yearly maintenance of 132/220kV Potential Transformer shall be carried out in line with Maintenance Manual/Approved drawings (As Build Drawings)/Specifications of DFCCIL with its latest correction slips, if any.
The Joint Report/Maintenance sheets to be signed by Engineer in-charge and Contractor's representative which will be submitted by contractor to DFCCIL centralized office.

Item no. 13 – Yearly Maintenance of 132/220kV Potential Transformer

The job shall cover checking & Half Yearly maintenance of 132/220kV Potential Transformer shall be carried out in line with Maintenance Manual/Approved drawings (As Build Drawings)/Specifications of DFCCIL with its latest correction slips, if any.
The Joint Report/Maintenance sheets to be signed by Engineer in-charge and Contractor's representative which will be submitted by contractor to DFCCIL centralized office.
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Item no. 14 – Monthly Maintenance of 120/198 kV Lightning Arrester

The job shall cover checking & Monthly maintenance of 120/198 kV Lightning Arrester shall be

carried out in line with Maintenance Manual/Approved drawings (As Build Drawings)/Specifications of DFCCIL with its latest correction slips, if any.
The Joint Report/Maintenance sheets to be signed by Engineer in-charge and Contractor's representative which will be submitted by contractor to DFCCIL centralized office.

Item no. 15 – Quarterly Maintenance of 120/198 kV Lightning Arrester

The job shall cover checking & Quarterly maintenance of 120/198 kV Lightning Arrester shall be carried out in line with Maintenance Manual/Approved drawings (As Build Drawings)/Specifications of DFCCIL with its latest correction slips, if any.
The Joint Report/Maintenance sheets to be signed by Engineer in-charge and Contractor's representative which will be submitted by contractor to DFCCIL centralized office.

Item no. 16 – Half Yearly Maintenance of 120/198 kV Lightning Arrester

The job shall cover checking & Half Yearly maintenance of 120/198 kV Lightning Arrester shall be carried out in line with Maintenance Manual/Approved drawings (As Build Drawings)/Specifications of DFCCIL with its latest correction slips, if any.
The Joint Report/Maintenance sheets to be signed by Engineer in-charge and Contractor's representative which will be submitted by contractor to DFCCIL centralized office.

Item no. 17 – Yearly Maintenance of 120/198 kV Lightning Arrester

The job shall cover checking & Yearly maintenance of 120/198 kV Lightning Arrester shall be carried out in line with Maintenance Manual/Approved drawings (As Build Drawings)/Specifications of DFCCIL with its latest correction slips, if any.
The Joint Report/Maintenance sheets to be signed by Engineer in-charge and Contractor's representative which will be submitted by contractor to DFCCIL centralized office.

Item no. 18 – Monthly Maintenance of 132/220kV TP Motorized Isolator with or without earthing heel.

The job shall cover checking & Monthly maintenance of 132/220kV TP Motorized Isolator shall be carried out in line with Maintenance Manual/Approved drawings (As Build Drawings)/Specifications of DFCCIL with its latest correction slips, if any.
The Joint Report/Maintenance sheets to be signed by Engineer in-charge and Contractor's representative which will be submitted by contractor to DFCCIL centralized office.

Item no. 19 – Half Yearly Maintenance of 132/220kV TP Motorized Isolator with or without earthing heel

The job shall cover checking & Half Yearly maintenance of 132/220kV TP Motorized Isolator shall be carried out in line with Maintenance Manual/Approved drawings (As Build Drawings)/Specifications of DFCCIL with its latest correction slips, if any.
The Joint Report/Maintenance sheets to be signed by Engineer in-charge and Contractor's representative which will be submitted by contractor to DFCCIL centralized office.

Item no. 20 – Yearly Maintenance of 132/220kV TP Motorized Isolator with or without earthing heel

The job shall cover checking & Yearly maintenance of 132/220kV TP Motorized Isolator shall be carried out in line with Maintenance Manual/Approved drawings (As Build Drawings)/Specifications of DFCCIL with its latest correction slips, if any.

The Joint Report/Maintenance sheets to be signed by Engineer in-charge and Contractor's representative which will be submitted by contractor to DFCCIL centralized office.

Item no. 21 – Monthly Maintenance of 66/25 kV DP Circuit breaker

The job shall cover checking & Monthly maintenance of 66/25 kV DP Circuit breaker shall be carried out in line with Maintenance Manual/Approved drawings (As Build Drawings)/Specifications of DFCCIL with its latest correction slips, if any.

Item no. 22 – Half yearly Maintenance of 66/25 kV DP Circuit breaker

The job shall cover checking & half Yearly maintenance of 66/25 kV DP Circuit breaker shall be carried out in line with Maintenance Manual/Approved drawings (As Build Drawings)/Specifications of DFCCIL with its latest correction slips, if any.

Item no. 23 – Yearly Maintenance of 66/25 kV DP Circuit breaker

The job shall cover checking & yearly maintenance of 66/25 kV DP Circuit breaker shall be carried out in line with Maintenance Manual/Approved drawings (As Build Drawings)/Specifications of DFCCIL with its latest correction slips, if any.

Item no. 24 – Three yearly Maintenance of 66/25 kV DP Circuit breaker

The job shall cover checking & three yearly maintenance of 66/25 kV DP Circuit breaker shall be carried out in line with Maintenance Manual/Approved drawings (As Build Drawings)/Specifications of DFCCIL with its latest correction slips, if any. The Joint Report/Maintenance sheets to be signed by Engineer in-charge and Contractor's representative which will be submitted by contractor to DFCCIL centralized office.

Item no. 25 – Monthly maintenance of 25 kV DP Motorized Isolator without earthing heel

The job shall cover checking & monthly maintenance of 25 kV Motorized Isolator without earthing heel shall be carried out in line with Maintenance Manual/Approved drawings (As Build Drawings)/Specifications of DFCCIL with its latest correction slips, if any.
The Joint Report/Maintenance sheets to be signed by Engineer in-charge and Contractor's representative which will be submitted by contractor to DFCCIL centralized office.

Item no. 26 – half Yearly Maintenance of 25 kV DP Motorized Isolator without earthing heel

The job shall cover checking & Half Yearly maintenance of 25 kV DP Motorized Isolator without earthing heel shall becarried out in line with Maintenance Manual/Approved drawings (As Build Drawings)/Specifications of DFCCIL with its latest correction slips, if any.
The Joint Report/Maintenance sheets to be signed by Engineer in-charge and Contractor's representative which will be submitted by contractor to DFCCIL centralized office.

Item no. 27 – Yearly Maintenance of 25 kV DP Motorized Isolator without earthing heel

The job shall cover checking & yearly maintenance of 25 kV DP Motorized Isolator without earthing heel shallbe carried out in line with Maintenance Manual/Approved drawings (As Build Drawings)/Specifications of DFCCIL with its latest correction slips, if any.

The Joint Report/Maintenance sheets to be signed by Engineer in-charge and Contractor's representative which will be submitted by contractor to DFCCIL centralized office.

Item no. 28 – Monthly Maintenance of 42/ 60 kV Lightning Arrester

The job shall cover checking & Monthly maintenance of 42/ 60 kV Lightning Arrester shall be carried out in line with Maintenance Manual/Approved drawings (As Build Drawings)/Specifications of DFCCIL with its latest correction slips, if any.
The Joint Report/Maintenance sheets to be signed by Engineer in-charge and Contractor's representative which will be submitted by contractor to DFCCIL centralized office.

Item no. 29 – Quarterly Maintenance of 42/60 kV Lightning Arrester

The job shall cover checking & Quarterly maintenance of 42/60 kV Lightning Arrester shall be carried out in line with Maintenance Manual/Approved drawings (As Build Drawings)/Specifications of DFCCIL with its latest correction slips, if any.
The Joint Report/Maintenance sheets to be signed by Engineer in-charge and Contractor's representative which will be submitted by contractor to DFCCIL centralized office.

Item no. 30 – Half Yearly Maintenance of 42/60 kV Lightning Arrester

The job shall cover checking & Half Yearly maintenance of 42/ 60 kV Lightning Arrester shall be carried out in line with Maintenance Manual/Approved drawings (As Build Drawings)/Specifications of DFCCIL with its latest correction slips, if any.
The Joint Report/Maintenance sheets to be signed by Engineer in-charge and Contractor's representative which will be submitted by contractor to DFCCIL centralized office.

Item no. 31 – Yearly Maintenance of 42/ 60 kV Lightning Arrester

The job shall cover checking & Yearly maintenance of 42/ 60 kV Lightning Arrester shall be carried out in line with Maintenance Manual/Approved drawings (As Build Drawings)/Specifications of DFCCIL with its latest correction slips, if any.
The Joint Report/Maintenance sheets to be signed by Engineer in-charge and Contractor's representative which will be submitted by contractor to DFCCIL centralized office.

Item no. 32 – Quarterly Maintenance of 25 kV Potential Transformer (Type-I)

The job shall cover checking & Quarterly Maintenance of 25 kV Potential Transformer (Type-I) shall be carried out in line with Maintenance Manual/Approved drawings (As Build Drawings)/Specifications of DFCCIL with its latest correction slips, if any.
The Joint Report/Maintenance sheets to be signed by Engineer in-charge and Contractor's representative which will be submitted by contractor to DFCCIL centralized office.

Item no. 33 - Half Yearly Maintenance of 25 kV Potential Transformer (Type-I)

The job shall cover checking & Half Yearly Maintenance of 25 kV Potential Transformer(Type-I) shall be carried out in line with Maintenance Manual/Approved drawings (As Build Drawings)/Specifications of DFCCIL with its latest correction slips, if any.
The Joint Report/Maintenance sheets to be signed by Engineer in-charge and Contractor's representative which will be submitted by contractor to DFCCIL centralized office.

Item no. 34 - Yearly Maintenance of 25 kV Potential Transformer (Type-I)

The job shall cover checking & Yearly Maintenance of 25 kV Potential Transformer (Type-I) shall be carried out in line with Maintenance Manual/Approved drawings (As Build Drawings)/Specifications of DFCCIL with its latest correction slips, if any.
The Joint Report/Maintenance sheets to be signed by Engineer in-charge and Contractor's representative which will be submitted by contractor to DFCCIL centralized office.

Item no. 35 – Quarterly Maintenance of 25 kV Potential Transformer (Type-II)

The job shall cover checking & Quarterly Maintenance of 25 kV Potential Transformer (Type-II) shall be carried out in line with Maintenance Manual/Approved drawings (As Build Drawings)/Specifications of DFCCIL with its latest correction slips, if any.
The Joint Report/Maintenance sheets to be signed by Engineer in-charge and Contractor's representative which will be submitted by contractor to DFCCIL centralized office.

Item no. 36 - Half Yearly Maintenance of 25 kV Potential Transformer (Type-II)

The job shall cover checking & Half Yearly Maintenance of 25 kV Potential Transformer(Type-II) shall be carried out in line with Maintenance Manual/Approved drawings (As Build Drawings)/Specifications of DFCCIL with its latest correction slips, if any.
The Joint Report/Maintenance sheets to be signed by Engineer in-charge and Contractor's representative which will be submitted by contractor to DFCCIL centralized office.

Item no. 37 - Yearly Maintenance of 25 kV Potential Transformer (Type-II)

The job shall cover checking & Yearly Maintenance of 25 kV Potential Transformer (Type-II) shall be carried out in line with Maintenance Manual/Approved drawings (As Build Drawings)/Specifications of DFCCIL with its latest correction slips, if any.
The Joint Report/Maintenance sheets to be signed by Engineer in-charge and Contractor's representative which will be submitted by contractor to DFCCIL centralized office.

Item no. 38 – Monthly Maintenance of 25 kV Current Transformer

The job shall cover checking & Monthly Maintenance of 25 kV Current Transformer at Auto Transformer shall be carried out in line with Maintenance Manual/Approved drawings (As Build Drawings)/Specifications of DFCCIL with its latest correction slips, if any.
The Joint Report/Maintenance sheets to be signed by Engineer in-charge and Contractor's representative which will be submitted by contractor to DFCCIL centralized office.

Item no. 39 – Half Yearly Maintenance of 25 kV Current Transformer

The job shall cover checking & Half Yearly Maintenance of 25 kV Current Transformer at Auto Transformer shall be carried out in line with Maintenance Manual/Approved drawings (As Build Drawings)/Specifications of DFCCIL with its latest correction slips, if any.
The Joint Report/Maintenance sheets to be signed by Engineer in-charge and Contractor's representative which will be submitted by contractor to DFCCIL centralized office.

Item no. 40 – Yearly Maintenance of 25 kV Current Transformer.

The job shall cover checking & Yearly Maintenance of 25 kV Current Transformer at Auto Transformer shall be carried out in line with Maintenance Manual/Approved drawings (As Build Drawings)/Specifications of DFCCIL with its latest correction slips, if any.
The Joint Report/Maintenance sheets to be signed by Engineer in-charge and Contractor's representative which will be submitted by contractor to DFCCIL centralized office.

Item no. 41 – Three Yearly Maintenance of 25 kV Current Transformer.

The job shall cover checking & Three Yearly Maintenance of 25 kV Current Transformer at Auto Transformer shall be carried out in line with Maintenance Manual/Approved drawings (As Build Drawings)/Specifications of DFCCIL with its latest correction slips, if any.
The Joint Report/Maintenance sheets to be signed by Engineer in-charge and Contractor's representative which will be submitted by contractor to DFCCIL centralized office.

Item no. 42 – Monthly Maintenance of 25 kV DP Vacuum Interrupter.

The job shall cover checking & Monthly Maintenance of 25 kV DP Vacuum Interrupter shall be carried out in line with Maintenance Manual/Approved drawings (As Build Drawings)/Specifications of DFCCIL with its latest correction slips, if any.
The Joint Report/Maintenance sheets to be signed by Engineer in-charge and Contractor's representative which will be submitted by contractor to DFCCIL centralized office.

Item no. 43 – Half Yearly Maintenance of 25 kV DP Vacuum Interrupter.

The job shall cover checking & Half Yearly Maintenance of 25 kV DP Circuit Breaker shall be carried out in line with Maintenance Manual/Approved drawings (As Build Drawings)/Specifications of DFCCIL with its latest correction slips, if any.
The Joint Report/Maintenance sheets to be signed by Engineer in-charge and Contractor's representative which will be submitted by contractor to DFCCIL centralized office.

Item no. 44 – Yearly Maintenance of 25 kV DP Vacuum Interrupter.

The job shall cover checking & Yearly Maintenance of 25 kV DP Vacuum Interrupter shall be carried out in line with Maintenance Manual/Approved drawings (As Build Drawings)/Specifications of DFCCILwith its latest correction slips, if any.
The Joint Report/Maintenance sheets to be signed by Engineer in-charge and Contractor's representative which will be submitted by contractor to DFCCIL centralized office.

Item no. 45 -Quarterly Maintenance of 25kV/240V, 100kVA LT Auxiliary Transformer–

The job shall cover checking & Quarterly Maintenance of 25kV/240V, 100kVA LT Auxiliary Transformer shall be carried out in line with Maintenance Manual/Approved drawings (As Build Drawings)/Specifications of DFCCIL with its latest correction slip, if any.

The Joint Report/Maintenance sheets to be signed by Engineer in-charge and Contractor's representative which will be submitted by contractor to DFCCIL centralized office.

Item no. 46 – Half Yearly Maintenance of 25kV/240V, 100kVA LT Auxiliary Transformer

The job shall cover checking & Half Yearly Maintenance of 25kV/240V, 100kVA LT Auxiliary Transformer shall be carried out in line with Maintenance Manual/Approved drawings (As Build Drawings)/Specifications of DFCCIL with its latest correction slips, if any.
The Joint Report/Maintenance sheets to be signed by Engineer in-charge and Contractor's

representative which will be submitted by contractor to DFCCIL centralized office.

Item no. 47 – Yearly Maintenance of 25kV/240V, 100kVA LT Auxiliary Transformer

The job shall cover checking & Half Yearly Maintenance of 25kV/240V, 100kVA LT Auxiliary Transformer shall be carried out in line with Maintenance Manual/Approved drawings (As Build Drawings)/Specifications of DFCCIL with its latest correction slip, if any.

The Joint Report/Maintenance sheets to be signed by Engineer in-charge and Contractor's representative which will be submitted by contractor to DFCCIL centralized office.

Item no. 48 -Quarterly Maintenance of 25kV/240V, 10kVA LT Auxiliary Transformer–

The job shall cover checking & Quarterly Maintenance of 25kV/240V, 10kVA LT Auxiliary Transformer shall be carried out in line with Maintenance Manual/Approved drawings (As Build Drawings)/Specifications of DFCCIL with its latest correction slip, if any.

The Joint Report/Maintenance sheets to be signed by Engineer in-charge and Contractor's representative which will be submitted by contractor to DFCCIL centralized office.

Item no. 49 – Half Yearly Maintenance of 25kV/240V, 10kVA LT Auxiliary Transformer

The job shall cover checking & Half Yearly Maintenance of 25kV/240V, 10kVA LT Auxiliary Transformer shall be carried out in line with Maintenance Manual/Approved drawings (As Build Drawings)/Specifications of DFCCIL with its latest correction slips, if any.

The Joint Report/Maintenance sheets to be signed by Engineer in-charge and Contractor's representative which will be submitted by contractor to DFCCIL centralized office.

Item no. 50 – Yearly Maintenance of 25kV/240V, 10kVA LT Auxiliary Transformer

The job shall cover checking & Half Yearly Maintenance of 25kV/240V, 100kVA LT Auxiliary Transformer shall be carried out in line with Maintenance Manual/Approved drawings (As Build Drawings)/Specifications of DFCCIL with its latest correction slip, if any.

The Joint Report/Maintenance sheets to be signed by Engineer in-charge and Contractor's representative which will be submitted by contractor to DFCCIL centralized office.

Item no. 51 – Quarterly maintenance of 2500 KVAR CAPACITOR BANK INCLUDING SERIES REACTOR

The job shall cover checking & Quarterly maintenance of 2500 KVAR Capacitor Bank including Series Reactor in line with SMI No. TI/MI/0026(07/03) or latest, DFCCIL Maintenance instructions if any.

1. Clean the dust over the insulators with the help of a damp cloth. In case of oily deposits carbon tetrachloride or any other suitable solvent may be used for cleaning of the insulators.
2. Observe for any dielectric leakage/seepage, if any leakage/seepage is found, rectify it.
3. Observe for any birdcages in and around the traction substations.

4. Observe physically for any abnormal temperature rise of the capacitor units.
5. Check and & set right the anti-bird nest.
6. Check duplicate earth connection& tightened.
7. Check the bus bar /jumper terminal connection tightness.

The Joint Report/Maintenance sheets to be signed by Engineer in-charge and Contractor's representative which will be submitted by contractor to DFCCIL centralized office.

Item no. 52 – Half yearly maintenance of 2500 KVAR CAPACITOR BANK INCLUDING SERIES REACTOR

The job shall cover checking & Half Yearly maintenance of 2500 KVAR Capacitor Bank including Series Reactor in line with RDSO SMI No. TI/MI/0026(07/03) or latest, DFCCIL Maintenance instructions if any.

During Half Yearly maintenance, the following checks also to be done along with the checksmentioned item no. 66 above):

1. Check the excessive tension on any of the connectors. Ease out the tension on the bushings, if required.
2. Observe for any rust collection/corrosion marks on the metallic parts and clean them.
3. Observe the current and voltage variations for the capacitor bank for at least 24 hours (Hourly readings of voltage and current for the capacitor bank should be recorded. If continuous recording facility is available, the same may be used).
4. Compare the records of measurements with last recorded readings. Measurements with Digital meters shall be ideal. Examine and execute the changes for the past few years.
5. Measured combined capacitance value of capacitor bank & record

The Joint Report/Maintenance sheets to be signed by Engineer in-charge and Contractor's representative which will be submitted by contractor to DFCCIL centralized office.

Item no. 53 – Yearly maintenance of 2500 KVAR CAPACITOR BANK INCLUDING SERIES REACTOR

The job shall cover checking & Yearly maintenance of 2500 KVAR Capacitor Bank including Series Reactor in line with RDSO SMI No. TI/MI/0026(07/03) or latest, DFCCIL Maintenance instructions if any.

During Yearly maintenance, the following checks also to be done along with the checks mentioned in Item n0. 65 & 66 above.

1. Ensure proper tightening of the fasteners and the connectors.
2. Measure the capacitance value and tan delta of the capacitor units at nearly the same ambient temperature. Compare with last measured values.
3. Measure the IR value & capacitance value of each capacitor unit & combined value of IR & Capacitance value.
4. Check and recorded the spill voltage.

The Joint Report/Maintenance sheets to be signed by Engineer in-charge and Contractor's representative which will be submitted by contractor to DFCCIL centralized office.

Item no. 54 – Quarterly Maintenance of 25 kV Neutral Current Transformer

The job shall cover checking & Quarterly Maintenance of 25 kV Neutral Current Transformer shall be carried out in line with Maintenance Manual/Approved drawings (As Build Drawings)/Specifications of DFCCIL with its latest correction slips, if any.

1. Clean externally the tank and bushing with dry cloth.
2. Check explosion vent diaphragm for any damage and presence of oil.
3. Check for any oil leakages at all joints, valves, plugs etc., rectify the leakage parts if found and restore the oil level.
4. Check all bonding & earthing connection.
5. Check and record oil level in bushes
6. Check terminal connectors.
7. Check for any other visual abnormality if appeared.

The Joint Report/Maintenance sheets to be signed by Engineer in-charge and Contractor's representative which will be submitted by contractor to DFCCIL centralized office.

Item no. 55 - Yearly Maintenance of 25 kV Neutral Current Transformer

The job shall cover checking & Yearly Maintenance of 25 kV Neutral Current Transformer shall be carried out in line with Maintenance Manual/Approved drawings (As Build Drawings)/Specifications of DFCCIL with its latest correction slips, if any.

1. Clean externally the tank bushing with dry cloth.
2. Check explosion vent diaphragm for any damage and presence of oil.
3. Check for any oil leakage.
4. Check all bonding & earth connection.
5. Record IR values with 2.5 kV megger.
6. Check and record oil level in the bush.
7. Check terminal connectors.

The Joint Report/Maintenance sheets to be signed by Engineer in-charge and Contractor's representative which will be submitted by contractor to DFCCIL centralized office.

Item no. 56 – Fortnightly battery & battery charger maintenance of TSS

The job shall cover checking & Fortnightly battery & battery charger maintenance of TSS shall be carried out in line with Maintenance Manual/Approved drawings (As Build Drawings)/Specifications of DFCCIL with its latest correction slips, if any.

The Joint Report/Maintenance sheets to be signed by Engineer in-charge and Contractor's representative which will be submitted by contractor to DFCCIL centralized office.

Item no. 57 – Yearly battery & battery charger maintenance of TSS

The job shall cover checking & Yearly battery & battery charger maintenance of TSS shall be carried out in line with Maintenance Manual/Approved drawings (As Build Drawings)/Specifications of DFCCIL with its latest correction slips, if any.

The Joint Report/Maintenance sheets to be signed by Engineer in-charge and Contractor's representative which will be submitted by contractor to DFCCIL centralized office.

Item no. 58 – Half Yearly maintenance of Earthing station

The job shall cover checking & Half Yearly maintenance of Earthing station shall be carried out in line with Maintenance Manual/Approved drawings (As Build Drawings)/Specifications of DFCCIL with its latest correction slips, if any.

The Joint Report/Maintenance sheets to be signed by Engineer in-charge and Contractor's representative which will be submitted by contractor to DFCCIL centralized

1. Check all bonding & earth connection.
2. Record Combined and individual Earth Resistance with Earth tester.
3. Stenciling of Earth Resistance values shall be done with date.

Item no. 59 – Yearly maintenance of Earthing station

The job shall cover checking & Yearly maintenance of Earthing station shall be carried out in line with Maintenance Manual/Approved drawings (As Build Drawings)/Specifications of DFCCIL with its latest correction slips, if any.

The Joint Report/Maintenance sheets to be signed by Engineer in-charge and Contractor's representative which will be submitted by contractor to DFCCIL centralized

1. Check all bonding & earth connection.
2. Record Combined and individual Earth Resistance with Earth tester.
3. Stenciling of Earth Resistance values shall be done with date.
1. Check all bonding & earth connection.
2. Record and individual Earth Resistance with Earth tester.
3. Stenciling of Earth Resistance values shall be done with date.

Item no. 60 – Yearly Buried Rail Connection

The price shall cover Yearly maintenance of Buried rail, connection with 400 sq. mm XLPE cable

1. Check all bonding & earth connection duly excavate.
2. Intactness of welding & Bonding Bolt needs to be ensured.
3. Painting of bond and welded joints.
4. If corroded, same shall be replaced or attended. (As per Schedule 03 item no. 16/17)
5. If earth value is below the prescribed value the same to be improved

Item no. 61 – Half Yearly Thermal Imaging of Equipment connector

The job shall cover Thermal Imaging of Equipment connectors as per directives of DFCCIL/RDSO instructions if any.

1. Thermal Imaging of Equipment connectors shall be done during loaded condition.
2. The Images shall be stored in Heat format. Necessary backup shall be made available in Depot systems for verifying on later date.
3. Thermal Imaging devices will be supplied by Railway.

4. Defects noticed during the check shall be escalated to depot in charge and as well as to DFCCIL officers and steps to be taken to attend the same at the earliest.

Item no. 62 – Yearly Maintenance of Earth Screen Conductor

The job shall cover checking & Yearly maintenance of Earth Screen Conductor

1. Tightness checking of earth flat and its accessories.
2. Visual checking of corrosion & strands cut if any.
3. Painting of earth flat and its accessories.

Item no. 63 – Yearly maintenance of Cable Trench Cleaning

The job shall cover checking & Yearly maintenance of Cable Trench Cleaning

1. Cleaning of cable trench and cables.
2. Painting of trench cover frame.
3. Repairing of minor damage of cable trench and its cover.

Item no. 64 – Reclamation of DCP (5kG, 10 kG & 25 kG),CO2 (9kG) & form type fire extinguisher.

The job shall cover Servicing & maintenance of,

1) Dry-chemical powder (DCP) type: 5, 10 Kg & 25Kgs.
2) CO2: 9 Kg.
3) Foam type Fire Extinguisher

Servicing of Fire extinguisher will be done once in quarter and replacement of dry chemical powder will be done once in 2 years. All accessories required for replacement to be arranged by the contractor. Details of servicing/replacement are to be stenciled on fire extinguisher.

Item no. 65 – Refilling of DCP (5kG, 10 kG & 25 kG), CO2(9kG) & foam type fire extinguisher.

The job shall cover refilling of,

1) Dry-chemical powder (DCP) type: 5, 10 Kg &25Kgs.
2) CO2: 9 Kg.
3) Foam type or any other type.

Details of refilling are to be stenciled on fire extinguisher.

Note: As the Contractor's each gang of staff is head quartered at respective TSS, the TSS yard shall be maintained vegetation free for which no additional payments are admissible.

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Schedule 7 SP/SSPs/ATS/PP Maintenance :

Item no.1 - Monthly Maintenance of 12/9/8 MVA Auto Transformer.

The job shall cover checking & Monthly Maintenance of 12/9/8 MVA Auto Transformer shall be carried out in line with Maintenance Manual/Approved drawings (As Build Drawings)/Specifications of DFCCIL with its latest correction slips, if any.

The Joint Report/Maintenance sheets to be signed by Engineer in-charge and Contractor's representative which will be submitted by contractor to DFCCIL centralized office.

Item no. 2 – Half Yearly Maintenance of 12/9/8 MVA Auto Transformers

The job shall cover checking & Half Yearly Maintenance of 12/9/8 MVA Auto Transformer shall be carriedout in line with Maintenance Manual/Approved drawings (As Build Drawings)/Specifications of DFCCIL with its latest correction slips, if any.

The Joint Report/Maintenance sheets to be signed by Engineer in-charge and Contractor's representative which will be submitted by contractor to DFCCIL centralized office.

Item no. 3 – Yearly Maintenance of 12/9/8 MVA Auto Transformers

The job shall cover checking & Yearly Maintenance of 12/9/8 MVA Auto Transformer shall be carried out in line with Maintenance Manual/Approved drawings (As Build Drawings)/Specifications of DFCCILwith its latest correction slips, if any.

The Joint Report/Maintenance sheets to be signed by Engineer in-charge and Contractor's representative which will be submitted by contractor to DFCCIL centralized office.

Item no. 4 – Monthly Maintenance of 25 kV DP Interrupter

The job shall cover checking & Monthly Maintenance of 25 kV DP Interrupter shall be carried out in line with Maintenance Manual/Approved drawings (As Build Drawings)/Specifications of DFCCIL with its latest correction slips, if any.

The Joint Report/Maintenance sheets to be signed by Engineer in-charge and Contractor's representative which will be submitted by contractor to DFCCIL centralized office.

Item no. 5 – Half Yearly Maintenance of 25 kV DP Interrupter

The job shall cover checking & Half Yearly Maintenance of 25 kV DP Interrupter shall be carried out in line with Maintenance Manual/Approved drawings (As Build Drawings)/Specifications of DFCCIL with its latest correction slips, if any.

The Joint Report/Maintenance sheets to be signed by Engineer in-charge and Contractor's representative which will be submitted by contractor to DFCCIL centralized office.

Item no. 6 – Yearly Maintenance of 25 kV DP Interrupter

The job shall cover checking & Half Yearly Maintenance of 25 kV DP Interrupter shall be carried out in line with Maintenance Manual/Approved drawings (As Build Drawings)/Specifications of DFCCIL with its latest correction slips, if any.

The Joint Report/Maintenance sheets to be signed by Engineer in-charge and Contractor's representative which will be submitted by contractor to DFCCIL centralized office.

Item no. 07 – Monthly Maintenance of 25 kV DP Isolator

The job shall cover checking & Monthly Maintenance of 25 kV DP Isolator shall be carriedout in line with Maintenance Manual/Approved drawings (As Build Drawings)/Specifications of DFCCIL with its latest correction slips, if any.

The Joint Report/Maintenance sheets to be signed by Engineer in-charge and Contractor's representative which will be submitted by contractor to DFCCIL centralized office.

Item no. 08 – Half Yearly Maintenance of 25 kV DP Isolator

The job shall cover checking & Half Yearly Maintenance of 25 kV DP Isolator shall be carried out in line with Maintenance Manual/Approved drawings (As Build Drawings)/Specificationsof DFCCIL with its latest correction slips, if any.

The Joint Report/Maintenance sheets to be signed by Engineer in-charge and Contractor's representative which will be submitted by contractor to DFCCIL centralized office.

Item no. 09 – Yearly Maintenance of 25 kV DP Isolator

The job shall cover checking & Yearly Maintenance of 25 kV DP Isolator shall be carried out in line with Maintenance Manual/Approved drawings (As Build Drawings)/Specifications of DFCCIL with its latest correction slips, if any.

The Joint Report/Maintenance sheets to be signed by Engineer in-charge and Contractor's representative which will be submitted by contractor to DFCCIL centralized office.

Item no. 10 –Quarterly Maintenance of 25 kV Potential Transformer

The job shall cover checking & Quarterly Maintenance of 25 kV Potential Transformer shall be carried out in line with Maintenance Manual/Approved drawings (As Build Drawings)/Specifications of DFCCIL with its latest correction slips, if any.

The Joint Report/Maintenance sheets to be signed by Engineer in-charge and Contractor's representative which will be submitted by contractor to DFCCIL centralized office.

Item no. 11 –Half Yearly Maintenance of 25 kV Potential Transformer

The job shall cover checking & Half Yearly Maintenance of 25 kV Potential Transformer shall be carried out in line with Maintenance Manual/Approved drawings (As Build Drawings)/Specifications of DFCCIL with its latest correction slips, if any.

The Joint Report/Maintenance sheets to be signed by Engineer in-charge and Contractor's representative which will be submitted by contractor to DFCCIL centralized office.

Item no. 12 –Yearly Maintenance of 25 kV Potential Transformer

The job shall cover checking & Yearly Maintenance of 25 kV Potential Transformer shall be carried out in line with Maintenance Manual/Approved drawings (As Build Drawings)/Specifications of DFCCIL with its latest correction slips, if any.

The Joint Report/Maintenance sheets to be signed by Engineer in-charge and Contractor's representative which will be submitted by contractor to DFCCIL centralized office.

Item no. 13 –Monthly Maintenance of 42 kV Lightning Arrester

The job shall cover checking & Monthly Maintenance of 42 kV Lightning Arrester shall be carried out in line with Maintenance Manual/Approved drawings (As Build Drawings)/Specifications of DFCCIL with its latest correction slips, if any.

The Joint Report/Maintenance sheets to be signed by Engineer in-charge and Contractor's representative which will be submitted by contractor to DFCCIL centralized office.

Item no. 14 –Quarterly Maintenance of 42 kV Lightning Arrester

The job shall cover checking & Quarterly Maintenance of 42 kV Lightning Arrester shall be carried out in line with Maintenance Manual/Approved drawings (As Build Drawings)/Specifications of DFCCIL with its latest correction slips, if any.

The Joint Report/Maintenance sheets to be signed by Engineer in-charge and Contractor's representative which will be submitted by contractor to DFCCIL centralized office

Item no. 15 –Half Yearly Maintenance of 42 kV Lightning Arrester

The job shall cover checking & Half Yearly Maintenance of 42 kV Lightning Arrester shall be carried out in line with Maintenance Manual/Approved drawings (As Build Drawings)/Specifications of DFCCIL with its latest correction slips, if any.

The Joint Report/Maintenance sheets to be signed by Engineer in-charge and Contractor's representative which will be submitted by contractor to DFCCIL centralized office

Item no. 16 -Yearly Maintenance of 42 kV Lightning Arrester

The job shall cover checking & Yearly Maintenance of 42 kV Lightning Arrester shall be carried out in line with Maintenance Manual/Approved drawings (As Build Drawings)/Specifications of DFCCIL with its latest correction slips, if any.

The Joint Report/Maintenance sheets to be signed by Engineer in-charge and Contractor's representative which will be submitted by contractor to DFCCIL centralized office

Item no. 17 –Quarterly Maintenance of 25kV/240V, 10kVA LT Auxiliary Transformer

The job shall cover checking & Quarterly Maintenance of 25kV/240V, 10kVA LT Auxiliary Transformer shall be carried out in line with Maintenance Manual/Approved drawings (As Build Drawings)/Specifications of DFCCIL with its latest correction slips, if any.

The Joint Report/Maintenance sheets to be signed by Engineer in-charge and Contractor's representative which will be submitted by contractor to DFCCIL centralized office

Item no. 18 – Half Yearly Maintenance of 25kV/240V, 10kVA LT Auxiliary Transformer

The job shall cover checking & Half Yearly Maintenance of 25kV/240V, 10kVA LT Auxiliary Transformer shall be carried out in line with Maintenance Manual/Approved drawings (As Build Drawings)/Specifications of DFCCIL with its latest correction slips, if any.

The Joint Report/Maintenance sheets to be signed by Engineer in-charge and Contractor's representative which will be submitted by contractor to DFCCIL centralized office

Item no. 19 – Yearly Maintenance of 25kV/240V, 10kVA LT Auxiliary Transformer

The job shall cover checking & Yearly Maintenance of 25kV/240V, 10kVA LT Auxiliary Transformer shall be carried out in line with Maintenance Manual/Approved drawings (As Build Drawings)/Specifications of DFCCIL with its latest correction slips, if any.

The Joint Report/Maintenance sheets to be signed by Engineer in-charge and Contractor's

representative which will be submitted by contractor to DFCCIL centralized office

Item no. 20 – Fortnightly battery & battery charger maintenance at SPs/SSPs

The job shall cover checking & Fortnightly battery & battery charger maintenance at SCPs shall be carried out in line with Maintenance Manual/Approved drawings (As Build Drawings)/Specifications of DFCCIL with its latest correction slips, if any.

The Joint Report/Maintenance sheets to be signed by Engineer in-charge and Contractor's representative which will be submitted by contractor to DFCCIL centralized office

Item no. 21 – Yearly Maintenance of Battery and Battery Charger

The job shall cover checking & Yearly Maintenance of Battery and Battery Charger maintenance at SPs/SSPs shall be carried out in line with Maintenance Manual/Approved drawings (As Build Drawings)/Specifications of DFCCIL with its latest correction slips, if any.

The Joint Report/Maintenance sheets to be signed by Engineer in-charge and Contractor's representative which will be submitted by contractor to DFCCIL centralized office

Item no. 22 – Half Yearly maintenance of Earthing station

The job shall cover checking & Half Yearly maintenance of Earthing station at SPs/SSPs/others shall be carried out in line with Maintenance Manual/Approved drawings (As Build Drawings)/Specifications of DFCCIL with its latest correction slips, if any.

The Joint Report/Maintenance sheets to be signed by Engineer in-charge and Contractor's representative which will be submitted by contractor to DFCCIL centralized office

Item no. 23 – Yearly maintenance of Earthing station

The job shall cover checking & Yearly maintenance of Earthing station at SPs/SSPs/Others shall be carried out inline with Maintenance Manual/Approved drawings (As Build Drawings)/Specifications of DFCCIL with its latest correction slips, if any.

The Joint Report/Maintenance sheets to be signed by Engineer in-charge and Contractor's representative which will be submitted by contractor to DFCCIL centralized office

Item no. 24 – Yearly Buried Rail Connection

The price shall cover Yearly maintenance of Buried rail, connection with 400 sq. mm XLPE cable

1. Check all bonding & earth connection duly excavate.
2. Intactness of welding & Bonding Bolt needs to be ensured.
3. Painting of bond and welded joints.
4. If corroded, same shall be replaced or attended. (As per Schedule 03 item no. 16/17)
5. If earth value is below the prescribed value the same to be improved

Item no. 25 – Monthly Maintenance of 25 kV SP Interrupter

The job shall cover checking & Monthly Maintenance of 25 kV SP Interrupter at SPs/SSPs/others shall be carried out in line with Maintenance Manual/Approved drawings (As Build Drawings)/Specifications of DFCCIL with its latest correction slips, if any.

The Joint Report/Maintenance sheets to be signed by Engineer in-charge and Contractor's representative which will be submitted by contractor to DFCCIL centralized office

Item no. 26 – Half Yearly Maintenance of 25 kV SP Interrupter

The job shall cover checking & Half Yearly Maintenance of 25 kV SP Interrupter shall be carried out in line with Maintenance Manual/Approved drawings (As Build Drawings)/Specifications of DFCCIL with its latest correction slips, if any.

The Joint Report/Maintenance sheets to be signed by Engineer in-charge and Contractor's representative which will be submitted by contractor to DFCCIL centralized office

Item no. 27 – Yearly Maintenance of 25 kV SP Interrupter

The job shall cover checking & Yearly Maintenance of 25 kV SP Interrupter shall be carried out in line with Maintenance Manual/Approved drawings (As Build Drawings)/Specifications of DFCCIL with its latest correction slips, if any.

The Joint Report/Maintenance sheets to be signed by Engineer in-charge and Contractor's representative which will be submitted by contractor to DFCCIL centralized office

Item no. 28 – Half Yearly Thermal Imaging of Equipment connector

The job shall cover checking & Half Yearly Thermal Imaging of Equipment connector shall be carried out in line with Maintenance Manual/Approved drawings (As Build Drawings)/Specifications of DFCCIL with its latest correction slips, if any.

1. Thermal Imaging of Equipment connectors shall be done during loaded condition.
2. The Images shall be stored in Heat format. Necessary backup shall be made available in Depot systems for verifying on later date.
3. Thermal Imaging devices will be supplied by Railway.
4. Defects noticed during the check shall be escalated to depot in charge and as well as to Railway officers and steps to be taken to attend the same at the earliest.

Item no. 29 – Yearly Maintenance of Earth Screen Conductor

The job shall cover checking & Yearly maintenance of Earth Screen Conductor

1. Tightness checking of earth flat and its accessories.
2. Visual checking of corrosion & strands cut if any.
3. Painting of earth flat and its accessories.

Item no. 30 - Yearly maintenance of Cable Trench Cleaning

The job shall cover checking & Yearly maintenance of Cable Trench Cleaning

Item no. 31 –Reclamation of DCP (5kG,10 kG & 25 kG), CO2(9kG) & form type fire extinguisher.

The job shall cover Servicing & maintenance of,

1) Dry-chemical powder (DCP) type: 5, 10 Kg & 25Kgs.
2) CO2: 9 Kg.
3) Foam type Fire Extinguisher

Servicing of Fire extinguisher will be done once in quarter and replacement of dry chemical powder

will be done once in 2 years. All accessories required for replacement to be arranged by the contractor. Details of servicing/replacement are to be stenciled on fire extinguisher.

Item no. 32 –Refilling of DCP (5kG,10 kG & 25 kG),CO2(9kG) & form type fire extinguisher.

The job shall cover refilling of,

1) Dry-chemical powder (DCP) type: 5, 10 Kg &25Kgs.
2) CO2: 9 Kg.
3) Foam type.

Details of refilling are to be stenciled on fire extinguisher.

Schedule 8 Panels & Gantry Bus Bar insulator other Maintenance:

Item no. 1 –Monthly panel maintenance in RSS/TSS

The Checking and maintenance against this item shall be carried out in line with Maintenance Manual/Approved drawings (As Build Drawings)/Specifications of DFCCILs with its latest correction slips if any as per instruction of DFCCIL representative.

The Joint Report/Maintenance sheets to be signed by Engineer in-charge and Contractor's representative which will be submitted by contractor to DFCCIL centralized office.

Item no. 2 –Monthly panel maintenance in SP/SSP

The Checking and maintenance against this item shall be carried out in line with Maintenance Manual/Approved drawings (As Build Drawings)/Specifications of DFCCILs with its latest correction slips if any as per instruction of DFCCIL representative.

The Joint Report/Maintenance sheets to be signed by Engineer in-charge and Contractor's representative which will be submitted by contractor to DFCCIL centralized office.

Item no. 3 –Half yearly Cross gantry or any others Gantry Bus Bar maintenance of TSS

The Checking and maintenance against this item shall be carried out in line with Maintenance Manual/Approved drawings(As Build Drawings)//Specifications of DFCCILs with its latest correction slips if any as per instruction of DFCCIL representative.

The Joint Report/Maintenance sheets to be signed by Engineer in-charge and Contractor's representative which will be submitted by contractor to DFCCIL centralized office.

Item no. 4 –Half yearly Cross gantry or any others Gantry Bus Bar maintenance of of SP/SSPs The Checking and maintenance against this item shall be carried out in line with Maintenance Manual/Approved drawings (As Build Drawings)/Specifications of DFCCILs with its latest correction slips if any as per instruction of DFCCIL representative.

The Joint Report/Maintenance sheets to be signed by Engineer in-charge and Contractor's representative which will be submitted by contractor to DFCCIL centralized office.

Item no. 5 –Removal and re-erection of PSI Equipment

Removal and re-erection of PSI Equipments shall be done as per OEM manual. This job shall cover replacement of PSI equipments viz CTs, PTs, ATs, LAs, Capacitors, Isolators, Interrupters, CBs etc. The rates are calculated for each occasion. The supply of material and tools will be provided by Railways. The man power deputed shall leave the work spot with the permission of engineer in charge. All released materials to be handed over to Railways.

The Joint Report sheets to be signed by Engineer in-charge and Contractor's representative which will be submitted by contractor to DFCCIL centralized office.

Item no. 6 –Supply & Erection of Caution Board

The payment under this item shall cover supply and erection of Retro-reflective type boards- 25 KV AC danger board, danger board for height gauge, public/ staff caution boards and special boards on uniform basis as decided by the DFCCIL Engineer.

Item no. 7 –Supply and spreading of ballast/Pebbles/Gravels in Switching Stations/TSS/RSS yard

The price shall cover the supply and spreading of 20 mm crushed stone ballast / pebbles / gravels in Switching Stations / TSS yard. The graded ballast shall be between 30 mm to 15mm machine crushed without any mixing of soil. The price shall also cover the spreading and leveling of ballast in switch yard smoothly with a good workmanship.

This price shall also include the following:

a) Removal of wild vegetation in switch yard in existing ballast areas along with its roots.
b) Cleaning of existing ballast and screening of soil from existing ballast.
c) Smoothing and re-spreading of existing ballast so collected.

The rates are calculated in CUM as per requirement for the entire section. The man power deputed shall leave the work spot with the permission of engineer in charge

Item no. 8 -Reinforce concrete for cable trench & cover

The price shall cover the provision of cable Trenches and its cover made with Reinforced concrete including digging of soil/surface as per instruction of Engineer in charge at site.

The rates are calculated in Sq.m as per requirement for the entire section. The man power deputed shall leave the work spot with the permission of engineer in charge. All released materials to be handed over to Railways

Item no. 9 – Supply and repainting of PSI Equipment like Transformer CT ,PT ,LA BM, CB, AT as per site requirement with water proof gray enameled paint by approved brand i.e. Asian Berger etc. as per IS 2932 or latest

The price shall cover the supply of paint and complete repainting of PSI equipments like Traction Transformer, CB, BM, PT, AT etc. as per site requirement with water proof gray enameled paint from any of RDSO approved brand paint i.e. Asian or Berger brand / make paint confirming to IS: 2932 or latest including rubbing / scrubbing of surface to remove corrosion/foreign material etc from PSI equipments as per instruction of Engineer in charge at site. The small patches or small patch rusting painting will be covered under maintenance schedule. Only complete repainting of any equipment will be paid under this item.

The rates are calculated in Sq. m as per requirement for the entire section. The man power deputed shall leave the work spot with the permission of engineer in charge. This work will be executed as per

satisfaction of DFCCIL Engineer.

Item no. 10 – Supply and repainting of PSI assets ie. Fencing Panels, Fencing UP right, barbared wire, Tubular pole at TSS/SP/SSP with Aluminum Paint i.e. Asian Berger etc. as per IS 2339 or latest

The price shall cover the supply of paint and repainting of PSI assets i.e. Fencing Panels / uprights, barbed wires, TSS / Switching posts and Tubular Poles at TSS in electrified section with Aluminum Paint from any of RDSO approved brand / make confirming to IS:2339 or latest as per instruction of Engineer in charge at site.

The rates are calculated in Sq.m as per requirement for the entire section. The man power deputed shall leave the work spot with the permission of engineer in charge. This work will be executed as per satisfaction of Railway Supervisor.

Item no. 11 – Supply and erection of Earth Pit cover & Box

The price shall cover the Supply and erection of Earth Pit Box with cover as per RDSO specification/ drawing available latest.

The rates are calculated in numbers of Earth Pit Box with cover provided as per requirement for the entire section. The man power deputed shall leave the work spot with the permission of engineer in charge.

Item no. 12 – Provision of Shock Treatment Chart

The price shall cover the supply and provision of Shock Treatment charts at TRD depots, TPC Control, TSS, Switching Stations and Level Crossing Gates as per requirement. The rates are calculated in the number of Shock Treatment Charts provided by the contractor as per requirement. The man power deputed shall leave the work spot with the permission of engineer in charge.

Item no. 13 – Drilling of holes in mast/ rails with contractor own labour and T&P complete.

The price shall cover the drilling and champehring of holes in mast / rails with contractor's own labour and T&P complete in the supervision of Engineer in charge and as per requirement of site. The rates are calculated in the number of holes drilled in masts/rails as per requirement. The man power deputed shall leave the work spot with the permission of Engineer in charge. All released materials to be handed over to Railways.

Item no. 14 – Removal of Wild vegetation in TSS/SP/SSPs

The price shall cover the complete removal of wild vegetation in Sub Station except Switching yard (Kacha Yard) on Quarterly schedule basis or as per requirement and as per instruction of Engineer in charge at site. The contractor shall provide the requisite chemical for spraying to destroy the wild vegetation and requisite T&P to the staff deployed to ensure complete and effective removal of wild vegetation in in Sub Station except Switching yard (Kacha Yard). The rates are calculated in Sq.m for in Sub Station except Switching yard (Kacha Yard) in the entire section. The man power deputed shall leave the work spot with the permission of engineer in charge.

Item no. 15 – Supply and erection of earth leads 75 x 8 mm mild steel flat laid in the ground or exposed as per site requirement"

The price shall cover supply and installation per meter length of 75x8mm mild steel flat, buried at a depth of 60 cm below ground level. The price shall also cover connections of the steel flats to the earth electrodes to constitute the main earth ring and to the earthed terminals of the power transformers etc. as required.

The price shall also cover supply and installation per meter length of 75x8 mm mild steel flat, painted all around with two coats of painting with red oxide and two coats of colour grass green shade-218 of IS:5 passing through cable trench or exposed above ground level. The price shall also cover the connections of the steel flats to the earth electrodes, to constitute the main earth ring and to the earthed terminals of the various equipments as required.

Item no. 16 – Supply and erection of earth leads 50 x6 mm mild steel flat laid in the ground or exposed as per site requirement"

The price shall cover supply and installation per meter length of 50x6mm mild steel flat buried at a depth of 60cm below ground level. The price shall also cover connections of the steel flats to the main earth ring and to the steel structures and metallic frame work/ terminals of various equipments, as required.

The price shall cover supply and installations per meter length of 50x6 mm mild steel flat painted all around with two coats of painting with red oxide and two coats of colour grass green shade-218 of IS:5 passing through cable trench or exposed above ground level. The price shall also cover the connections of the steel flats to the main earth ring and to the steel structures and metallic frame work/terminals of various outdoor equipments as required

Item no. 17 – Supply and erection of 8 SWG GI Wire for earthing

The price shall cover supply, shaping and erection of 8 SWG G.I wire per metre used for earthing of control panels, LT, AC and DC distribution boards, battery chargers, etc. at sub- station control rooms. The requirement of fencing panel earthing to the nearest fencing upright shall also be included and paid for under this item.

Schedule 9 -Break down attention

Item no. 1 – Breakdown attention of PSI equipments at TSS/SP/SSPs

The job shall cover the Breakdown attention of PSI equipments as mentioned below, The job shall cover Supply of Man Power for restoration of all 2x 25kV PSI equipments such as circuit breakers, Interrupters, Potential transformers, AT, CT, Capacitor bank ,Bus bar etc. during Break down round the clock on hourly basis for all restoration of 25kV PSI Equipments

.The Contractor is required to deploy one Supervisors, One Technicians and Two Helpers who are competent to attend Failures in PSI equipments. The job against this item is applicable for Supply of Man Power on hourly basis consisting of the above staff in one Gang.

In case of major repair that requires OEM/Specialized agency attention then such repair will be undertaken by DFCCIL separately.

Breakdown staff may be located at selected points as required by Railways to deal promptly with PSI equipments failures.

Item no. 2 – Maintenance of 25 KV dropout fuse AT TSS/SP/SSP

The job shall cover Rectification of 25 kV dropout fuse in Auxiliary Transformer locations between REJN-Madar section. Rectification to be done immediately, as and when required. Nominated staff for the above job should be available to reach the working spot round the clock..

Item no. 3 - Manning of SP/SSP in case of Emergency

The job shall cover the Manning of SP/SSP in case of Emergency as mentioned below:

1. Whenever remote control working is not possible due to any fault on the communication cable or in the remote control equipment or failure of battery etc. it is necessary to arrange for manning the switching station by posting suitably qualified and competent staff that is authorized to carry out emergency switching operations as instructed by TPC. The manning staff shall make himself conversant with the equipment is required to operate and the rules that are laid down by the Railway administration.

2. Manning staff shall carry out orders issued by TPC over the telephone, observing the rules laid down for exchange of telephone messages.

3. Manning staff should maintain a log book showing the details of operations in order in which they were done, interruption to power supply, abnormal occurrences, defects in plant requiring attention and other information if any. The log will be signed by both the relieving and relived staffs at every change of shift as a token of having taken over and hand over all equipment correctly.

4. The manning staff on shift duty is forbidden to leave the post station unless he is relieved by another person. No interchange of duties or variation of duty hours is permitted without the prior permission of TPC, and staff who are unable from any cause to take their shift, shall at once notify TPC.

5. One man day in this part of schedule is for 12 hours. Contractor has to arrange for transport of the personnel manning the SP/SSP. The man so deployed shall have mobile phone which shall be advised to TPC immediately he is assigned for manning duty.

Schedule 10 Additional PSI maintenance Activity

Item no. 1 – Dismantling, supply, erection & commissioning of LA, CT, PT, CB & BM in case of break down/bursting of the equipment- As per Appendix B.

Supply of spares required during maintenance break downs for a period of 2 years- As per **Appendix B.**

The spares required for attending the breakdown & preventive maintenance will be arranged by the contractor from OEM / authorized dealer of OEM. The contractor will be paid the cost of the spare / materials supplied as per price list of Annexure-B along with the released materials to the consignee.

Schedule 11: Maintenance of Traction Sub Stations /SCPs (Optional)

Item no. 1 to 3 – Oil Filtration for power Transformer: Streamline Oil filtration work & Conservator tank

This shall cover the cost towards oil filtration for Power Transformer during topping up of oil or during any replacement of gasket / Bushing. Oil filtration needs to be done to improve oil BDV.

Item no. 4 to 14– Bushings Oil leakage attention in Transformer: Streamline Oil filtration work & Conservator tank

This shall cover the cost towards Oil leakage attention in Transformer bushings.

Item no. 15 to 17– Oil Leakage attention and overhauling of TAP changer: Leakage attention to OLTC tapping gear and new Gasket O ring changing work.

This shall cover the cost towards Oil leakage attention and overhauling of TAP changer of Power Transformers.

Item no. 18 – Calibration of Measuring instruments [Will be paid based on the submission of proof

This job shall cover calibration of Measuring instruments supplied by DFCCIL at the NABL accredited labs. It also includes the transportation of instruments from Depot to Labs and return. The payment for this item will be made based on the submission of certificate for the calibrated instruments with original bill/invoice from the NABL accredited labs. The periodicity of calibration will be as per extant rule and as advised by authorized Railway in-charge.f of bill of calibrated instruments in the NABL accredited labs]

Schedule 12 -TSS Manning & House keeping

Item no. 1 – Manning of TSS

The job shall cover the Manning of TSS as mentioned below, Contract staff:

(i) The staff to be deputed should be able to take and write messages from Railway authorities in English/Hindi/Kannada over phone and should be able to convey the same to the desired person and should also be computer literate.

(ii) Age should be more than 18 years and preferably less than 58 years as on date of commence of work.

(iii) The contractor shall be solely responsible for the conduct of the staff deputed by him for the work.

(iv) The contractor's staff should not carry any unauthorized/dangerous/explosives in the complex. The staff to be deputed for manning of TSS highly skilled person should have passed minimum ITI or higher technical qualification and should possess experience in similar job in which they have dealt with maintenance of Electrical systems / equipment / switchgears and protective devices. However the

person who is to be found to be qualified and suitable in scrutiny by representative of GM/PM/EL/DDU willonly are allowed to work. Following are the minor works:-

1. Replacement of defective LED, indication lamps of relay panel, ACDB & DCDB panel.
2. Battery maintenance distilled water topping work.
3. Replacement of HRC fuse and rotary switch of ACDB, DCDB and control and relay panel.
4. Provision of naphthalene balls at control and other equipment supplied by DFCCIL.

Item no. 2 – Regular House Keeping of TSS.

The job shall cover the Daily Housekeeping of TSS, control room, Battery room, Store room, staff room, staff rest room, TSS yard and surroundings. The TSS should be kept free of bushes, oil spillage etc. A checklist of cleaning shall be maintained in TSS. Attendance shall be maintained by the concerned DFCCIL in charge. In case of absence of the house keeping personnel reliever should be immediately arranged by the contractor. The working hours will be 08.00 to 17.00 Hrs with lunch Hr between 13.00 to 14.00 Hrs. Duties are as under:

1. Regular cleaning of equipment, installed at traction substations.
2. Cleaning of vegetation in yard.
3. Safe guarding of TSS premises from any unwanted movements of stranger or animals.
4. Time to time checking for ensuring no reptiles are found in equipment box or any other location which create unwanted faults or short circuits.
5. Any other work that does not require excavation or access to the switchyard that can be undertaken without disturbing the operation of the substation.
6. He should not operate any equipment in any condition.
7. He should not climb in any structure on live condition.

Item no. 3 – Data Entry Operator Cum Store Maintainer at IMD/ISMD (Skilled Person at 01 SEBN/IMD, 01 DGON/ISMD, 01 DDUN/CGM office & 01 KWDN/ISMD= Total 04) (08 Hour shift only)(Class C Salary).

The job shall cover the data Entry Operator Cum Store Maintainer at IMD/ISMD/CGM for data entry. Attendance shall be maintained by the concerned DFCCIL in charge. In case of absence of the data entry personnel reliever should be immediately arranged by the contractor. The working hours will be 09.00 to 17.00 Hrs with lunch Hrbetween 13.00 to 14.00 Hrs or as decided by DFCCIL officials.

Item no. 4 – Regular Foot Patrolling Skilled Person for 01 IMD SEBN & 02 ISMD = 06 Person i.e 02/Location (08 Hour shift only) (Person having Knowledge of OHE/PSI Equipments and competent to attend the fault, insulator cleaning and other miscellaneous OHE/PSI Work during Power and traffic block in supervision of DFCCIL Official) (During Foot patrolling Person will carry Operating rod+Hammer +Flag +Spiner /Wrenches) Per day 6-8 TKM Foot patrolling.(Class C Salary).

The Checking and maintenance of 2x25kV OHE by Foot Patrolling shall be carried out in line with Maintenance Manual/Specifications of DFCCILs.

The price shall cover foot to foot visual checking of complete of OHE and on completion of the foot patrolling the report should be submitted to the depot-in-charge as per prescribed Performa. The Performa should to be arranged by the contractor as advised by DFCCILs. The foot patrolling is to be carried for each section every fortnight.

The price shall also include

I. The object of foot-patrolling is to make visual inspection of every part of the OHE (including feeder line) so that any defects and abnormalities noticed are recorded and reported to the maintenance gangs for attention.
II. The engaged staff on foot-patrol should be equipped with signal flags, an emergency telephone instrument and essential tools required for attending to defects on the spot e.g., spanners for tightening bond connections, Spring balance
III. The staff/labour on patrol duty should particularly look for the following

(a) Chipped or damaged insulators.
(b) Displaced fittings and droppers.
(c) Excessive sagging or hogging of contact wire.
(d) Whether equalizing plate is tilted.
(e) Free movement of auto-tensioning device/ Strands cut in SS rope and position of counterweight with reference to upper and lower limits of movement marked on the mast.
(f) Presence of protective screens, caution and warning boards and anti-climbing devices.
(g) Structural soundness of height gauges at level crossings and availability of 25KV danger boards on Level crossing guard
(h) Bird-nests and pieces of stray wire likely to cause short circuits and branches of trees likely to infringe the OHE;
(i) Defective bonds and earth connections;
(j) Any obstructions including tree branches in the way of free movement of pantograph and trains;
(k) Signs of heavy sparking when trains pass;
(l) Isolators blades being fully in and for signs of sparking or overheating of isolators as also condition of locks;
(m) General condition of switching stations en-route;
(n) Tilting of masts especially on high banks and masts with sand-core foundations;
(o) Number plates.
(p) Any other abnormal/unusual situation.

(v) Various special drives as and when issued by DFCCIL or Railway board are also to be inspected and checked for deficiency as advised by depot in charge
The Joint Report/Maintenance sheets to be signed by Engineer in-charge and Contractor's representative which will be submitted by contractor to DFCCIL centralized office.

A. Duties of operator (manning) staff –

1. He should go through the instructions/messages written in handing over charge/Taking over charge register before taking over charge of duty.
2. He should check the condition of all indication lamps and status of equipment.
3. He should obtained the HT meter readings if any such as KWH, KVAH, KVARH, MD, PF etcfrom the supply authority meters at 00-00Hrs daily and convey to on duty TPC.
4. He should check the counter reading of Equipment and relays at 00-00Hrs daily.
5. He should record the Transformer current, bus voltage, Feeder Voltage, Capacitor current, WTI, OTI, Ambient temperature, Gas Pressure and Air pressure of equipment's every hours in daily log sheet.
6. He should record the time of CB tripping, 132KV supply failures and the feed extensions in concerned register.
7. He should check the Trickle/Boost current, Voltage of Battery charger.

8. He should neatly clean the battery cell surfaces daily.
9. He should check the condition of equipment for any abnormality such as heating of terminal connector, bus splice, bus connectors, un-usual sound, sparking ect. If any abnormality noticed shall be informed immediately to the on duty TPC and act accordingly.
10. He should check the oil level in conservator tank of Transformer, leakage of oil from the Transformer, CT, PT and ATs and to be informed immediately to the on duty TPC and act accordingly.
11. He should check the of safety equipment such as Fire extinguisher, Fire buckets with sand etc.
12. He should check the functioning of telephones provided.
13. He should operate the equipments as per instructions of TPC on duty.
14. He should check the safe custody of T & P items and other stores kept at TSS.
15. He should clean the control panel and equipment provided at control room.
16. He should carry out minor repairs under guidance of in-charges of TSS.
17. He should switch on & off of Yard lights, pump at TSS.
18. He should follow any instructions given by TPC & In-charges of TSS.
19. He should look after any other duty assigned by In-charges of TSS.
20. He should register all incoming and outgoing calls on register.
21. Do not allow un-authorized staff into the sub-station.
22. Do not allow co-staff to operate the control panel/equipment without his knowledge.
23. Ensure communication facilities are in working order. If any defect noticed, report to CTPC/TSS in-charges.
24. Check all safety items/equipment, such as discharge rod, hand gloves, Helmets, safety belts for sound condition.
25. Ensure firefighting equipment for a periodical checking and refilling.
26. Operate the equipment only on instructions of the TPC under clear message duly exchanging PN number.
27. Report any abnormalities noticed to TPC and carry out the operations as per direction of TPC. In case of failure of equipment, such as PT, CT, AT, LA, TM, CB, DM. Isolate the defect equipment under the instructions from TPC duly under power block and permit to work.
28. Check and record the specific gravity & the voltage of Battery, top up with distilled water if necessary. Check and record the charging current so the charging voltage is 120 to125V.
29. Check the condition of silica gel in breathers of Power Transformer and Auxiliary Transformer, CBs and record and inform to TPC if condition are bad.
30. In case of 132KV power supply failure report TPC immediately to facilitate feed extension. On resumption of 132KV supply, informs TPC and normalizes upon the instructions of TPC.
31. In case of 25KV supply voltage falling below 19 kV/increasing above 27.5 kV inform immediately to on duty TPC for appropriate action.
32. All local operations are done under the instructions of TPC daily, and duly keeping the switches in local condition.
33. During duty hours operator shall bear tight fitting clothes and shoes.
34. During hourly yard checking he shall keep himself alert, 2meter safe distance away from electrical live parts and bear helmet.
35. He shall not attempt to climb a structure, until permission granted by TPC/In-charge and proper earthing and equipped with all safety gears.

36. He shall not carry boom, ladder in standing position in the yard to access the equipment.
37. He shall bear hand gloves for operation of isolator to isolate the faulty equipment after getting the TPC's instructions and exchange of private number.
38. He shall not carry umbrella in yard in any season.
39. Recording of Electrical parameters, events and alarms at TSS and TPC will take status of allequipments of TSS from the manning staff on hourly basis.

4.1 The detailed scope of work is as under: -

4.1.1 2x25kV OHE installations maintenance schedule: -

1. <u>Cantilever: (As per DFCC Maintenance Manual)</u>

i. Check rail level and setting distance against markings on the masts and entries in the Register. Variation above 30mm in setting distance and 20mm in rail level should be notified for correction. Variations, even within the above limits, should not be permitted if the Schedule of Dimensions are infringed.
ii. Check all tightness of bolts, nuts and check nuts and pins.
iii. Check all galvanized pipes and fittings. Where galvanization is found to be chipped off, the fitting of pipe should be replaced. Minor chippings may be repaired using 'cold galvanizing paint'.
iv. Examine register arm and all hooks and fittings for cracks. Check for cracks on steady arm tube also.
v. Clean all insulators and carefully check as per approved drawing.
vi. Check and adjust heights and staggers on the basis of setting distance and rail level marked. Close coordination with track works is required for keeping the permanent way at the correct location.
vii. Check carefully condition of contact and catenary wires, particularly for kinks and twists in contact wire and broken strands of catenary wire. Any stranded conductor (catenary wire, negative feeder wire, aerial earth wire etc.) should be spliced if more than 20 per cent of the strands are broken.
viii. Check droppers and tighten bolts wherever required.
ix. Clean insulators and replace defective insulators as per approved maintenance plan.
x. Check staggers carefully on Tangent and Curved lines.
xi. Check and ensure exact Encumbrance and steady clearance as per site.
xii. Check kinks and twist on contact wire and removed.
xiii. Check all bolts, nuts, check nuts, pins etc.
xiv. Checking of RRA clamps and contact wire at double cantilevers.
xv. Miscellaneous, if any.

2. <u>Turn Outs & Crossovers: (As per DFCC Maintenance Manual)</u>

a. With OHE Inspection Car running on main line check up if pantograph glides smoothly under the loop line OHE.
b. With OHE Inspection Car running on loop line check up if pantograph glides

smoothly under the main line OHE.

c. Check stagger of both the OHEs at turn outs. (It shall not normally exceed 300mm).

d. Check that the main line OHE of overlap type turn out is about 50mm below that of the turnout OHE.

e. Checkup cross contact bar, if any, for displacement and distortion.

f. Check up for hit marks, if any.

g. Checkup rail level and setting of the obligatory mast.

h. Check up for hard spots near rigid droppers, if any.

i. Miscellaneous, if any.

3. Isolators: (As per DFCC Maintenance Manual)

a. Check number plates for cleanliness and security.
b. Check correctness of operation, alignment of contacts and arcing horns.
c. Check earth continuity where applicable.
d. Lubricate moving parts and locks.
e. Check interlocks where provided.
f. Check that the distance between male and female contacts in open position as per drawing depending upon the type of isolator.
g. Miscellaneous, if any.

4. Section Insulators:(As per DFCC Maintenance Manual)

a. Replace defective insulators as per maintenance manual.

b. Check runners for flash-marks, hit marks and proper adjustment,

c. Check for excessive contact wire wear near anchor clamps,

d. Check the level of the assembly and adjust if necessary,

e. Tighten PG clamps of droppers and stiffeners.

f. Miscellaneous, if any

5. Overlaps:(As per DFCC Maintenance Manual)

a) Check height and stagger of OHE in the overlap section.
b) Check whether the lifting of out-of-run OHE is correct.
c) Check that parallel running of contact wires in the overlap for a minimum 2m in the panto sweep region.
d) Miscellaneous, if any.

6. ATDs:(As per DFCC Maintenance Manual)

Regulating Equipment:

a) Check 'X' and 'Y' dimensions in the case of pulley block type equipment against prescribed values for the temperature at the time of checking. Make use of turn-buckles to adjust as required.

b) Check that the compensating plate is vertical. If not, adjust as required.

c) Lubricate pulleys and other moving parts.

d) Check if 20rnm wide bands in black colour are painted on the mast to indicate upper and lower limits of movement of counter weight.

e) Check condition of stainless steel wire rope for any signs of corrosion and breakage of strands.

f) Ensure the availability of correct length sleeves, if not available same are to be provided.

g) Miscellaneous, if any.

7. Insulators: (As per DFCC Maintenance Manual)

Checking the insulators at regular intervals as per maintenance manual and approved drawings.

8. Jumpers: (As per DFCC Maintenance Manual)

All kinds of Jumpers with broken strands should be invariably replaced as per maintenance manual and approved drawings. Broken strands are most likely at the point of entry into PG clamps, possibly due to sharp edges in the clamp. PG clamps should have properly rounded off edges to prevent the cutting of strands. The clamps
should be checked for signs of overheating and proper tightness.

9. Splice: (As per DFCC Maintenance Manual)

The splice in OHE becomes necessary when a small length requires replacement as a result of excessive wear or restoration after breakdown as per maintenance manual.
The main points requiring attention during inspection of splice fittings are :
1. Careful examination for cracks or other casting defects or abnormalities.
2. In case of catenary splice fitting tightness of the right-hand and left-hand joint sockets.
3. Check to see if any slipping of the ends of two contact wires has taken place. When viewed through the top window, there should be no gap between the two contact wire ends.
4. Tightness of the stainless steel studs.

Note : Contact wire splices should not be re-used.

10. Leaning mast: (As per DFCC Maintenance Manual)

Masts which appear to be out-of-plumb should be checked with a plumb bob. Since the normal height of the contact wire is 5.80m above rail level, the extent of deflection of the masts at this height would be measured by conventional method and If the mast is out-of-plumb, by more than 3cm upto 5cm, it should be kept under watch after making sure that there is enough earthwork all-round.

During patrolling and inspection, make a particular check of the condition of earthwork around foundations of masts on embankments. If the earthwork has been or is likely to be eroded away, same shall be strengthened.

Note: To eliminate excess/abnormal leaning mast suitable foundation to be cast and new mast to be provided.

11. Foot patrolling: (As per DFCC Maintenance Manual)

I. The object of foot-patrolling is to make visual inspection of every part of the OHE (including feeder line) so that any defects and abnormalities noticed are recorded and reported to the maintenance gangs for attention.

II. The engaged staff on foot-patrol should be equipped with signal flags, an emergency telephone instrument and essential tools required for attending to defects on the spot e.g., spanners for tightening bond connections.

III. The staff/labour on patrol duty should particularly look for the following:
(a) Damaged insulators.
(b) Displaced fittings and droppers.

(c) Excessive sagging or hogging of contact wire.
(d) Whether equalizing plate is tilted.
(e) Free movement of auto-tensioning device and position of with counterweight reference to upper and lower limits of movement marked on the mast.
(f) Presence of protective screens, caution and warning boards and ant climbing devices.
(g) Structural soundness of height gauges at level crossings.
(h) Bird-nests and pieces of stray wire likely to cause short circuits and branches of trees likely to infringe the OHE;
(i) Defective bonds and earth connections;
(j) Any obstructions including tree branches in the way of free movement of pantograph and trains;
(j) Signs of heavy sparking when trains pass;
(k) Isolators blades being fully in and for signs of sparking or overheating of isolators also condition of locks;
(l) General condition of switching stations en-route;
(m) Tilting of masts especially on high banks and masts with sand-core foundations;
(n) Number plates.
(o) Any other abnormal/unusual situation.
(p) Miscellaneous, if any.

12. <u>Anti-Creep: (As per DFCC Maintenance Manual)</u>

i. Check the tightness of suspension clamps bolts.
ii. Check the healthiness of double suspension clamps.
iii. Ensure availability of every part.
iv. Miscellaneous, if any.

13. <u>OHE Conductors by Tower car: (As per DFCC Maintenance Manual)</u>

i. Ensure smooth passage of pantograph.
ii. Recording of contact wire height and staggers, and adjust to be done if required.
iii. Checking and tightening of all kinds of PG clamp available. Contact & Catenary splices are to be provided if required.
iv. Contact & Catenary splices are to be provided if required.
v. Checking of in span droppers and if found no load taken are to replaced.
vi. Replacement of catenary and dropper clips if required.
vii. Miscellaneous, if any.

14. <u>Rail level and setting distance: (As per DFCC Maintenance Manual)</u>

During periodical checking rail level and setting distance should be found out against the GPS Coordinates as per executed works and the same shall be rectified by the concerned party.

15. <u>Checking and Maintenance of Portal Booms: (As per DFCC Maintenance Manual)</u>

Check all steel parts and remove rust, if any, from painted steelworks. Rusted portions, after cleaning must be given two coats of Zinc chromate premier followed by Aluminum paint.

Any Preventive OHE maintenance activity/ Schedule maintenance should be as per DFCCIL maintenance Manual.

5.0 Maintenance Schedule of Power Supply Installations (PSI):-

Normally all Maintenance Schedule should be followed as per DFCCIL Maintenance Manual for all type of Transformers, Circuit Breakers, Isolators, CT, PT etc. PSI equipment of different voltage levels in TSS, SP, SSP and ATS etc.

A. FORTNIGHTLY SCHEDULE

Battery

SN	Item	Inspection And Work to be Carried Out	Remarks
1.	Specific gravity	Check & record the specific gravity of each cell. At 27ºC, 1210 in charged condition and 1150 means discharged condition.	
2.	Distilled water	Check the level of electrolyte of the cells. Top up to the maximum mark, if required.	
3.	Temperature	Check & record the temperature of each cell.	
4.	Sulphation	Check & clean sulphation on terminal connectors and apply petroleum jelly, if required.	
5.	Condition of Plate	Check & clean physical condition such as cracks, distortions and accumulation of whitish deposit on +ve plates. Replace cell, if required.	
6.	Cell voltage	Check & record the voltage of each cell, it should be in the range of 2.0V to 2.2V.	
7.	Total voltage	Check & record the total voltage of battery, it should not be less than 110 Volts.	
8.	Vent plugs	Check for clear passage of gases. If hole is blocked, clean it.	
9.	Sedimentation and any internal damage	Check the cells for undue sedimentation and any internal damage. If observed, clean it. If damage can not be attended, replace the cell.	
10.	Inter cell connections	Check & clean with dry cloth. Replace defective nuts, bolts & washers.	
11.	Battery room	Clean the room and ensure proper ventilation.	

B. MONTHLY SCHEDULE

1. General Works on TSS, SSP & SP

SN	Item	Inspection And Work to be Carried Out	Remarks
1.	General cleanliness	Check surface of the roadway, proper drainage, rail access and pathways in the substation. Roadway and pathway should be firm and sufficiently elevated to prevent water-logging and proper drainage.	
2.	Vegetation	Check & clean vegetation near and around equipment in yard.	
3.	Tree and branches	Check & trim tree branches likely to come in the vicinity of live lines.	

4.	Caution, danger board, shock treatment chart and other boards	Check & clean the boards for damages, availability and well secured, replace if any damage is observed.	
5.	Fire extinguishers, fire buckets and first aid box	Check for expiry of fire extinguisher and first aid box and refill with necessary medicines. Fill up/replace sand in fire buckets, if required.	
6.	Structure and plant foundations	Check for any sinking or cracking and go round the structural work for checking tightness of various bolts and nuts.	
7.	All indication lamps on control panels	Check loose connections, fuse indicationetc. Tighten the same and replace the fuse, if required.	
8.	State electricity board meter readings	Check & record meter reading, MD, variation in voltage, frequency and power factor and important data parameters.	
9.	All jumpers & other connections	Check visually for flash/spark marks on jumper, nuts & bolts. Tighten the respective bi-metallic clamp/connections. Replace, if required.	
10.	Discharge rod	Check for cable strands broken and damages. If strands 20% broken, replace the cable.	

2. Power Transformer (Scott Connected / V Connected)

SN	Item	Inspection And Work to be Carried Out	Remarks
1.	Maximum temperature of transformer oil on dial indicator	Check and compare it with the previous values. Abnormal change in the temperature should be further investigated and reset indicator.	
2.	Maximum temperature of transformer winding on dial indicator	Check and compare it with the previous values. Abnormal change in the temperature should be further investigated and reset indicator	
3.	Oil level in conservator (MOLOG)	Check as per transformer oil temperature indication. If low, top up with the filtered oil.	
4.	Buchholz Relay	Check for gas collection. In case gas is collected, the DGA test of oil must be carried out.	DGA report must be examined for any abnormality.

5.	Oil level in Oil Immigrated Paper (OIP) condenser bushing	Check for oil level with reference to the oil level indicator:- • In case of sealed bushing, if no oil./less than minimum level indication. Measure Tan-Delta & capacitance and compare the test values recorded earlier. • In case of oil filled bushing, if any leakage is observed, the same shall be attended	Max. Allowable tan-Delta-0.007 and capacitance is 110% of the factory set value respectively or as per OEMmanuals.
6.	Tap changer	Check & record the position of tap changer in standby and service transformer.	
7.	Tank, radiators, conservator, Bushing, Oil level indicator, gauges	Check & clean dirt deposits, leakage and crack. If crack/leakage is observed, replace/attend it.	
8.	Dehydrating breather	• Check breather for choking due to insect/dirt. If breather is choked, remove the dirt etc. • Check the intactness of gasket and color of silica gel. If gasket is damaged and silica gel is pink, replace the same with new gasket and dry silica gel or recondition the old silica gel. If silica gel is too wet, check the BDV of transformer oil. • Check oil level in oil cup. Fill up oil in cup, if required.	If BDV is less than 50 kV, filter the oil till it reaches 50 kV.
9.	Heater in marshalling box	Check for proper functioning. In case not working, the connection should be checked and rectified.	
10.	Sound	Check abnormal humming, observe and arrest the humming sound.	Find out the reason
11.	All external connection	Check visually that all connections are normal without any discoloration due to local heating. In case of any sign of heating, clean and tighten the bolts and nuts.	
12	NIFPS	Visually Check for any abnormality. In the Nitrogen Injection Fire Protection System (NIFPS). Check pressure of nitrogen gas in the dial gauge as per OEM recommendation.	

3. Auto Transformer (8 MVA / 9 MVA / 12 MVA)

SN	Item	Inspection And Work to be Carried Out	Remarks
1.	Maximum temperature of transformer oil on dial indicator	Check and compare it with the previous values. Abnormal change in the temperature should be further investigated and reset indicator	
2.	Maximum temperature of transformer winding on dial indicator	Check and compare it with the previous values. Abnormal change in the temperature should be further investigated and reset indicator	
3.	Oil level in conservator (MOLOG)	Check as per transformer oil temperature indication. If low, top up with the filtered oil	
4.	Buchholz Relay	Check for gas collection. In case gas is collected, the DGA test of oil must be carried out.	DGA report must be examined for any abnormality.
5.	Oil level in Oil Immigrated Paper (OIP) condenser bushing	Check for oil level with reference to the oil level indicator:- • In case of sealed bushing, if no oil./less than minimum level indication. Measure Tan-Delta & capacitance and compare the test values recorded earlier. • In case of oil filled bushing, if any leakage is observed, the same shall be attended.	Max. allowable tan-Delta-0.007 and capacitance is 110% of the factory set value respectively or as per OEM manual.
6.	Tank, radiators, conservator, Bushing, Oil level indicator, gauges	Check & clean dirt deposits, leakage and crack. If crack/leakage is observed, replace/attend it.	

7.	Dehydrating breather	• Check breather for choking due to insect/dirt. If breather is choked, remove the dirt etc. • Check the intactness of gasket and color of silica gel. If gasket is damaged and silica gel is pink, replace the same with new gasketand dry silica gel or recondition the old silica gel. If silica gel is too wet, check the BDV of transformer oil. • Check oil level in the oil cup. Fill up oil in cup, if required.	If BDV is less than 50 kV, filter the oil till it reaches 50 kV.
8.	Heater in marshalling box	Check for proper functioning. In case not working, the connection should be checked and rectified.	
9.	Sound	Check abnormal humming, observe and arrest the humming sound.	Find out the reason
10.	All externa l connection	Check visually that all connections are normal without any discoloration due to local heating. In case of any sign of heating, clean and tighten the bolts and nuts.	
11	NIFPS	Visually Check for any abnormality in Nitrogen Injection Fire Protection System (NIFPS). Check pressure of nitrogen gas in the dial gauge as per OEM recommendation.	

4. 220 KV / 132 KV Triple Pole SF-6 Circuit Breaker

SN	Item	Inspection And Work to be Carried Out	Remarks
1.	Surface of porcelain pol e insulator unit	Check for damages, flash mark, chipping of insulator. Replace, if required. Clean with dry cotton cloth for dirtiness.	
2.	Counter reading	Check operation of counter and record counter reading of Circuit Breaker: - Before maintenance - After maintenance	
3.	Gas pressure	Check & record gas pressure with temperature	7.0Kg/cm sq at 20ºC temp or as per OEM manual.
4.	Mechanism box	Open the cover, check & clean mechanism box for condensation rain water, gasket of door, dust and hinges. Arrest the reason and attend it.	Clean & apply weather sealant material as per OEM manual.

5.	Heater, thermostat & lamp	Check function of heater, thermostat & lamp. If any defect, attend it.	Working & setting of thermostat is 25 – 30^0 C or
6.	Control circuit	Record operating voltage, check control circuit wiring and all connections should have proper lugs and ferule number in terminal box.	
7.	Local/Remote switch operation	Check the operation of breaker on local and remote switch. Breaker should have open & close on selected position.	
8.	Local and Remote switch	Check the function of local and remote switch.	
9.	Position of indicator	Check the proper alignment of breaker operation indicator with its position.	
10.	Shock observer	Check the oil leakage from shock absorber. Repair or replace, if necessary.	
11.	Limit switch & auxiliary contact	Check & clean the function of auxiliary limit switch, auxiliary contact and connection for tightness.	
12.	Condenser tripping device, if provided	Check the function of CTD for proper operation. If defective, attend the same.	
13.	Anti pumping device for CB	Check the function of APD for proper operation. If defective, attend the same.	
14.	Interlocking	Check the proper interlocking with isolator.	

5. 66 KV Double Pole SF-6 Circuit Breaker

SN	Item	Inspection And Work to be Carried Out	Remarks
1.	Surface of porcelain pole insulator unit	Check for damages, flash mark, chipping of insulator. Replace, if required. Clean with dry cotton cloth for dirtiness.	
2.	Counter reading	Check operation of counter and record counter reading of CB: Before maintenance After maintenance	
3.	Gas pressure	Check & record gas pressure with temperature	7.0Kg/ sq cm at 20ºC temp.
4.	Mechanism box	Open the cover, check & clean mechanism box for condensation rain water, gasket of door, dust and hinges. Arrest the reasonand attend it.	Clean & apply weather sealant material as per OEM manual.
5.	Heater, thermostat & lamp	Check function of heater, thermostat & lamp. If any defect, attend it.	Working & setting of thermostat is 30ºC – 35ºC.

6.	Control circuit	Record operating voltage, check control circuit wiring and all connections should have proper lugs and ferule number in terminal box.	
7.	Local/Remote switch operation	Check the operation of breaker on local and remote switch. Breaker should have open & close on selected position.	
8.	Local and Remote switch	Check the function of local and remote switch.	
9.	Position of indicator	Check the proper alignment of breaker operation indicator with its position.	
10.	Shock observer	Check the oil leakage from shock absorber. Repair or replace, if necessary.	
11.	Limit switch & auxiliary contact	Check & clean the function of limit switch, auxilioary contact and connection for tightness.	
12.	Condenser tripping device, if provided	Check the function of CTD for proper operation. If defective, attend the same.	
13.	Anti-pumping device for CB	Check the function of APD for proper operation. If defective, attend the same.	
14.	Interlocking	Check proper interlocking with isolator.	

6. 25 kV Double Pole Vacuum Circuit Breaker

SN	Item	Inspection And Work to be Carried Out	Remarks
1.	Surface of porcelain pole insulator unit	Check for damages, flash mark, chipping of insulator. Replace, if required.Clean with dry cotton cloth for dirtiness.	
2.	Magnetic actuator operating mechanism and drive link assembly, if applicable	Check presence of dust, looseness of bolts and distortion in the operating mechanism. Clean the same with dry cloth tighten the bolts and investigate the problem in mechanism & rectify.	
3.	Counter reading	Check operation of counter and record counter reading of CB: - Before maintenance - After maintenance	
4.	Mechanism box	Open the cover, check & clean mechanism box for condensation rain water, gasket of door, dust and hinges. Arrest the reason and attend it.	Clean & apply weather sealant material as per OEM manual.
5.	Heater, thermostat & lamp	Check function of heater, thermostat & lamp. If any defect, attend it.	

6.	Position of indicator	Check alignment and missing indicator	
7.	Control circuit	Record operating voltage, check control circuit wiring and all connections should have proper lugs and ferule number in terminal box.	
8.	Tripping mechanism	Check & correct operation of tripping mechanism.	
9.	Shaft of pole assembly	Check visibility of red band on shaft of the pole assembly.	
10.	Auxiliary circuits	Check the connections & function of auxiliary control circuit.	
11.	Local/Remote switch operation	Check the operation of breaker on local and remote switch. Breaker should have open & close on selected position.	
12.	Connections	Check loose/overheating connections. Tight, if found loose.	

SN	Item	Inspection And Work to be Carried Out	Remarks
13.	Earth connections & foundation bolts	Check & tight the earth connections & foundation bolts.	
14.	Condenser tripping device for CB, if provided.	Check the function of CTD for proper operation. If defective, attend the same.	
15.	Anti pumping device for CB	Check the function of APD for proper operation. If defective, attend the same.	
16.	Interlocking	Check the proper interlocking with isolator.	

7. 220/132 kV Triple Pole Motorized Isolator

S N	Item	Inspection And Work to be Carried Out	Remarks
1.	Isolator	Check visually the conditions of the support insulator. If observe any abnormality, attend it.	
2.	Mechanism & earthing	Check & clean mechanism, ensure proper operation, tightness of earthing connection and lubricate the moving parts.	

3.	Operation of Isolator	Check operation of isolator for correct adjustment ofblade and smooth hand operation.	
4.	Interlock	Check working of interlock without obstruction.	
5.	Earthing connections	Check & tight earthing of the frame with its fittings. Check tightness and condition of lead of earthing heel, if provided.	
6.	D C Motor	Check the working of DC Motor	

8. 220/132 kV Triple Pole Motorized Bus Coupler

SN	Item	Inspection And Work to be Carried Out	Remarks
1.	Motorized Bus Coupler	Check visually the conditions of the support insulator. In case of any abnormality, attend it.	
2.	Mechanism	Check & clean mechanism, ensure proper operation, tightness of earthing connection and lubricate the moving parts.	
3.	Operation of Bus Coupler	Check operation of isolator for correct adjustment of blade and smooth hand operation.	
4.	Interlock	Check working of interlock without obstruction.	
5	D C Motor	Check the working of DC Motor	

9. 25 KV Double Pole Motorized Isolator

SN	Item	Inspection And Work to be Carried Out	Remarks
1.	Main contacts	Check overheating and clean main contacts and lightly wipe with petroleum jelly	
2.	Small parts	Check all nuts, bolts, split pins for good condition. Replace if rusted or defective.	
3.	Simultaneous operation of blades (double pole)	Check the simultaneous operation of blades for correct alignment. In case of any variation, adjust it.	
4.	Locking arrangement	Check the condition of locking arrangements to the operating handle and provision of padlocks.	
5.	Arcing horn, if provided	Check arcing horn for correct alignment & working, if provided.	

6.	Earthing of operating handle	Check earthing of operating handle with copper flexible wire.	
7.	D C Motor	Check the working of DC Motor	

10. 220 KV/132 KV/ 66 KV/ 25 kV Current Transformer type- Single phase, oil filled naturalair cooled

SN	Item	Inspection And Work to be Carried Out	Remarks
1.	Surface of porcelain pole insulator unit	Check damages, flash mark, chipping of insulators. Replace, if required. Clean with dry cotton cloth for dirtiness.	
2.	Terminal connectors	Check overheated/rusted terminal connectors. Replace, if any sign of overheating/rusted	
3.	Terminal bolts. Nuts & washers	Check tightness of terminal bolts, nuts & washers. Replace, if any sign of rusting/oxidation.	
4.	Oil level	Check Oil level for leakage. Top up oil, if required and arrest the leakage.	
5.	Earthing connections	Check & tight the earth connections, if founds loose.	
6.	Arching horn, if provided	Check flash mark on horn tips	

11. 220 KV /132 KV / 66 kV/ 25 kV Lightening Arrester

SN	Item	Inspection And Work to be Carried Out	Remarks
1.	Visual inspection of lightning arrestor	Check sign of overheating. If observed, find out the reason and attend it.	
2.	Surface of porcelain pole insulator unit	Check damages, flash mark, chipping of insulators. Replace, if required. Clean with dry cotton cloth for dirtiness.	
3.	Lightning counter, if provided	Check & record the number of discharges of lightening counter, if meter is provided.	

12. Battery Charger

SN	Item	Inspection And Work to be Carried Out	Remark
1.	Carry out following work in addition to fortnightly schedule		
2.	Charger	Check & clean the charger outside and inside with dry cloth	

3.	Voltmeter & Ammeter	Check the proper function of voltmeter & ammeter.	
4.	Overheating	Check any sign of overheating inside the charger. Find out the reason and attend it.	

i. Control and Relay Panel

SN	Item	Inspection And Work to be Carried Out	Remarks
1.	Cleaning of panel	Check and clean accumulated dust externally & internally with dry cloth	
2.	Indicating and recording instrument	Check all indicating and recording instrument are working normally	
3.	Relay	Check & clean outer terminals of relay for any abnormality	
4.	Cable connections	Check & tighten all cable connections, if found loose	
5.	Terminal board	Check & clean terminal board, cable damage and cable leads with dry cotton cloth and attend the damage cable	
6.	Fuses	Check all fuses for proper rating & overheating, replace if necessary	
7.	Earthing connections	Check & tight the earth connections. If founds loose.	
8.	Doors	Check doors & hinges for intactness	
9.	Holes in panel	Check & plug the holes to avoid entry of moisture and insects	

C. QUARTERLY SCHEDULE

1. General Works on TSS, SSP & SP

SN	Item	Inspection And Work to be Carried Out	Remark
1.	Carry out following work in addition to monthly schedule		
2.	Bus bar, clamps & connectors by thermovision camera	Check nut, bolt & washers for overheating. Replace, if necessary.	

2. Auxiliary Transformer

Type- Double wound, single phase, oil immersed natural air cooled and step downtransformer for outdoor installation

SN	Item	Inspection And Work to be Carried Out	Remarks
1.	Visual inspection of transformer	Check any sign of oil leakage, overheating. If observed, attend it.	

2.	Cleaning of transformer	Clean the transformer, conservator, bushing and tank externally with clean cotton cloth.	
3.	Silica gel	• Check the condition of silica gel. If color is pink reactivate/replace. • Check oil in the cup of breather. Top up the oil in cup, if required.	
4.	Connection	Check, clean & tight all connections of HT and LT bushing terminals.	
5.	Oil level in conservator	Check & top up oil level in conservator with new filtered oil up to mark, if required.	
6.	AT enclosure	Check & clean AT enclosure for vegetation and other materials.	
7.	Condition of pole mounted ICDP(MCCB) switch, control panel and its fuses	Check condition of pole mounted ICDP (MCCB) switch, control panel and its fuses. Replace overheated lugs, fuses and tighten loose connections. Note: Use fuse wire 20 SWG for 34 Amp, 22 SWG for 24 Amp	
8.	Caution board and anti-climbing device	Check caution board and anti-climbing device for availability and proper condition.	
9.	Earthing connections	Check & tight the earth connections, if found loose.	
10.	Arcing horn HV busing	Check flash mark on arcing horn. Attend, if flashover marks observed & check the arcing horn gap.	Attend
11.	Drop out (DO) fuse	Check the condition of DO fuse barrel and fuse element. Replace the breakage, over heated and non-standard fuse wire, if any.	

3. 25 kV Potential Transformer

SN	Item	Inspection And Work to be Carried Out	Remarks
1.	Inspection of PT	Check oil leakage, chip or insulator broken and any sign of overheating. If observed, attend it.	
2.	Terminal	Check any overheating of terminals. Replace, if found overheated.	
3.	Terminal bolts. Nuts & washers	Check & replace terminal bolts, nuts & washers, if any sign of rusting/oxidation is found.	
4.	Oil level	Check the oil level in PT & top up with new oil up to mark, if required & measure BDV of oil.	BDV of oil more than 40 KV
5.	Fuse	Check fuse and neutral link for proper rating and tightness. Replace the fuse, if necessary	
6.	Earthing connections	Check & tight the earth connections, if found loose.	

4. 25 KV Motorized/manual Isolator Type – Double Pole

SN	Item	Inspection And Work to be Carried Out	Remarks
1.	Carry out following work in addition to monthly schedule		
2.	Door gasket and hinges	Check weather proof gasket and hinges for good condition. Replace/repair, if damaged.	
3.	Manual operation	Check the operation manually in local and remote, keeping the control door open. Observe whether the mechanism and operating rod functions smoothly without any rubbing or obstruction.	
4.	Electrical operation	Check the operation electrically in local and remote, keeping the control door open. Observe whether the mechanism and operating rod functions smoothly without any rubbing or obstruction.	
5.	Wiring connection	Check & tight wiring connections for loose, overheating or any defect.	
6.	Relays and contactors	Check & clean healthiness of relays, contactors and its contacts.	
7.	Heater	Check working condition of heater, if defective, attend it.	
8.	Grease and lubrication	Check & clean and apply grease and lubricate in all moving parts.	
9.	Earthing connections	Check & tight the earth connections, if found loose.	
10.	Locking arrangement	Check working of locking arrangement, for smooth functioning.	

5. 220 / 132 / 66 / 25 kV Lightening Arrester

SN	Item	Inspection And Work to be Carried Out	Remarks
1.	Carry out following work in addition to monthly schedule		
2.	Earthing terminal & earthing strip	Check & tight earthing terminal strip, tighten if loose.	
3.	Guarding ring, if provided	Check guarding ring, connections, tighten, if loose	

6. Battery Charger

SN	Item	Inspection And Work to be Carried Out	Remarks
1.	Carry out following work in addition to monthly schedule		
2.	Terminal connection	Check the terminal connection on the disconnecting link. Replace any overheating of terminal connectors, if found overheated or rusted.	
3.	Earth terminals	Check & tight the earth connections, if found loose.	

4.	MCB	Check visually for proper functioning and rating.	
5.	Three pin plug with socket	Check & replace overheating or defective three pin plug/socket.	
6.	Termination ends of the cable	Check & tight all termination ends of the cable, if loose.	

7. AC/ DC Distribution Panel

SN	Item	Inspection And Work to be Carried Out	Remarks
1.	Distribution panel	Check & clean the panel outside and inside with dry cloth.	
2.	Voltmeter	Check function of voltmeter	
3.	Earth terminals	Check & tight earth termination points on both ends. Attend, if any deficiency observed.	
4.	MCB	Check visually for proper functioning and rating	
5.	Temperature at termination points	Measure & record the temperature at termination points. If variation is more than 5 deg. With room temp, ensure the tightness.	
6.	LED	Check & replace the defective LED with tested LED.	
7.	Fuses	Check all fuses for proper rating & overheating, replace, if necessary	
8.	Holes in panel	Check & plug the holes to avoid entry of moisture and insects	

D. HALF YEARLY SCHEDULE

1. General Works on TSS, SSP & SP

SN	Item	Inspection And Work to be Carried Out	Remarks
1.	Carry out following work in addition to monthly and quarterly schedule		
2.	Fencing	Inspect all around switching station to observe any abnormality. If seen, attend the same.	
3.	Door and bonding between metal fencing panels and earth	Check hinges of all doors and bonding between metal fencing panels and earth, lubricant the hinges of all doors. If bonding deficient in metal fencing panels and earth, attend it.	
4.	Boards	Check and ensure proper painting of all caution, danger board, shock treatment board, schematic diagram, key box and other boards, if faded. Replace or repaint again by enamel paint	

5.	Fire extinguisher, buckets, first aid boxes	Inspect expiry date of fire extinguisher, fill buckets with sand, Refill first aid boxes with necessary medicine with valid date of expiry.	
6.	Oil sump, if available	Check & clean oil sump for dirtiness	

2. Traction Power Transformer (Scott / V Connected)

SN	Item	Inspection And Work to be Carried Out	Remarks
1.	Carry out following work in addition to monthly schedule		
2.	Test oil sample with oil test kit	Test for BDV and acidity. Compare and take action.	
3.	Insulation resistance of Winding and polarization. Index (PI) with 2.5kV Or 5kV megger for HV-L HV-E LV-E.	Insulation resistance is to be measured for 10 sec., 60 sec. and 600 sec. for HV-LV, HV-E and LV-E. Calculate PI (Polarization index) • Insulation resistance values should be compared with the last recorded value. • Compare PI values with values at the time of commissioning/ last recorded. • PI Insulation/ condition ▪ < 1.0 Dangerous ▪ Poor ▪ 1.25 Questionable ▪ 1.25 - 2.0 Satisfactory ▪ >2.0 Good • If PI value is less than 1.1, oil should be filtered. In case, the value does not improve even after filtrations, periodic overhauling should be under taken.	Ensure that transformer is disconnected. Ensure bushing are clean and free from moisture and temperature on which IR value is recorded. The OEM's manual may also be referred.
4.	PRD Explosion vent	Check and investigate for operation of PRD/explosion vent for any damage and presence of oil. Check connection and operation of PRD/explosion vent. Replace the damaged PRD with new PRD, if required.	

3. Auto Transformer (8 MVA / 9 MVA / 12 MVA)

SN	Item	Inspection And Work to be Carried Out	Remarks
1.	Carry out following work in addition to monthly schedule		
2.	Test oil sample with oil test kit	Test for BDV and acidity. Compare and take action as indicated in enclosed ANNEXURE-1	

3.	Insulation resistance of Winding and polarization. Index (PI) with 2.5kV Or 5kV megger for HV-L HV-E LV-E.	Insulation resistance is to be measured for 10 sec., 60 sec. and 600 sec. for HV-LV, HV-E and LV-E. Calculate PI (Polarization index) • Insulation resistance values should be compared with the last recorded value. • Compare PI values with values at the time of commissioning/ last recorded. • PI Insulation/ condition ▪ < 1.0 Dangerous ▪ Poor ▪ 1.25 Questionable ▪ 1.25 - 2.0 Satisfactory ▪ >2.0 Good • If PI value is less than 1.1, oil should be filtered. In case the value does not improve even after filtrations, periodic overhauling should be under taken.	Ensure that transformer is disconnected. Ensure busing are clean and free from moisture and temperature on which IR value is recorded The OEM's manual may also be referred.
4.	PRD Explosion vent	Check and investigate for operation of PRD/explosion vent for any damage and presence of oil. Check connection and operation of PRD/explosion vent. Replace the damaged PRD with new PRD, if required.	

4. 25 kV Double Pole Vacuum Circuit Breaker

SN	Item	Inspection And Work to be Carried Out	Remarks
1.	Carry out following work in addition to monthly schedule		
2.	All the moving part of the mechanism	Check, clean & lubricate the gear, bearing cum shaft rollers and latches	Lubricate as per annexure 'VI'
3.	All circlip, split clip and dowel pin	Check for availability and damages. Replace, if any damages.	
4.	Spring stroke	Measure & record spring stroke contact pressure.	Minimum 4 mm and max 5 mm.
5.	Contact wear indication	Check contact wear mark. If green indication is not visible under the bottle, then contacts may be worn off.	Change bottle or contact manufacturer /OEM
6.	Insulation Resistance of pole unit (when breaker in open position)	Check & record IR value of pole unit as per OEM: i. Top-Bottom ii. Top-Earth iii. Bottom-Earth Check with 2.5/5.0 KV megger.	More than 5000 MΩ

7.	Insulation Resistance of pole unit (when breaker in open position)	Check & record continuity & IR value of pole unit as per OEM: Top-Bottom- for continuity Top & Bottom -Earth Check with multimeter & 2.5/5 KV megger.	IR More than 5000 MΩ
8.	Insulation Resistance of . Motor . Closing coil . Tripping coil . AC&DC wiring	Check & record IR value of: Motor Closing coil Tripping coil iv. AC wiring & DC wiring Check with 500 V megger	i. Motor- more than 2 MΩ ii. Closing coil- More than 2 MΩ iii. Tripping coil- More than 2 MΩ iv. AC wiring & DC wiring more than 2 MΩ
9.	Motor, if applicable	Check carbon brushes & clean commutator. Replace carbon brushes, if worn out.	
10.	Top cover	Check sealing of top cover for any moisture trapping.	
11.	Wipe & travel measurement	Measure & record the wipe & travel measurement as per OEM manual.	

5. 220 KV / 132 KV Triple Pole SF-6 Circuit Breaker

SN	Item	Inspection And Work to be Carried Out	Remarks
1.	Carry out following work in addition to monthly schedule		
2.	All the moving part of the mechanism	Check, clean & lubricate the gear, bearing cum shaft rollers and latches	Lubricate as per annexure 'III'
3.	Insulation Resistance of pole unit (when breaker in open position)	Check & record IR value of pole unit i. Top-Bottom ii. Top-Earth iii. Bottom-Earth Check with 2.5/5.0 KV megger.	IR More than 1500 MΩ
4.	Insulation Resistance of pole unit (when breaker in open position)	Check & record continuity & IR value of pole unit as per OEM: iii. Top-Bottom- for continuity iv. Top & Bottom -Earth Check with multimeter & 2.5/5.0 KV megger.	IR More than 1500 MΩ
5.	Insulation Resistance between control circuit toground	Measure & record the Insulation Resistance between control circuits to ground by 500 V megger	IR More than 2 MΩ

6.	Closing /Trip coil	Check & record closing coil parameter: i. Voltage ii. Resistance iii. IR values Check with measuring instrument (megger& multimeter)	i. Voltage 110V DC+/-10% ii. Resistance 32 OHM iii. IR value more than 2 MΩ
7.	Mechanism box	Check penetration of rain water, rust and door hinges. Arrest the reason and rectify.	Weather sealant as per annexure 'V'
8.	Main terminal connector	Check overheated & rusted nuts, bolts, washers and bi-metallic strips. Replace, if required.	
9.	Shock observer	Check for oil leakage, if leakages attend it.	
10.	Charging time of closing spring	Check and record charging time of closing spring	15 sec. or as per OEM manual.

- In case of any variation in measured value of above parameters, OEM's manual for above parameter may be referred to.

6. 66 KV Double Pole SF-6 Circuit Breaker

SN	Item	Inspection And Work to be Carried Out	Remarks
1.	Carry out following work in addition to monthly schedule		
2.	All the moving part of the mechanism	Check, clean & lubricate the gear, bearing cum shaft rollers and latches	Lubricate as per annexure 'III'
3.	Insulation Resistance of pole unit (when breaker in open position)	Check & record IR value of pole unit i. Top-Bottom ii. Top-Earth iii. Bottom-Earth Check with 2.5/5.0 KV megger.	More than 1500 MΩ
4.	Insulation Resistance of pole unit (when breaker in open position)	Check & record continuity & IR value of pole unit as per OEM: i. Top-Bottom- for continuity ii. Top & Bottom -Earth Check with multimeter & 2.5/5.0 KV megger.	More than 1500 MΩ
5.	Insulation Resistance between control circuit to round	Measure & record the Insulation Resistance between control circuits to ground by 500 V megger	More than 2 MΩ Record the make & serial number of megger
6.	Closing /Trip coil	Check & record closing coil parameter: i. Voltage ii. Resistance iii. IR values Check with measuring instrument (megger& multimeter)	i. Voltage 110V DC+/-10% ii. Resistance 32 OHM iii. IR value more than 2 MΩ

7.	Mechanism box	Check penetration of rain water, rust and door hinges. Arrest the reason and rectify.	Weather sealant as per annexure 'V'
8.	Main terminal connector	Check overheated & rusted nuts, bolts, washers ad bi-metallic strips. Replace, if required.	Replace and use conducting compound
9.	Shock observer	Check for oil leakage, if leakages attend it.	Attend or Replace
10.	Charging time of closing spring	Check and record charging time of closing spring	15 sec. or as per OEM'S manual.

7. Auxiliary Transformer

TYPE- Double wound, single phase, oil immersed natural air cooled and step down transformer for outdoor installation

SN	Item	Inspection And Work to be Carried Out	Remarks
1.	Carry out following work in addition to quarterly schedule		
2.	BDV oil	Take sample of oil from bottom of tank and check the BDV of oil with BDV tester.	BDV more than 30 KV (with 2.5 mm spindle gap)
3.	Additional arching horn on fixed 9-ton insulator	Check for any flash mark on arching horn and measure the gap of aching horns.	Maintain gap 165 mm (min) & record.
4.	Measure & record the Insulation Resistance between		
(i)	HV-Earth	200 M ohm. Minimum (use 2.5 KV megger)	
(ii)	HV-LV	200 M ohm. Minimum (use 2.5 KV megger)	
(iii)	LV-Earth	2 M ohm. Minimum (use 500 KV megger)	
5.	Earth resistance	Check earth connections, measure & record the earth resistance by earth tester.	Not more than 10 ohm.
6.	LT cable	Check & replace damage, overheating of wires, lugs etc. of LT cable. Measure & record IR value of cable: i. Between AT to ICDP (MCCB) switch. ii. Between ICDP (MCCB) switch to control panel by 500 V megger.	2 M ohm min. at 30^0 Temperature.

8. 25 kV Potential Transformer

SN	Item	Inspection And Work to be Carried Out	Remarks
1.	Carry out following work in addition to quarterly schedule		
2.	Measure Insulation Resistance between		
(i)	HV-Earth, if possible	200 M ohm. Minimum (use 2.5 KV megger)	
(ii)	HV-LV	200 M ohm. Minimum (use 2.5 KV megger)	
(iii)	LV-Earth	2 M ohm. Minimum (use 500 KV megger)	
3.	Rod gap, if provided	Check & record rod gap setting	

9. 220/132/25 kV Current Transformer

Type- Single phase, oil filled natural air cooled

SN	Item	Inspection and Work to be Carried Out	Remarks
1.	Carry out following work in addition to monthly schedule		
2.	Earth link	Check & tight earth link in secondary box.	
3.	Measure Insulation Resistance between:		
(i)	HV-Earth	i. 2000 MΩ min. for 220/132 kV (use 2.5 kV megger) ii. 200 MΩ min. for 25 kV (use 2.5 kV megger)	
	HV-LV	i. 2000 MΩ min. for 220/132 kV (use 2.5 kV megger) ii. 200 MΩ min. for 25 kV (use 2.5 kV megger)	
	LV-Earth	i. 200 MΩ Min. for 220/132 kV (use 2.5 kV megger) ii. 2 MΩ min. for 25 kV (use 500 V megger)	
4.	Fuses	Check fuse for proper rating & overheating, replace, if necessary.	
5.	Arching horn, if provided	Check arching horn for flash mark and measure the gap of arching horns.	

10. 220/132 kV Triple Pole Isolator

SN	Item	Inspection And Work to be Carried Out	Remarks
1.	Carry out following work in addition to monthly schedule		
2.	Small parts	Check all nuts, bolts, split pins for good condition. Replace, if rusted or defective.	
3.	Jaws	Check the spring of jaws for proper gripping	
4.	Main contacts	Check overheating and clean main contacts and lightly wipe with petroleum jelly.	
5.	Articulated joints, sliding and bearing surface	Check & clean all articulated joints, sliding and bearing surface with kerosene oil and lubricate.	
6.	Interlock	Check interlock operation and lubricate all moving parts.	
7.	Arching horn, if provided	Check arching horn for flash mark and measure the gap of arching horns.	
8.	HV connections	Check & tight HV connections for overheating/rusting. Replace, if required	
9.	Earthing of operating handle	Check earthing of operating handle with copper flexible wire.	

11. 25 KV Double Pole Motorized/manual Isolator

SN	Item	Inspection and Work to be Carried Out	Remark
1.	Carry out following work in addition to quarterly schedule		
2.	Clearance of blades in open condition	Check, measure & record the distance between male and female contacts in fully open position.	Minimum 500mm
3.	Electrical operation	Check the isolator for smooth operation and correct alignment of male and female contacts.	
4.	Alignment of isolator	Check the correct alignment of isolator for its firm grip, while isolator is in closed condition.	

5.	Blade tips and contact fingers	Check blade tips for overheating and contact fingers and apply petroleum jelly on the contact surface.	
6.	Earthing of operating handle	Check earthing of operating handle with copper flexible wire.	Intact

12. 198/120/42 kV Lightening Arrester

SN	Item	Inspection And Work to be Carried Out	Remarks
1.	Carry out following work in addition to monthly & quarterly schedule		
2.	Leakage current, If monitor provided	Measure & record of leakage current	Less than 500 Micro Amps

13. Control and Relay Panel

SN	Item	Inspection And Work to be Carried Out	Remarks
1.	Carry out following work in addition to monthly schedule		
2.	Indication and recording instrument	Check all indication and recording instrument for healthiness. Replace if defective.	
3.	Relay	Check & clean outer terminals of relay	
4.	Door gasket & hinges	Check & replace gasket for damages. Replace with new, if necessary	
5.	All connections	Check all connections. Tighten, if found loose.	

14. Condition Based Maintenance through Thermo vision Camera (TractionSubstation) AC TRD (Traction Sub- Station)

SN	Item	Inspection And Work to be Carried Out	Remarks
1.	Cable Termination of cable isolators ends connection	- Check thermal scanning by thermo vision camera. - The temperature of hot spots is compared with adjacent/nearby similar components.	
2.	All joints, commotions, jumpers PG clamps of incoming switch yard and outgoing switch gear	- Check thermal scanning by thermo vision camera. - The temperature of hot spots is compared with adjacent/nearby similar components.	
3.	Transformers bushing connection	- Check thermal scanning by thermo vision camera. - The temperature of hot spots is compared with adjacent/nearby similar components.	
4.	Bus bar joints	- Check thermal scanning by thermo vision camera. - The temperature of hot spots is compared with adjacent/nearby similar components.	

5.	LA,CT,PT connections from bus bar and PG clamps	- Check thermal scanning by thermo vision camera. - The temperature of hot spots is compared with adjacent/nearby similar components.	
6.	HV side bi-polar isolators. Single pole isolator contact and bas bar	- Check thermal scanning by thermo vision camera. - The temperature of hot spots is compared with adjacent/nearby similar components.	
7.	Power cable terminations and joints provided in sub-stations	- Check thermal scanning by thermo vision camera. - The temperature of hot spots is compared with adjacent/nearby similar components.	

15. Earthing & Bonding

SN	Item	Inspection And Work to be Carried Out	Remarks
1.	Bonding & earth connection with structure	Check physical soundness & tightness of bonding & earth connection with structure, Lightning arrestor and electrical equipment inter panel connections.	
2.	Earth resistanceof electrical equipment body, fencing and structure with electrode	Measure & record the earth resistance of electrical equipment body, fencing, structures by earth tester.	
3.	Shielding wire	Check termination of shielding wire condition and bonding with structures.	
4.	Earth resistance of each electrode after disconnection	Measure & record the earth resistance of each electrode after disconnecting it from common earth system by earth tester.	
5.	Combined earth resistance of TSS/SP/SSP with rail	Measure & record the earth resistance of combined electrode without disconnecting it from common earth system by earth tester.	For TSS < 0.5 and SP and SSP <2.0 □

16. Battery Charger

SN	Item	Inspection And Work to be Carried Out	Remarks
1.	Carry out following work in addition to monthly & quarterly schedule		
2.	Cleaning	Check and clean battery charger from outside and inside with soft wire brush.	

3.	i. Rectifier ii. Coarse, fine/ control switch, iii. Trickle/Boost change over switch	Check & tight connection of all terminal connectors and working: i. Rectifier, ii. Coarse/fine control switch iii. Trickle/Boost change over switch	

Note: In case battery charger is of SMPS type, OEM's manual may be referred to for thescheduled maintenance.

17. AC/DC Distribution Panel

SN	Item	Inspection And Work to be Carried Out	Remarks
1.	Carry out following work in addition to quarterly schedule		
2.	Panel	Check & clean the panel inside and outside by soft wire brush.	
3.	MCB, rotary switches	Check & clean for smooth operation & working without obstruction	
4.	Tightness	Check & tight cable termination of MCBs, rotary switch and bus bar	

E. YEARLY SCHEDULE

1. General Works on TSS, SSP & SP

SN	Item	Inspection And Work to be Carried Out	Remarks
1.	Carry out following work in addition to half yearly schedule		
2.	Building	Check for roof cleaning, leakage and condition of building.	
3.	Lightning screen (earth screen wire)	Check strain clamps of wire. If any defect is observed, attend it.	
4.	Structure and fencing	Check Structure and fencing for soundness, loose connection etc.	
5.	Trenches	Open and clean trenches for possibility of lizard and other insects entry in control panels/equipments.	
6.	Tree & branches	Check & prune the tree branches near to live conductor as required.	

2. Traction Power Transformer (Scott / V Connected)

SN	Item	Inspection And Work to be Carried Out	Remarks
1.	Carry out following work in addition to half yearly schedule		
2.	Transformer tank, bushings, taps, changer, radiator and connection joints	Infrared temperature scanning is to be done preferably at the time of full load to find ay over heating parts & compare with previous results.	

3.	Oil Immersed Paper (OIP) condenser bushing	Measure, record & compare the test for Tan-delta, capacitance and IR(Shearing bridge may be used for tan delta & capacitance). Compare with earlier value. In case of deviation in reading from standard value, replace or consult manufacture. -Bushing should be cleaned for dust and moisture. - Test should be done on sunny day. - Max allowable Tan- delta is 0.007 - Max allowable capacitance 110%	OEM's manual may also be referred to.
4.	Gasket joints of transformer	Check & tight the bolts evenly to avoid uneven pressure in case of leakage only.	Tightening of bolts to be done in proper sequence.
5.	Rod gap setting of bushing	Check rod gap setting. Adjust, if required.	
6.	Test oil in transformer	The oil sample is tested as per IS-1866-2000. If the oil value does not meet the requirement, oil to be replaced.	The oil test results should confirm IS 1866- 2000 or latest or as per OEM's manual.
7.	Dissolved gas analysis (DGA) on oil	Oil sample taken for DGA as per OEM's manual.	The DGA test results should meet as per OEM's manual
8.	Working of tap changer switch	Move the tap setting switch up and down full range so that by self-wiping action good contacts are assured.	
9.	Relays, alarm & their circuits	Check relay and alarm contacts, their Operation, fuses etc. and relay accessories. Clean the components, replace contacts and fuses, if necessary. Change the relay setting only if necessary.	
10.	Control boxes & Terminal boxes/cable	Check for water tightness of boxes & terminal boxes. Replace gasket, if required	
11.	Temperature indicators	Check for thermometer holding pockets, oil to be replenished, if required.	
12.	Dial type oil gauge	Check pointer for free movement. Adjust, if required.	
13.	Earth resistance	Measure & record earth resistance by earth tester. Take suitable action, if earth resistance is high.	Less than 10 ohms
14.	Buchholz relay	Check operation and measure the insulation resistance by 500V megger and continuity test for contacts with test lock screw set as 5°.	IR not less than 20 mega ohm. On continuity test relay shall operate.

15.	Voltage ratiotest with wheat stone bridge, voltmeter	Precautions to be taken as per normal practice being followed for measurements with wheat stone bridge. Compare the trends of the ratio with reference to pre commissioning/ factory value/ earlier test	The sudden variation in ratio from the last measured value should call for further investigation.
16.	Winding resistance test with wheat stone bridge voltmeter-ammeter	The test conducted on principal tap by applying DC current. The measured value should be converted to 75°C for Conversion. Compare the value with the pre- commissioning/ factory test values. Deviation in absolute value should be less than ± 5% of pre-commissioning or factory set value.	This test shall be last test on winding to avoid DC flux remaining in core resulting in incorrect values in the other tests.

3. Auto Transformer (8 MVA/ 9 MVA/ 12 MVA)

SN	Item	Inspection And Work to be Carried Out	Remarks
1.	Carry out following work in addition to half yearly schedule		
2.	Transformer tank, bushings, taps, changer, radiator and connection joints	Infrared temperature scanning is to be done preferably at the time of full load to finday over heating parts & compare with previous results.	
3.	Oil Immersed Paper (OIP) condenser bushing	Measure, record & compare the test for Tan-delta, capacitance and IR(Shearing bridge may be used for tan delta & capacitance). Compare with earlier value. In case of deviation in reading from standard value, replace or consult manufacturer. -Bushing should be cleaned for dust and moisture. - Test should be done on sunny day. - Max allowable Tan- delta is 0.007 - Max allowable capacitance 110%	OEM's manual may also be referred to.
4.	Gasket joints of transformer	Check & tight the bolts evenly to avoid uneven pressure in case of leakage only	Tightening of the bolts to be done in proper sequence.
5.	Rod gap setting of bushing	Check rod gap setting. Adjust, if required.	
6.	Test oil in transformer	The oil sample is tested as per IS-1866-2000. If the oil value does not meet the requirement, oil to be replaced.	The oil test results should confirm IS 1866-2000 or latest or as per OEM's Manual.
7.	Dissolved gas analysis (DGA) on oil	Oil sample taken for DGA as per OEM's manual.	The DGA test results should meet as per OEM's manual

8.	Relays, alarm & their circuits	Check relay and alarm contacts, their Operation, fuses etc. and relay accessories. Clean the components, replace contacts and fuses, if necessary. Change the relay setting only if necessary.	
9.	Control boxes & Terminal boxes/cable	Check for water tightness of boxes & terminal boxes. Replace gasket, if required	
10.	Temperature indicators	Check for thermometer holding pockets, oil to be replenished, if required.	
11.	Dial type oil gauge	Check pointer for free movement. Adjust, if required.	
12.	Earth resistance	Measure & record earth resistance by earth tester. Take suitable action, if earth resistance is high.	Less than 10 ohms
13.	Buchholz relay	Check operation and measure the insulation resistance by 500V megger and continuity test for contacts with test lock screw set as 5°.	IR not less than 20 mega ohm. On continuity test relay shall operate.
14.	Voltage ratiotest with wheat stone bridge, voltmeter	Precautions to be taken as per normal practice being followed for measurements with wheat stone bridge. Compare the trends of the ratio with reference to pre commissioning/ factory value/ earlier test	The sudden variation in ratio from the last measured valu e should call for further investigation.
15.	Winding resistance test with wheat stone bridge voltmeter-ammeter	The test conducted on principal tap by applying DC current. The measured value should be converted to 75°C for conversion. Compare the value with the pre-commissioning/ factory test values. Deviation in absolute value should be less than ± 5% of pre-commissioning or factory set value.	This test shall be last test on winding to avoid DC flux remaining in core resulting in incorrect values in the other tests.

4. 25 kV Vacuum Circuit Breaker

SN	Item	Inspection And Work to be Carried Out	Remarks
1.	Carry out following work in addition to half yearly schedule		
2.	Auxiliary switches connected in conjunction with mechanism	Check for correct position of the aux. switches and carry out few close & open operations. Signals occurred correctly and driving level is correctly positioned auxiliary switch.	
3.	Cable glands	Check tightness of the fairleads and locked. The free fairleads must be covered with relative plate and blocked.	
4.	Terminal connectors	Check & clean connector, nuts, bolt, washer and bimetallic strip Polish the surface and freely plate bimetallic strip properly, if provided	

5.	Travel Graph Recorder Test	Measure & record the closing and tripping timing in mili second as per OEM manual:	
		Travel of contact in mm.	
		Measure the Contact resistance in Micro ohms as per OEM:	

5. 220 KV / 132 kV SF-6 Circuit Breaker Type – 120 – SFM – 32A,MAKE – Any

SN	Item	Inspection And Work To Be Carried Out	Remarks
1.	Carry out following work in addition to half yearly schedule		
2.	Surface of rollers and sliding	Check & lubricate the bearing surface of rollers and sliding surfaces of lever.	Lubricate as per annexure 'III'
3.	Mechanism	Check manual operation of mechanism slowly at 80% of normal voltage. Ensure that link and lever should move freely.	Operate at 88% Volt DC
4.	Tripping mechanism	Check the clearance ST (solenoid magnet stroke) between armature and core by feeler gauge.	Between armature and core 2.0 to 2.4 mm
		Check & record the clearance GT between plunger and trigger by feeler gauge.	0.5 to 0.9 mm
		Check the clearance & record of ST, GT	1.5 to 1.7 mm
5.	Closing Mechanism	Check the clearance SC (solenoid magnet between Armature and core SC	4.5 to 5.5 mm
		Check the pumping prevention pin to latch distance clearance "P" between anti pumping Pin and latch	P=1 to 2 mm
6.	Pole and Mechanism setting Check & record mechanism setting of interrupter & operating mechanism:		
	Operating Mechanism	Check over stroke "SO" completely open position to stop position.	6+1 mm (B2-B1)
	Interrupter	Measure the stroke and contact wipe between fix contact and moving contact of pole	Stroke (A1) – (A3) = 180=2 mm, -5 mm Wipe (A2-A3) = 36+ 2mm
		Operation Mechanism Stroke:- Check stroke "S" from closed portion to completing opened position	Stroke (B3-B2) = 40+1 MM – 3 MM
7.	DC motor:		
	i. Inlet filter	Check & clean inlet filter. Replace, if damaged.	
	ii. Carbon brushes	Check & clean condition of carbon brush and commutator. Replace, if defective carbon brush.	
	iii. 'V'Belt of motor	Check condition and tension of belt motor to compressor. Replace the belt, if defective or loose.	Tension <2 times of belt diameter.

SN	Item		Inspection And Work To Be Carried Out		Remarks
8.	Operation timing		Check & record closing & opening timing with timer	70 - SFM-32A	i. Closing time <100ms ii. Opening time < 30ms
				120-SFM-32A	i. Closing time <100 ms ii. Opening time <30 ms
9.	Contact resistance (CB close position)		Check & record contact resistance of fixed & moving contact with contact resistance meter.		< 50 μ Ω
10.	Safety valves		Check the control valve for air leakage and safety valve for function.		Working condition
11.	Checking of setting of				
			70-SFM-40AA		120-SFM-32B
	Gas pressure	Normal	5.0 kgf/cm2		7.0 kgf/cm2
		Alarm	5.5 kgf/cm2		6.5 kgf/cm2
		Lockout	5.0 kgfcm2		6.0 kgf/cm2

Note: The above values/settings need to be matched from the manual of respective OEM,in case of any variation of above parameters.

6. Auxiliary Transformer

Type - Double wound, single phase, oil immersed natural air cooled and stepdown transformer for outdoor installation

SN	Item	Inspection And Work To Be Carried Out	Remarks
1.	Carry out following work in addition to half yearly schedule		
2.	Winding continuity	Measure & record winding continuity on all tapings with multimeter /500 V megger.	
3.	Tap changer	Check the smooth operation of tap changer on all tapings	
4.	Acidity of oil	Check the acidity of transformer oil.	Maximum 0.5mg KOH/gm
5.	Ratio test	Conduct ratio test by applying AC supply to HV winding and measure the voltage at LV side winding.	
6.	Jumpers	Check HT and LT jumpers & lugs for loose & flash mark. Replace, if loose & flash.	
7.	Painting	Paint to be done, if color of tank is faded/rusted. Paint to be done with epoxy and polyurethane paints as per A& C slip no. 8 to the RDSO specification no. ETI/PSI/118(10/93) or as per OEM's manual.	
8.	DO fuse wire	Replace the fuse wide with new one.	

7. 220 KV/132 KV/ 25 kV Potential Transformer

SN	Item	Inspection And Work To Be Carried Out	Remarks
1.	Carry out following work in addition to half yearly schedule		
2.	Duplicate earthing	Check duplicate earth conditions for broken & loose. Attend the same	
3.	Oil testing if possible	Test the oil with BDV tester. If possible	
4.	Ration test	Conduct ratio test by applying AC supply to HV winding and measure the voltage at LV side winding	
5.	Painting	Paint to be done, if color of tank if faded/rusted. Paint with epoxy and polyurethane paints or as per OEM manual.	

8. Current Transformer 220 kV/132 /66 kV/25kV Type- Single phase, oil fillednatural air cooled.

SN	Item	Inspection And Work To Be Carried Out	Remarks
1.	Carry out following work in addition to half yearly schedule		
2.	Arching horn gap, if provided	Check & measure arching horn gap as required.	
3.	Oil testing, if possible	Test the oil with BDV tester	BDV more than 40 KV
4.	Painting	Paint to be done, if color of tank if faded/rusted. Paint with epoxy and polyurethane paints as per OEM's manual.	
5.	Polarity test	Conduct polarity test and check the direction of current.	
6.	Ratio test	Conduct ratio test by applying AC supply to HV winding and measure the voltage at LV side winding.	

9. 220/132/ kV Isolator Type –Triple Pole

SN	Item	Inspection And Work To Be Carried Out	Remarks
1.	Carry out following work in addition to half yearly schedule		
2.	Operation of isolator (double & Triple Pole)	Check the operation of isolator slowly and check for simultaneous operation of blades on the poles and correct alignment of blade tips in the fixed contact jaws of the poles	
3.	Insulation resistance	Measure & record IR values of pedestal and tie rod insulators with 2.5 KV megger.	More than 1000 MΩ
4.	Operating handle of main blade and earth blade, if provided	Check the locking arrangement to the operating handle of main blade and earth blade	

5.	Bearing	Check & clean the bearings of rotating bushings of insulator and lubricate with grease.	
6.	Bus connections and bimetallic strips	Check & clean for tightness, sigh of oxidation on bus connections and bimetallic strips correct if necessary. Replace bimetallic, if required.	
7.	Paint	Check & replace rusted parts and paint the on rusted parts, if any.	Cold galvanizing paint

10. Motorised Isolator, 25 kV Type – Double Pole

SN	Item	Inspection And Work To Be Carried Out	Remarks
1.	Carry out following work in addition to half yearly schedule		
2.	Insulation resistance of motor	Measure & record Insulation resistance of winding with 500V megger	More than 2 MΩ
3.	Commutator	Check & clean commutator with dry cotton cloth	
4.	Carbon brushes	Check carbon brushes for under size. Replace, if necessary.	
5.	Arching horn, if provided	Check correct setting and alignment of arcing horn. Adjust, if required	

11. 220 KV 132 KV / 66 KV / 25 KV Lightening Arrester

SN	Item	Inspection And work to be carried out	Remarks
1.	Carry out following work in addition to half yearly schedule.		
2.	Lightning arrestor (LV side) HT –E	Check, measure & record insulation resistance of each unit of lightning arrestor with by 2.5/5.0 kV megger.	IR value more than 1000 M ohms
3.	Lightning arrestor (HV side) HT-E	Check, measure & record insulation resistance of each unit of lightning arrestor with by 2.5/5.0 kV megger.	IR value more than 1000 M ohms
4.	Earth resistance	Check & record the earth resistance of each earth connection with earth resistance meter.	Not more than 0.5 ohms
	Lightning arrestor details	Check & record the following: i. Location ii. Rating iii. Make iv. Sr no v. Date of MFG vi. Date of commission vii. Date of measurement viii. IR value ix. THRC value of leakage current, x. No. of Lightenings passed	Record

6.	THRC leakage current value	Check & record leakage current before and after cleaning of LA with THRC meter.	If the leakage current between 350- 500 µ A, keep it under close observation & beyond 500 µA, remove fro m service.

12. Control and Relay Panel

SN	Item	Inspection And work to be carried out	Remarks
1.	Carry out following work in addition to half yearly schedule		
2.	Operation of relay	Check & record operation of all relays	
3.	Testing of relay	Conduct relay testing by testing instrument and record. Compare as per previous settings.	
4.	Contactors, pus h button, switches	Check & clean al contactors, push button and switches from burnt, carbonize or corroded marks, Replace if defective.	
5.	Check voltage	Check & record voltage between + (ve) to Earth & -(ve|) to Earth. If observe more difference, then necesasry take action.	

13. Condition Based Maintenance through Thermo vision Camera (Traction Substation)

1. AC TRD (Traction Sub-station, SP and SSP)

SN	Item	Inspection And Work to be carried out	Remarks
1.	Carry out all works as in half yearly schedule		

14. Earthing & Boding

SN	Item	Inspection And Work to be carried out	Remarks
1.	Carry out all work in half yearly schedule		
2.	Buried rail	Check condition of connections traction rail to buried rail and mat to buried rail. Clean & tighten all connections	

15. Battery Charger

SN	Item	Inspection And Work to be carried out	Remarks
1.	Carry out all work in addition to half yearly schedule		
2.	Transformer winding	Measure & record the insulation resistance of winding at room temperature with 500 V megger.	More than 2 M Ω
3.	Electrolyte condenser	Measure & record the capacitance value with LCR meter. Replace if open circuited/short circuited.	
4.	Cable glands	Check cable holes and unwanted holes. Provided proper size of glands, close unwanted holes and gaps.	
5.	Cable ends	Check for crimping of cable ends with connectors\lugs and cable ends crimped with suitable size of connectors/lugs.	

16. AC/DC Distribution Panel

SN	Item	Inspection And Work to be Carried Out	Remarks
1.	Carry out following work in addition to half yearly schedule		
2.	Cable glands	Check cable holes and unwanted holes. Provide proper size of glands, close unwanted holes and gaps.	Cork gasket and HOLDITE compound
3.	Cable ends	Check for crimping of cable ends with connector/lugs and cable ends crimped with suitable size of connectors/lugs.	Proper crimped
4.	Insulation resistance of cable	Measure & record insulation resistance of cable at room temp. with 500 V megger.	More than 2 M
5.	Stickers/paint	Check stickers/paint to MCBs/rotary switch. Paste new sticker/paint to MBCs/rotary switch, if faded.	
6.	Painting	Paint to be done, if color of panel is faded/rusted. Paint with epoxy and polyurethane paints as per A & C slip no. 8 to the RDSO specification no. ETI/PSI/118 (10/93) or as per OEM manual.	

F. THREE YEARLY SCHEDULE

1. SF-6 Circuit Breaker

SN	Item	Inspection And Work to be Carried Out	Remarks
1.	Carry out following work in addition to yearly schedule		
2.	Mechanical travels	Measurement & record of mechanical travels, Adjust if required.	As per maintenance manual
3.	Door gasket & hinges	Replace & check the door gasket of the operating mechanism and hingesfor damages. Replace with new one.	
4.	Movement of rollers	Check the free movement of rollers. If not free, replace the same	
5.	Contact resistance	Measure the value of contact resistance of pole between upper terminal and lower terminal. If value is more than 120% of the design value specified in maintenance manual contact manufacturer.	Approach the Manufacturer for rectification

2. 220 kV/132 kV/66 KV / 25kV Current Transformer

SN	Item	Inspection And Work to be Carried Out	Remarks
1.	Primary injection test	Conduct primary injection test and record reading. Compare with pre commissioning test.	

G. FIVE YEARLY SCHEDULE

1. Power Transformer/Auto Transformer

SN.	Item	Inspection And Work to be Carried Out	Remark
1.	Carry out following work in addition to monthly, half yearly & yearly schedule		
2.	Painting of transformer tank, conservator radiator and other exposed parts	Clean the exposed parts thoroughly. Transformer tank and other parts should be painted with epoxy and polyurethane paints as per OEM recommendation	-In case of previous enamel paints, the repainting may be carried out after 3years polluted area. -In case of previous epoxy and polyurethane pants the repair painting may be carried out after 5 years
3.	Pipe work	Check for any damages, misalignment and leakages. If any misalignment the pipe should be realigned and joint made.	-----

4.	Test oil in transformer	Measure the inhibitor content in the oil. In the new oil it has to be within 0.25-0.30% by total weight of oil. If the inhibitor content in the oil reduces to 0.15% it should be re- inhibited by addingrequired amount of DBPC (2,6 Ditertiary Butyl para Cresol) or as per OEM recommendation	
5.	Magnetizing current test with voltmeter, ammeter and lamp	Check by applying 230 V AC supply preferably on LV side with series lamp. Compare the value with respect to pre commissioning value. Any abnormal increase to the order of 50 times indicates that these are a fault inside	Ensure that the comparison is doneto the value taken at LV side only
6.	Winding resistance test with wheat stone bridge, voltmeter and ammeter	The test conducted on principal tap by applying DC current. The measure value should be converted to 75^0C. Compare the value with the pre-commissioning/ factory test values. Deviation in absolute vale shall be less than +-5% pre-commissioning or factory test value.	This test should be last the test on winding to avoidDC flux remaining in core resultin g erroneous value in the other test
7.	Impedance test with voltmeter and ammeter	Test to be conducted on principal tap applying 230V single-phase AC to the HV side with LV side shorted and calculate V/I and convert to percentage impedance. Compare the value with the pre-commissioning value, any deviation beyond 5% calls for further analysis.	Any deviation beyond 2% fromthe earlier values shall be consideredfor keeping watchon the transformer.

H. Vacuum Circuit Breaker

The operating mechanism should be checked/attended (without dismantling the circuit breaker/interrupter) if circuit breaker has competed 5 years of service or 10,000 electrical switching operations.

a. SIX YEARLY SCHEDULE

1. SF-6 Circuit Breaker,

The following items should be checked/attendee (without dismantling the circuit breaker/interrupter) if circuit breaker has competed 6 years of service or 2000 electrical switching operations or 5000 mechanical CO operations.
In case of interrupter, if it has completed 6 years of service or 5000 Electrical/ Mechanical CO operations.

SN.	Item	Inspection And Work to be Carried Out	Remarks
1.	Carry out following work in addition to monthly, half yearly, yearly, threeyearly schedule		
2.	Inspection and re-adjustment of Operating mechanism	Measurement of mechanism dimension, Lubricating the mechanism, leakage check of dash pot oil, Looseness of circlips and nuts, check free movement of antipumping pin and trip & closing plungers, Replacement of some parts of mechanism.	
3.	Connecting rod end joint and Bellows	Check the crack of connecting rod end joint and Bellows. Replace, if crack	Replace
4.	Lubricate the mechanism linkages	Check & clean lubricating mechanism linkage with dry cotton cloth	As per annexure
5.	Contacts and nozzle of interrupting pole	Check contact and nozzle. Renew them, if required	As per maintenance manual
6.	Absorbent	Check absorbent for SF6 gas by-products. Renew the absorbent for SF6 gas by-products	Renew
7.	Moisture sealant	Check moisture sealant to all cemented joints of porcelain. Apply moisture sealant to all cemented joints of porcelain.	Apply moisture sealant
8.	Shock absorber	Replace Shock absorber	Replace
9.	Gas system	Check setting of gas density switch	As per maintenancemanual
10	Compressor	Take out the compressor after every sis year refit the items which are damaged.	Replace the defective items

Any Preventive PSI maintenance e/ Schedule maintenance should be as per DFCCIL maintenance Manual.

6.0 TIME SCHEDULE

6.1. TIME OF START AND COMPLETION

1. The completion period for said maintenance work **is 02 (Two) years**.

2. The Contractor shall be expected to mobilize and commence supply of maintenance services as per instruction received from competent authority of DFCCIL to start the work.

3. If the Contractor fails to start the awarded work **within 10 days,** DFCCIL shall without prejudice to any other right or remedy, be at liberty to forfeit the full Earnest Money Deposit and retention money along with Performance Guarantee of the Contractor.

7.0 Organization Structure:

7.1 Manpower Organization:

The Tenderer shall have adequate Manpower Organization required for the execution of the tendered work. The details are given below.

(i) Manpower deployed by the Contractor:

The Contractor should employ the following personnel for execution of the contract/ maintenance work, with the minimum qualification & experience as given in the para 6.0 (a) below:

(a) Supervisor In-charge
(b) Asst. Supervisor
(c) Technicians/Fitters (Highly Skilled)
(d) Skilled
(e) Semi Skilled
(f) Helpers (Un-Skilled)

(ii) (A) The contractor shall maintain the minimum manpower at the OHE & PSI depots as under:

Requirement for OHE depots				
	SEBN	**KWDN**	**DGON**	**Total**
Supervisor	1	0	0	**1**
Assistant Supervisor	1	1	1	**3**
Highly Skilled / Skilled	4	4	6	**14**
Unskilled/ Helpers	6	6	7	**19**
Total	**12**	**11**	**14**	**37**

(B)

Requirement for PSI/TSS depots				
	SEBN	**KWDN**	**DGON**	**Total**
Supervisor	1	0	0	**1**
Assistant Supervisor	1	1	1	**3**
Highly Skilled / Skilled	3	3	3	**09**
Unskilled/ Helpers	3	3	4	**10**
Total	**8**	**7**	**8**	**23**

Note: In case the deployed Supervisor will take leave or out of his headquarters, contractor will deploy another employee/s having equivalent educational & experienced as "Supervisor" for the work. At no time the gang shall be permitted to work at site without contractor's supervisor.

TRANSPOTATION (MOVEMENT OF Contractor's staff to different work site for regular maintenance and to attend emergency at site) will be the responsibility of Contractor. To ensure this, Contractor has to mandatorily to depute minimum 03 nos. MUV suitable vehicle (01 at IMD, 01 no. at each IMSD = Total 03 nos. vehicle) in 24x7 mode during entire currency of contract for movement of his gang to different work sites. DFCCIL will not facilitate any road vehicle for contractor's staff movement and only provide Tower Wagon as per avaliability. Contractor should quote his offer considering above requirement.

(iii) Required gang size:

The contractor should proportionately increase the size of the gang (i.e. Technicians and Helpers) during Break down/ power block/ night / special engineering works to cater the requirements.

(iv) Suitable reliever:

Since OHE maintenance work will be on all days the contractor should arrange necessary relief to the personnel working as per the labour laws from time to time for which no additional payment will be made by the Railways. Each gang should work under the instruction of DFCCIL Engineer. If performance of any contractor's staff is not found upto the mark, he should be replaced by suitable reliever within a week. If the staff is not replaced, should be treated as absent and penalty should be imposed as per special conditions of contract.

(v) The work shall be taken up in accordance to GCC & SCC services in which all provisions such as Safety of property & life's including all minimum wages act etc. Contractor is bound to follow all the conditions stipulated in GCC & SCC services**.**

7.2 Qualification of the contractor's Personnel for 25kV OHE & PSI Maintenance work:

(a) Since the contract is primarily manpower oriented, therefore qualification and competence of the manpower deployed by the contractor is a crucial factor. Therefore, Contractor is required to deploy Supervisors, Technicians and Helpers round the clock, for all maintenance and restoration of 25kV OHE Breakdown works. The contractor shall ensure the required minimum educational qualifications & experience for his deployed Supervisors, Technicians and Helpers as tabulated below:

(i) **Supervisor-in-Charge/ Design Engineer**: The supervisory staff posted by the contractor should at least be Engineering degree holder in Electrical/ Mechanical/ Electronics/computer discipline OR Diploma in Electrical / Mechanical / Electronics / Computer engineering & should have 3 years' experience in similar works OR should have worked at the supervisory level (SSE/JE of OHE/PSI/RC) in Railway for a minimum period of 3 years.

(ii) **Assistant Supervisor:** Assistant supervisory staff posted by the contractor should at least be Diploma in Electrical/Mechanical/Electronics/Computer Engineering & should have 1-year experience in similar works OR should have worked at the Assistant supervisory level (JE/Sr.Tech of OHE/PSI/RC) in Railway for a minimum period of 1 year.

(iii) **Technician/Fitter (Highly Skilled & Skilled):** Should have certificate of ITI issued by any recognized institution and with minimum 3 years' experience in relevant field OR Should have worked as OHE/PSI technician in Railways for a minimum period of 2 years OR 5 Years' Experience in the relevant OHE field.

(iv) **Semi-Skilled** Should have passed Matriculation and have minimum 3 years' experience in relevant field.

(v) Unskilled: Should have minimum 2 years' experience in the relevant field.

Note:1. Photostat copies above educational qualification Certificates shall be self-attested by the concerned person. The certificate of experience shall be submitted duly countersigned by the successful tenderer.

(a) Training to the contractor's personnel:

Training for the Contractor's personnel will be given free of cost by DFCCIL. The training for different level of staff will be different and shall be decided by GM/PM/E .All the personnel desired to be deputed for this work including supervisors have to undergo a scrutinizing test conducted by GM/PM/EL or his representative for their Jurisdiction. Candidates found suitable will be given a "competency certificate" valid for a period of currency of contract or as mentioned in Competency certificate before they are put on the job. They have to keep both Id Cards provided by contractor and "Competency Certificate" with them while on duty and for their movements in the Railway premises.
Contractor is required to deploy Supervisors, Technicians and Helpers round the clock for all OHE maintenance activities and shall ensure the required minimum educational qualifications & experience for his deployed Supervisors, Technicians and Helpers.

7.3 **Competency Certificate for 25kV Isolators (SP/DP) with or without Earthing Heel:** The contractor's personnel who are found to be qualified and suitable in the scrutiny by authorized representative of GM/EL/DDU shall only be allowed to work.
All the Supervisory Staff & Technicians of the contractors shall attend to the nominated officer of GM/EL/DDU of respective division to take the counseling & training to operate 25 kV Isolators (SP/DP) with or without Earthing Heel. The competent staff shall be given a "Competency Certificate for 25kV Isolators" by the above nominated officer and it shall be carried by such staff while on duty on the section/location.

7.4 Provisions of Payments of Wages Act:

The contractor shall comply with the provisions of the payment of wages Act 1936 with its latest amendments if any and the rules made there under in respect of all employees directly or through petty contractors or sub-contractors employed by him in the works. It shall be ensured that Minimum wages Act 1948, EPF, ESI act and Workmen compensation act 1923, Contract Labour act 1970, Miscellaneous Provision Act 1952 under about Law etc. rules & regulation as may be enacted by government or any modification thereof or any other law relating thereof and rules made there under time to time. In the event of non-Compliance of the contractor would undertake to indemnify DFCCIL on any cost or liability it may incur on account of such non compliance

(ii) Any dispute regarding labour deployment as per LABOUR ACT i.e. payment, weekly rest, extra work, leave, medical benefit, VDA or any other claim of deployed labour should be set right by the contractor. DFCCIL will not responsible for the same.

7.5 Medical fitness certificates:

All the personnel whether undergone training as per Para 6.1(b) above OR having experienced as per Para 6.1(a) above shall undergo a scrutinizing test conducted by authorized representative of CGM /DDU of the respective section. Candidates found suitable shall be issued with competency certificate by respective authorized representative of CGM /DDU .

All such selected staff of contractor shall medically fit for Railway's working circumstances round the clock, for all maintenance and restoration of Breakdown. The contractor's personnel shall be healthy, physically fit, eye sight normal with spectacles, BP/Diabetes etc., disabling / debilitating diseases controllable by drugs, no contagious/ infectious diseases, generally good physique. The contractor's personnel should be habitual to work on the height and no fear (Acrophobia) to working on height.

7.6 Police verification:

The contractor shall ensure police verification for all the staff deployed by him against subject work and to certify to the DFCCIL administration that the **"staff is free from criminal record".**

7.7 Commencement of O.H.E Maintenance Contract at field:

The contractor shall commence OHE maintenance work at field within 10 days from obtain a letter from competent authority of DFCCIL duly stating actual date of commencement of subject OHE and PSI equipment maintenance work and accordingly the completion period of contract (Twenty Four months) will be reckoned.

7.8 **Subletting of Contract:** The contractor shall not assign/sublet the contract in the interest therein or the part thereof to any other party or partner(s) without the consent of the DFCCIL.

7.9 Photo Identity Cards ,Uniform & PPE equipments to the Contractor Staff Deployed:

The deployed staff should be taken on duty after approval of DFCCIL and necessary photo identity cards of the staff deployed shall be issued by the contractor duly attested by the DFCCIL. The Contractor shall submit a list of suitable persons to be deployed for subject Maintenance work.

The personnel who are found to be qualified and suitable in the scrutiny by representative of CGM /DDU of the respective division shall only be allowed to work. However, the contractor shall be solely responsible for the conduct of the personnel deputed by him for the work.

The contractor shall arrange Identity cards valid only for a period of currency of contract or as mentioned in identity card for the suitable persons whom they have to keep with them while on duty and for their movements in the DFCCIL works pots.

The age of the contractor's personnel deputed for duty should be more than 18 years and less than 58 years as on date of commencement of work.

UNIFORM: Orange colour dungaree / allover with Retro reflective bond of min 2" width to be provided. Contractor will ensure minimum 3 uniforms for staff so that the staff are always in their protective uniform at work. The uniform shall bear Logo & Name of the Contracting Agency.

The contractor's staff shall not carry or display or exhibit any kind of advertisement on his person at DFCCIL/Railway premises.

The contractor's personnel should have knowledge of Local language Hindi / English for speaking/writing.

The contractor's personnel should not carry any unauthorized/dangerous/explosives in the complex and should not consume alcohol/intoxicating drugs etc. during duty hours.

The Contractor shall provide the PPE kit & safety item i.e. Safety belts, Helmets, First Aid Box, Safety Jackets (retro reflective) to his staff at his own cost.

These staff should reside close to the contractor's Depot for easy approach during emergencies. Residential addresses and phone numbers of specified staff should be made available with Traction Power Control and relevant OHE depot. The DFCCIL reserves the right to ask the contractor to remove any contractor's personnel from duty without assigning any reason whatsoever. The decision of DFCCIL's Engineer- in-charge will be final and binding on the contractor.
Any changes in the list shall be done with prior approval of DFCCIL authority.

7.10 Safety during O.H.E & P.S.I. Maintenance work at field:

The contractor shall ensure the safety of all the staff provided for maintenance of 2x25kV OHE& PSI equipment maintenance. In case of any injury or accident the contractor is liable for their compensation; DFCCIL will not take any responsibility to the contractor's provided labour.

7.10.1 The contractor should maintain safety belts to his staff those authorized to work on the OHE, shockproof safety shoes, raincoats and helmets etc. to all his site staff and two red banner flags, two sets of hand flags should be maintained with each gang at his own cost.

7.10.2 Communication facilities (cell phones) shall have for all the technicians and supervisors by 24x7 hrs.

7.10.3 While working in normal maintenance, if any breakdown occurs in the section, the maintenance staff should be diverted to breakdown site immediately as per the direction of DFCCIL's representative.

7.10.4 If any unusual occurrence/Breakdown taken place the contractor's staff should reach the Depot within 30 minutes in day time and 45 minutes at night time after receipt of the information from DFCCIL representative and to report the DFCCIL representative. The time of receipt of information should be recorded before DFCCIL representative and the call book memo should be jointly signed by the gang supervisor and DFCCIL representative before leaving to the breakdown site. In all such cases contractor should ensure full strength staff before leaving for the breakdown site.

7.10.5 Contractor shall provide for transportation of his staff by road/train for foot patrolling /AT fuse replacement/foreign body removal/any other activities specified by DFCCIL's representative.

7.10.6 Contractor shall be in position for arranging immediately attention of the defects noticed during various inspections for normal / emergency power block.

7.10.7 The arrangement for the stay of the contractor's staff shall be made by the contractor at his own cost.

7.10.8 Safety precautions to be followed as per safety plan/ maintenance manual.

7.10.9 The contractor shall have to take all precautions to prevent possible electrical accidents due to proximity of adjacent live OHE always in live condition, unless otherwise a power block is granted on the adjacent line. The contractor shall also take all precautions to protect his staff working on the line against traffic (running of trains) on the working lines/adjacent lines.

7.11 Progress Monitoring of Maintenance Schedule:

Progress of One TKM of maintenance shall cover all the equipment uniformly. Completion of total TKM of a particular depot/section should ensure completion of maintenance of all the pertaining equipment.

7.12 Tools and plants management:

7.12.1 Tools & plants etc. Per Depot/Gang (03 nos.), as per list in Annexure-1 should be owned and maintained by the contractor. Before ordering the T&P equipment, the successful tenderer shall seek approval from concerned GM/PM/Elect./DDU regarding the latest list of approved suppliers for the equipment's. The ladder trolley provided by DFCCIL shall be kept in good condition by the contractor.

7.12.2 Any additional tools and plants as required other than the tools for maintenance of the OHE/PSI shall be arranged by the contractor at his own cost as per Annexure-2 for each Gangs (3nos.)

7.12.3 Periodical load testing of tools, tackles, plants shall be carried out to ensure healthiness and safety of equipment duly maintaining testing record equipment wise. Meters like dynamometer, etc., shall be calibrated & maintained for periodical testing of tools & plants. Contractor has to ensure to take over the load bearing T&P items after jointly testing the equipment's with Railway Supervisor. There after these will be maintained in good working condition by the contractor during entire contract period.

7.12.4 Each Gang shall maintain and carry tool boxes having full set of required tools. These tool boxes shall be arranged by the contractor.

7.12.5 Consumable items of OHE & PSI to be supplied by contractor as per Annexure-3.

Note: Contractor must have all necessary T&P Items like Tirfor, Pull-lift, steel sling pulleys, ladder, manila rope, lights, safety belts, helmets, discharge rod, operating rod etc. and measuring instrument like Magger, Earth tester, Binocular etc. and consumable items like Oil Kerosene, Toilet soap, cotton waste, Tape insulation black, Hacksaw Blade, Cell for hand torch, Paint Brush, Emery cloth paper, Duster cloth white khadi, petroleum jelly, soap bar etc. order to execute maintenance / Breakdown work at PSI. If the work is delayed due to Non–availability of above items necessary Penalty as per the Para-7.0 as given below in this part of this tender document will be imposed.

7.13 The RECONCILIATION OF MATERIALS SUPPLIED BY THE DFCCIL:

All the material supplied by the DFCICL and also released from the existing OHE/PSI maintenance shall be correctly accounted for and quantities reconciled on completion of the work by the contractor.

On completion of work, all surplus materials supplied by the DFCCIL together with the ones found defective or that have become defective or broken on account of manufacture defect, will be handed over to concerned OHE/PSI depot.

7.14 Stores Management in Depot at Site

7.14.1 The consumable material for the maintenance and replacement for the defective parts shall be provided by the purchaser. The material required for the maintenance shall be issued by authorized representative of CGM/DDU available at IMD/IMSD. The material shall be issued to the contractor on demand as per the requirement of the maintenance in the section further the essential material issued to the contractor to attend 24x7 breakdowns shall lie with the contractor. The material shall only be issued to authorized person of the contractor.

7.14.2 Maintenance of record for daily material transaction and entries in ledgers for the same should be carried out by the supervisory in-charge. Shortfall of consumed stores shall be recouped periodically so as to ensure that the minimum quantity is always available. During periodic inspections by Railway officers, scrutiny of this inventory should be one of the important items in order that the required stores are always made available.

7.14.3 OHE material/parts (spares) likely to be used during restoration of breakdown shall be systematically stocked in small bags as per the correct identification and for carrying to work spot.

7.14.4 Consumption of emergency OHE material/parts (spares) used during maintenance / breakdowns shall be recorded location wise in the format of work progress and should be jointly signed by contractor and DFCCIL representative for proper accountable of inventory.

7.14.5 DFCCIL will recoup, the consumed material/parts (spares) duly placing issue challan/voucher to the contract supervisor who shall be responsible to ensure the minimum quantity emergency spares is always available.

7.14.6 All released materials shall be properly accounted location wise and returned to DFCCIL by return challan at the nominated purchaser's depot.

7.14.7 List of spares to be maintained by the contractor at his depot is to be jointly finalized by the DFCCIL& contractor at the time of agreement. The contractor at his own cost maintains a depot for stacking of issued material in respective IMD/IMSD.

7.14.8 Transportation of the purchaser supply materials from the nominated stores of the purchaser to the working site and vice-versa will be the responsibility of the contractor, whether specifically mentioned or not. DFCCIL will not give any transportation expense for transportation of these materials to the working site.

The receipt of storage of materials at the main and sub-depots shall be so planned as to avoid transport of materials between the main and sub-depot/s and vice versa to the maximum extent possible.

7.15 Reconciliation of DFCCIL Materials:

7.15.1 **Reconciliation of Materials supplied by the DFCCIL:** All the material supplied by the purchaser and also released from the existing 2x25kV OHE installations & Power Supply Installation shall be correctly accounted for and quantities reconciled on completion of the work by the contractor.

7.15.2 On completion of work, all surplus materials supplied by the purchaser together with the ones found defective or that have become defective or broken on account of defective materials, the surplus DFCCIL supplied material to be handed over to concerned depot. For the purpose of measurement of 2x25kV OHE& PSI equipment, the length of the conductor will be taken from termination to termination and erection tolerance of 0.5% will be allowed.

7.16 Contractor Vehicles:

The vehicles used by contractor must be fully & comprehensively insured covering the risk to the Driver & all passengers also. All kinds of repairs/maintenance costs, charges of fuels, oil, lubricant, mobile phone charges, fee towards licences /registration taxes, challans, salary/overtime of the driver, insurance premium etc. are responsibility of the contractor and shall be borne by the contractor all along the contract duration,

7.17 Tower Wagon:

For carrying out maintenance and other works on Section Insulators, cross-over/Turn-outs, Overlaps, attending spark locations, staggers, etc. **Tower Wagon will be spared by DFCCIL** to the extent of requirement.

7.18 POWER BLOCKS AND PERMITS-TO-WORK:

Obtaining "Power Block, Permit-To-Work" and "Restoration of Supply" after a Permit-To-Work is returned shall be carried out by the **'Authorized DFCCIL Section representative'** only with its latest correction slips if any. Contractor Supervisor shall not permitted to do the above duties.

i. Availability of power block is dependent on traffic conditions and other operational exigencies. Hence, contractor should be prepared to mobilize staff for maintenance any time during day / night time upon one hour advance intimation from DFCCIL to ensure there is no shortfall in availability & utilization of power block.

ii. Power blocks are premium hours permitted by regulating trains. Hence, optimum utilization requires full deployment of manpower and multiple gangs.

iii. If work is to be carried out by contractor representative on or adjacent to any part of the electrical equipment such work shall not commence until the person in-charge of the work is in possession of a written permit-to-work in the prescribed form issued to him by an 'Authorized DFCCIL Person'.

iv. Such permits-to-work in the prescribed form shall only be issued by an 'Authorized DFCCIL Person' of the Electric Traction Branch not below the rank of an executive.

v. The permit-to-work shall first be taken from TPC by an 'Authorized DFCCIL Person' n who shall ensure earthing the electrical equipment specified and hand over a permit-to-work card to the person in-charge of the work getting an acknowledgment on the other copy. A duplicate copy of every permit-to-work card shall be retained in the personal possession of the 'Authorized DFCCIL Person' who issued it.

vi. On completion of the work and when all men and materials have been withdrawn from the electric equipment and its vicinity, the person in-charge of the working party shall cancel his permit-to-work card and return it to the 'Authorized DFCCIL Person' who issued it. The 'Authorized DFCCIL Person' shall in turn issue a message to TPC to cancel permit-to-work.

7.19 Knowledge of Rules and Sectioning:

1. It is very important for every contractor Supervisor who has occasion to ask for power block to know the correct method of identifying and describing any section of the OHE where shutdown is required. He should have with him the up to-date Station Working Rule Diagram for the section, showing all relevant particulars such as station names, position of all isolators, interrupters, circuit breakers, "up" and "down" tracks, cross- over section insulators, sectors, sub-sectors and elementary section numbers.

2. All contract staff shall be fully conversant with the "Rules & Safety Procedures" while working on TRD installations as laid down in maintenance manuals.
3. Competency certificates for working in 2x25kV electrified areas will be issued by DFCCIL as per the scope of work.

4. Safety precautions to be followed as per safety/maintenance manual.

7.20 Maintenance of schedules registers, records and forms:

7.20.1 The contractor shall maintain records of maintenance, inspections, special checks, other works, etc., in the standard format of registers, records, and schedule forms as per the guide lines of circulated time to time. Vital OHE parameters recorded during maintenance shall be updated in the records, registers, forms for review of maintenance performance, remedial measures and further action plan to achieve high reliability.

7.20.2 Each two copies of Drawings such as LOP, SED, Operation & Maintenance Manual and as build documents etc. of agreement work will be spared by DFCCIL at free cost.

7.20.3 List of maintenance registers and forms to be maintained along with Joint procedure orders issued by DFCCIL on time to time.

7.21 BREAKDOWN GANGS:

7.21.1 Accidents and breakdowns involving traction installations and electric rolling-stock should normally be attended to by the nominated contract gangs themselves. It is, however, essential that the contractor shall maintain adequate number of experienced staff comprising Technician, Helpers and Supervisors, housed close to IMD/IMSD. In electrified suburban sections, however, 'breakdown gangs' of adequate strength may be located at selected points to deal promptly with OHE failures, particularly during the hours of peak traffic.

The breakdown gang comprising supervisory staff, technicians, helpers, etc., shall be fully aware of different skills required to tackle OHE breakdowns of various nature.

7.21.2 **Summoning of Emergency Staff:** To enable the TPC to summon breakdown staff as required, a register showing the residential addresses with phone numbers of specified staff of the contract gang those residing close to depots/railway stations, shall be maintained depot-wise/station-wise by TPC.

7.21.3 **Importance of Expeditious Repairs:** Every breakdown of OHE, even if minor in nature, should be attended to urgently as it generally interferes with traffic. Since electrified lines carry a high density of traffic, the effect on traffic will be quite severe if restoration is not arranged expeditiously.

7.21.4 **Detailed Assessment by The First Supervisor Reaching Site:** The first Supervisor / staff reaching the site of the breakdown should make a quick assessment of the extent of damage and the time required for restoration. He will ascertain from TPC the details of break-down gangs and equipment directed to the site and if the circumstances warrant, ask for additional gangs and breakdown equipment to be sent to the site. On receipt of these details, TPC should arrange for additional gangs and equipment to be sent to the site expeditiously. In the meanwhile, isolation and repair works should be started at site.

7.22 Power Block Working – Protection of Men Working:

(i) DFCCIL will arrange only power block for the works related to power block depending on the traffic and other conditions. The contractor shall ensure the removal of men and material before cancellation of power block. The contractor shall have to take full advantage of available power block by employing adequate staff for getting the maximum possible work done during the available block period. For adhering to target date of completion, the contractor may have to work during night time under power block for which the contractor is not entitled for any additional payments.

(ii) The contractor shall take all precautions necessary to protect staff working under him. The contractor shall treat all other lines live except the line under Power block. He should ensure execution of work under the supervision of a competent person to carry out the work in electrified areas. Unless the adjacent lines are also under power block, voltage and currents will be induced in the line under power block. To protect against these induced voltages and currents, earth discharge rods are to be provided. Care should be taken by the contractor that these discharge rods are intact and not disturbed by his staff. He shall also ensure that none of the staff working under him shall work/reach beyond safe working limits

(iii) Under all conditions the contractor shall have to arrange protection of his staff against traffic. He shall have to also take all necessary precautions to guard against any possible obstructions to traffic during working by providing necessary staff while erection/dismantling of structures, coverage of excavated foundation pits with sand filled bags to keep free of stacked materials from obstructions to traffic
etc.,

(iv) At the end of each power block work the contractor shall ensure removal of all men and material and no work inclusive of OHE should be left out in a state of obstruction to running of trains and the OHE should be made fit for electric traffic, failing which DFCCIL will remove such obstructions and the Contractor will be liable to pay cost of such removal.

(v) If the contractor fails to execute and to work within the time of power block granted, DFCCIL shall be at liberty to take action and recover penalty for availing additional power block in accordance with standard practice of the DFCCIL. The contractor shall in consultation with the - DFCCIL submit a weekly power block programmed for work, 7 days in advance of the commencement of work.

7.0 NON-PERFORMANCE OF THE CONTRACT CONDITIONS

7.1 Penalties

A) Recovery due to shortfall in staff per Supervisor, Skilled / Un-skilled staff:

The staff should be available 24 hours X 7 days of the week. The contractor should ensure the availability of full strength gang every day. The deployed staff should give their attendance to the depot in-charge before leaving to work site. No staff should leave the work site without intimating the DFCCIL's representatives. Failing to do so will be treated as absent.

In case of absentee of staff to the provided gang, the contractor should ensure the suitable replacement to make the full strength gang. If the contractor fails to provide the suitable replacement a penalty of **1000/- per day of Supervisor and 500/- per day Skilled / Un- skilled staff** to deducted from contractor's monthly bill.

B) Recovery Due To Poor Maintenance / Fail To Utilize Power Block / Poor Progress for every Hour of Power Block Utilized /Bursting of Power Block:

If breakdown occurs due to poor maintenance, fail to utilize power block, poor progress for every hour of power block utilized, bursting of power block and proved in joint findings a penalty of **Rs.20,000/- on flat rate basis per occasion. For power block burst less than or more than hour, penalty shall be imposed on pro-rata basis.**

The deficiency is not checked the equipment as per standard proforma enclosed with tender book OR not carried out the up to the satisfaction of maintenance manual/DFCCIL work. Delay in the scheduled maintenance of equipments for more than a month will also call for a penalty of Rs. 500 per day after grace period of one month.

In addition of above not attending the break down maintenance of the equipments with in twelve hours from information given by TPC/APM/Incharge to the contractor, a penalty of Rs. 50000/- per break down will be levied.

C) Recovery due to wrong operation of equipment:

On duty contractor personnel shall follow the instructions of DFCCIL Supervisor on duty for the maintenance of 2x25kV OHE equipment's. If the contractor personnel performs any wrong operation of equipment, a penalty of **Rs.5,000/- per occasion, if there is no operational delay and no financial repercussion.** However if there is any financial repercussion, in that case, penalty will in consonance with the loss as approved by tender accepting authority. Also, if the train services are affected particular operator shall be debarred from duties against subject agreement in addition to levy of penalty.
The cost of the damages/loss, if any, caused due to the negligence/fault of the contractor's personnel, to the DFCCIL property shall be recovered from the contractor. The recovery shall be made inclusive of all contingencies by the DFCCIL.

D) Recovery due to contractor's personnel is found without Identity card:
If the contractor's personnel is found without Identity card, found in untidy condition, having improper conduct, found not obeying the instructions of Engineer In-Charge of DFCCIL, a penalty of **Rs. 500/-** shall be levied and recovered from Contractor's bill for each such instance. If such deficiencies are found to be more than 5 in a month, it may be a ground for termination of the contract. Also, the contractor's personnel shall be dealt according to the DFCCIL rules in force from time to time.

E) Recovery Due To Non-Returning of T&P supplied by DFCCIL:
Any T&P items supplied to the contractor for the maintenance of OHE& PSI installations "over and above" to the quantities provided under "Scope of the work and Special conditions", if supplied by DFCCIL in Break downs, the contractor should liable for safe return of the same. If the contractor fails to return such materials, the cost of such materials will be recovered at twice the book rate or twice the market rate enhanced by 5000/- per incident for integrity breach.

F) Recovery Due To fails to return unutilized DFCCIL supply materials:
The material issued to the deployed staff for maintenance/replacement of existing OHE on day to day basis before leaving to the work site as per programmed assigned by the depot in-charge, the unused materials and released materials should be handed over to the depot in-charge at depot premises after completion of day's work. **If the contractor fails to return such materials, the cost of such materials will be recovered at twice the book rate or twice the market rate enhanced plus Rs 5000/-**

G) Recovery Due To state of Intoxication

While working, contractor's personnel should not smoke or consume any alcohol / liquor or be in a state of intoxication. In case if it is noticed any time that they are either smoking or under influence of intoxication, penalty of **Rs. 10,000/- per occasion per incident** shall be imposed to the contractor and the particular contractor's person shall not be allowed to duties further period of subject contract.

H) Once the staff put in service after issuing competency certificate, changing the staff by contractor is not permissible. How staff engaged may be changed or replace with the prior consent of employer. If contractor change or replace the staff without prior consent of employer suitable penalty of **1000/- per day of Supervisor and 500/- per day Skilled / Un- skilled staff** to be deducted from contractor's monthly bill.

The penalties as mentioned above may be imposed simultaneously.

8.0 ORDER OF PRIORITY OF CONTRACT DOCUMENTS:

The documents forming the Contract agreement are to be taken as mutually explanatory of one another. For the purposes of interpretation, the priority of the documents shall be in accordance with the following sequence:

i) The Contract Agreement.

ii) Letter of Acceptance.

iii) Form of bid

iv) General Information

v) Notice Inviting Tender (with Annexes)

vi) Instructions to Tenderers

vii) Special Conditions of Contract

viii) Annexures

ix) Bill of Quantities (BOQ)

x) General Conditions of Contract

9.0 Jurisdiction of Courts

In case of any disputes/differences between contractor & DFCCIL the jurisdiction shall be of Chandauli Courts only.

10 In case of any deviation in downloaded copy of the tender documents, the Master Copy kept in the office of Chief General Manager/DDU/ DFCCIL, will prevail and the interpretation of CGM./DDU will prevail.

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PART-VI

MILESTONES AND TIME SCHEDULE

MILESTONES AND TIME SCHEDULE

Time Schedule:

Time of start and completion:

The time allowed for execution of the works is 24 (Twenty-Four Months) from the date of issue of letter of acceptance from DFCCIL.

The contractor shall be expected to mobilize to the site of works and commence execution of the works within 10 (days) from issue of Acceptance Letter by DFCCIL.

The contractor shall be expected to complete the whole work ordered on the contractor within 24 (Twenty-Four Months) from the date of issue of Acceptance Letter by DFCCIL.

If the contractor commits defaults in commencing execution of the works as afore stated, DFCCIL shall without prejudice to any other right to remedy, be at liberty to forfeit fully the Earnest Money Deposit and performance guarantee of the contractor.

Progress of works:

The contractor shall submit a programme of work in the form of a Bar Chart of all the activities in consistence as applicable as per requirement. In case this bar chart requires to be modified, the Engineer and the contractor shall agree upon a time and progress chart. The chart shall be prepared in direct relation to the time stated as 24 months for the completion of the works as the milestone targets specified below of these special conditions. It shall indicate the forecast of the dates of commencement and completion of various activities of the work and may be amended as necessary by agreements between the Engineer and the contractor within the limitation of 04 (Four Months) as overall completion period.

PART-VII

TENDER ANNEXURES & FORMS

Annexures /form no.	Subject
Annexure no I	Tender form
Annexure no II	Agreement for zone contract (Not Applicable for this Tender)
Annexure no III	Work order under zone contract (Not Applicable for this Tender)
Annexure no IV	Contract agreement of works
Annexure no V	Format for certificate to be submitted / uploaded by tenderer along with the tender documents
Annexure no VI	Tenderer's credentials (bid capacity) (Not Applicable for this Tender)
Annexure –VIA	(Bid security) bank guarantee bond from any scheduled commercial bank of India.
Annexure –VIB	Annual contractual turnover data for the previous 3/4 years
Annexure no VII	Proforma for time extension
ANNEXURE – VIIA	Proforma of 14 days' notice for offloading of part of contract
ANNEXURE – VIIB	Notice for part of contract work offloaded
Annexure no VIII	Certificate of fitness
Annexure no IX	Proforma of 7 days' notice for works as a whole/ in parts
Annexure no X	Proforma of 48 hrs. Notice for whole work
Annexure no XI	Proforma of termination notice
Annexure no XII	Proforma of 48 hrs. Notice
Annexure no XIII	Proforma of termination notice
Annexure no XIV	Final supplementary agreement
Annexure no XV	Agreement towards waiver under section 12(5) and section 31a (5) of arbitration and conciliation (amendment) act
Annexure no XVII	Performance Bank Guarantee
Form no.1	Schedule of prices & total prices Tender schedule
Form no. 2	Tenderer's credentials
Form no 2A	Technical eligibility criteria details
Form No.2B	Statement of works in progress for bid capacity (Not Applicable for this Tender)
Form-2C	Applicant's party information form
Form no. 3	ECS/ NEFT / RTGS mandate form
Form no. 4	Sample standing indemnity bond for "on account" payments
Form no.5	Pre contract integrity pact

Form No. 6	Anti-profiteering declaration to whomsoever it may concern
Form no 7	Draft memorandum of understanding (MOU) for Joint venture participation. (Not Applicable for this Tender)
Form no. 8	Draft format of joint venture agreement (Not Applicable for this Tender) (Not Applicable for this Tender)
Form no 9	Pro-forma letter of participation from each partner of joint venture (jv) (Not Applicable for this Tender)
Form no 10	Format for power of attorney for authorised signatory of joint venture (jv) partners (Not Applicable for this Tender)
Form no 11	Format for power of attorney to lead partner of joint venture (jv) (Not Applicable for this Tender)
Annexure-1	BARE MINIMUM TOOLS & PLANTS TO BE ARRANGED BY CONTRACTOR FOR OHE MAINTENANCE FOR EACH GANG (3 sets)
Annexure-2	TOOLS AND PLANTS TO BE IN POSSESSION OF CONTRACTOR (3 sets)
Annexure-3	CONSUMABLE ITEMS TO BE MADE AVAILABLE BY CONTRACTOR

ANNEXURE - I

TENDER FORM

Tender No:- **DFC-DDU-EL-MAINT-TRD-T012**

Name of Work :- Maintenance of 2x25 kV OHE/PSI and Miscellaneous OHE/PSI and Testing of PSI equipment in New Pt Deen Dayal Upadhaya Nagar to New Sone Nagar/New Chiraila Pauthu (SEBN/CPBN) section of DFCCIL including IR link line/Connecting line connection to Indian Railways for a period of 24 (Twenty-Four) months under CGM DDU Unit.

To

The President of India

Acting through the Chief General Manager/ DFCCIL/DDU

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 offer open for acceptance for a period of __days from the date fixed for closing of the tender and in default thereof, I/We will be liable for forfeiture of my/our "Bid Security". I/We offer to do the work for _____DFCCIL, at the rates quoted in the attached bill(s) of quantities and hereby bind myself/ourselves to complete the work in all respects within _____months from the date of issue of letter of acceptance of the tender.

2. I/We also hereby agree to abide by the Indian DFCCIL/Railways Standard General Conditions of Contract, with all correction slips up-to-date and to carry out the work according to the Special Conditions of Contract and Specifications of materials and works as laid down by DFCCIL in the annexed Special Conditions/Specifications, Standard Schedule of Rates (SSOR) with all correction slips up-to-date for the present contract.

3. A Bid Security of ₹ _____has already been deposited online/ submitted as Bank Guarantee bond. Full value of the Bid Security shall stand 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 days after receipt of notice issued by the DFCCIL that such documents are ready; and
(c) I/We do not commence the work within fifteen days after receipt of orders to that effect.

4.(a) I/We am/are a Startup firm registered by.....Department of Industrial Policy and Promotion (DIPP) and my registration number is ……. valid upto .....(Copy enclosed) and hence exempted from submission of Bid Security.

5. We are a Labour Cooperative Society and our Registration No. is.....with …..... and hence required to deposit only 50% of Bid Security.

6. Until a formal 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) _____ Signature of Tenderer(s)

(2) _____ Date _____

Address of the Tenderer(s)

_____

ANNEXURE – II

AGREEMENT FOR ZONE CONTRACT

Deleted

ANNEXURE - III

WORK ORDER UNDER ZONE CONTRACT

Deleted

ANNEXURE - IV

DFCCIL

CONTRACT AGREEMENT OF WORKS

CONTRACT AGREEMENT NO. _____ DATED _____

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

WHEREAS the Contractor has agreed with the DFCCIL 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 Railways/DFCCIL, 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 DFCCIL 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 DFCCIL, 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 DFCCIL 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) DFCCIL: Designation _____

Address _____ (For President of India)

Date _____ Date _____

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

Witnesses:

_____ _____

_____ _____

ANNEXURE-V

FORMAT FOR CERTIFICATE TO BE SUBMITTED / UPLOADED BY TENDERER ALONGWITH THE TENDER DOCUMENTS

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

M/s_____ (hereinafter called the tenderer) for the purpose of the Tender documents for the work of _____ as per the tender No. _____of _____(*DFCCIL*)**, do hereby solemnly affirm and state on the 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 Indian DFCCIL website www.ireps.gov.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 the DFCCIL Administration 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 DFCCIL/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 upto five year. 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 certificate 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/Security Deposit and Performance guarantee besides any other action provided in the contract including banning of business for a period of upto five year.
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

Signature of tenderer(s) with seal

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.

This certificate is to be given by each member of JV or Partners of Partnership firm/LLP/etc.

(As per advance Correction Slip No. 1, Letter No. 2022/CE-I/CT/GCC-2022/Policy Dated-14.07.2022)

ANNEXURE – VI

TENDERER'S CREDENTIALS (BID CAPACITY) (Not Applicable)

For tenders having advertised value more than Rs 20 crore wherein eligibility criteria includes 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:
Available Bid Capacity = [A x N x 2] – 0.33xNxB
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 = Existing commitments and balance amount of ongoing works with tenderer as per the prescribed proforma of Railway 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.

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 DFCCIL 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 DFCCIL 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.

(As per Advance Correction Slip No. 1, As per Letter No. 2022/CE-I/CT/GCC-2022/Policy Dated-14.07.2022)

Annexure –VIA

(Bid Security)

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 …….,
Chief General Manager/DFCCIL/DDU,

Beneficiary: ..... DFCCIL

Date:.....

Bank Guarantee Bond No.: ***Date:---------***

In consideration of the President of India acting through ----- ***(Designation & address of Contract Signing Authority***), …….. DFCCIL, ……., …. (hereinafter called "The DFCCIL") 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 DFCCIL:

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 DFCCIL 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 DFCCIL any amount up to and including aforementioned full amount without any demur, reservation or recourse. Any such demand made by the DFCCIL 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 DFCCIL without any reference to the Bidder and without the DFCCIL 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 DFCCIL 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 DFCCIL 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 DFCCIL 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 DFCCIL. 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	
IFSC TYPE	
BANK NAME	
BRANCH NAME	
CITY NAME	
ADDRESS	
DISTRICT	
STATE	
BG ENABLED	

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

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

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			

1. 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.
2. 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.
3. 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)

ANNEXURE – VII

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

DFCCIL

(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/Chief Engineer's 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

ANNEXURE – VIIB

NOTICE FOR PART OF CONTRACT WORK OFFLOADED

DFCCIL

(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

ANNEXURE – VIII

Reference Para 60.(2)

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.

ANNEXURE – IX

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

_____DFCCIL

(Without Prejudice)

To

M/s _____

_____

Dear Sir,

Contract Agreement No. _____

In connection with _____

1. 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/Chief Engineer's 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 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

ANNEXURE – X

Reference Para 62(1)

Registered Acknowledgement Due

PROFORMA OF 48 HRS. NOTICE FOR WHOLE WORK DFCCIL

(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 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 encased and any other consequences which may please be noted.

Kindly acknowledge receipt.

Yours faithfully

For and on behalf of the President of India

ANNEXURE – XI

Reference Para 62.(1)

Registered Acknowledgement Due

PROFORMA OF TERMINATION NOTICE DFCCIL

(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

Reference Para 62.(1)

Registered Acknowledgement Due

PROFORMA OF 48 HRS. NOTICE FOR PART OF THE WORK……..

(DETAILS OF PART OF WORK TO BE MENTIONED)

_____DFCCIL

(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

ANNEXURE – XIII

Reference Para 62.(1)

Registered Acknowledgement Due

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

DFCCIL

(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

Signature of tenderer(s) with seal

ANNEXURE – XIV

Reference Para 48.(3)

FINAL SUPPLEMENTARY AGREEMENT

1. Articles of agreement made this day _____in the year _____between the President of India, acting through the _____DFCCIL Administration having his office at _____ herein after called the DFCCIL 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

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)

zzI/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 DFCCIL 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

Format of Bank Guarantee for Performance Security

Bank Guarantee No. :…… Dated :……

To,

Dedicated Freight Corridor Corporation of India Limited, Metro Station Building Complex 5th Floor, Pragati Maidan, New Delhi

Acting through Chief General Manager/DDU DFCCIL, CGM/DDU, DFCCIL, Manas Nagar Railway Colony, Near RPF Post, Pt. Deen Dayal Upadhyay, Post Office: Alinagar, Chandauli- 232101, Uttar Pradesh.

Reference: - Contract No. ----------, Awarded on ----------

This deed of guarantee made this day of _____ Between_____ (Name of Bank) having registered office at _____(hereinafter referred to as "Bank") of the one part, and Dedicated Freight Corridor Corporation of India Limited (hereinafter called the "Client") of the other part.

Whereas Dedicated Freight Corridor Corporation of India Limited has awarded the contract no. _____ for _____ (hereinafter called "the Contract") to _____ (Name of the Firm/ Consultant) having its registered office at_____(hereinafter called the Firm/ Consultant).

AND WHEREAS the Firm/ Consultant is bound by the said Contract to submit to the Client an irrevocable performance security guarantee bond for a total amount of Rs. _____(Rupees Amount in words).

Now, we the undersigned (name of the Bank official), of the Bank being fully authorized to sign and to incur obligations for and on behalf of the Bank hereby declare that the said Bank will guarantee the Employer the full amount of Rs ----------(Rs. In words) as stated above.

After the Contractor has signed the aforesaid contract with the Employer, the Bank further agrees and promise to pay the amount due and payable under this guarantee without any demure merely on a demand from the Employer stating that the amount claimed is due by way of loss or damage cause to or would be caused or suffered by the Employer by reason of any breach by the said contractor of any of the terms or conditions contained in the said agreement or by reason of the contractor 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 Rs ---------- (in words) only.

We ----------(indicate the name of Bank), further undertake to pay to the Employer any money so demanded not withstanding any dispute or dispute raised by the contractor in any suit or proceeding pending before any court or Tribunal relating to liability under this present being absolute and unequivocal.
The Payment so made by us (name of Bank) under this bond shall be a valid discharges of our liability for payment there under and the Contractor shall have no claim against us for making such payment.

We----------(indicate the name of bank), to 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 at all the dues of the Employer under or by virtue of the said agreement have been fully paid and its claims satisfied or discharged by ------
(Designation and address of contract signing authority) on behalf of Employer certify that the terms and conditions of the said agreement have been fully and properly carried out by the said contractor and accordingly discharges this guarantee.

Not with standing anything to the contrary contained herein the liability of the bank under this guarantee will remain in force and effect until such time as this guarantee is discharged in writing by the Employer or until (date of validity/extended validity) whichever is earlier and no claim shall be valid under the guarantee unless notice in writing , thereof is given by the Employer within validity/extended validity period of guarantee from the date aforesaid.

Provided always that we …….(name of bank) un conditionally undertakes to renew this guarantee or to extend the period of guarantee from year to year before the expiry of the period or the extended period of guarantee, as the case may be on being called upon to do so by the Employer. If the guarantee is not renewed or the period extended on demand, we------- (name of bank) shall pay the Employer the full amount of the guarantee on demand without demur.

We --------- (indicate the name of Bank), to further agree with the Employer that the Employer shall have the fullest liberty without our consent and without effecting in any manner out of obligation hereunder to vary any of the terms and conditions of the said contract from time to time or to postpone for any time or from time to time any to power exercisable by the Employer against the said contractor and to forbear or enforce any of the terms and conditions of the said agreement and we shall not be relieved from our liabilities by reason of such variation, or extension being granted to the said contractor for any forbearance act or omission on the part of the Employer or any indulgence by the Employer to the said contractor or by any such matter or thing whatsoever which under the law relating to sureties for the said reservation would relieve us from the liability.

The Guarantee hereinbefore contained shall not be affected by any change in the constitution of Bank or of the Contractor.

The expression “The Employer”, “The Bank” and “The Contractor” hereinbefore used shall include their respective successors and assigns.

We ----------(name of the bank lastly undertake not to revoke this guarantee during its currency except with the previous consent of the Employer in writing. Notwithstanding anything to the contrary contained hereinbefore:

i) Our liability under this Bank Guarantee shall not exceed and restricted to Rs. ---------- (in words).

ii) This Bank Guarantee shall be valid up to---------- , unless extended on demand by Employer.

iii) The Bank is liable to pay the Guaranteed amount or any part thereof under this Bank Guarantee only if Employer serve a written claim or demand on or before----------

IN WITNESS WHEREOF we of the Bank have signed and stamped this guarantee on this day of ----------being herewith duly authorized.

Bank Seal

Signature of Bank Authorize Official with Seal

Name :----------
Designation:----------
Address :

Witness:

1. Name :……..
   Designation :……..
   Address :

2. Name
   :…….
   Designation:…….
   Address :……

FINANCIAL OFFER

Form no-1

Maintenance of 2x25 kV Over Head Equipment and PSI Equipments (at TSS/SP/SSP) IN DDUN to SEBN/CPBN section of DFCCIL including link line connection to Indian Railways for the period of 24 (Twenty Four) months under CGM/DDU Unit.

PART A.OHE Maintenance Activity

Schedule 01: Regular Maintenance Activity

S.No.	Description of Work		Qty	Rate	Total Amount (In Rs.)
1	2	3	4	5	6
1	Checking and Maintenance of Cantilever assembly	Each	15000	780.17	11702565.00
2	Checking and maintenance of 25 kV OHE conductors.	TKM	588	4990.41	2934359.61
3	Checking & maintenance of all type of 25 KV OHE Jumpers not covered in other items	Each	1200	456.31	547568.88
4	Checking & maintenance of Overlaps (IOL) & (UIOL)	Each	718	1663.82	1194623.91
5	Checking & Maintenance of Anti Creep arrangement	Each	604	1247.87	753711.18
6	Checking & Maintenance of 25 KV Isolator (SP/DP) including earthing heel arrangement if any.	Each	75	1334.78	100108.37
7	Checking & Maintenance of 25 KV OHE at Turnouts by Tower Wagon	Each	60	2167.27	130036.26
8	Checking & Maintenance of 25 KV OHE on a cross over by Tower Wagon	Each	40	2557.80	102312.11
9	Checking & Maintenance of Section Insulator Assembly by Tower Wagon	Each	60	1279.93	76796.06
10	Checking & Maintenance of Auto tension Device (ATD)	Each	1140	2702.66	3081035.25
11	Checking & maintenance of all type of bonds & Electrode Earthing connection including cleaning of muffs at OHE mast	Each	3600	30.01	108042.48
12	Removal of & Re erection of bonds of various type during track machine working or Erection of missing/new bonds including Paint etc.	Each	1800	77.60	139680.00
13	Checking & maintenance of leaning of OHE mast till a new mast erected	Each	40	3558.37	142334.70
14	Checking & Maintenance of PTFE type neutral section	Each	112	5424.92	607590.93

15	Checking and Maintenance of Portal boom & drop arms free from foreign body including bird nests	Each	1600	397.33	635730.24
16	Trimming of tree branches to maintain minimum 5 to 6 meter clearance from OHE.	Each	2600	26.90	69935.06
17	Erection of 25 KV overhead equipment as per requirement	TKM	10	43182.62	431826.15
18	Checking and compilation of hotspot of OHE using Thermo vision camera by a skilled Engineer	TKM	60	977.28	58637.08
19	Stenciling/Painting of rail level, implantation, MRL, ERL & location number etc. Sed Parameters	Each	6000	83.59	501567.60
20	Painting of counter weight of ATD & GUY Rod assembly including marking of Y value	Each	600	590.80	354478.74
21	Checking and maintenance of Feeder Termination and AEC termination	Each	705	358.95	253058.69
22	Supply and erection of OHE Retro reflecting number plate including plate fixing.	Each	1500	719.33	1078998.90
23	Supply and erection of caution board	Each	50	296.30	14814.81
24	Providing and replacing of DO Fuse at Auxiliary Transformer of 1 A/ 5A as per requirement.	Each	620	128.18	79469.00
25	Maintenance of Auxiliary Transformer at Station and ALH and RH Locations	Each	1084	873.12	946458.18
26	Checking and maintenance of 25 kV OHE feeder & AEC conductors excluding termination arrangement	TKM	560	1463.83	819743.12
	Schedule-1 Total				**26865482.30**

Schedule 02 - Emergency & Other maintenance activities

S. No	Description of Work	Unit	Qty.	Rate	Total Amount
1	Loading, unloading of DFCCIL supplied material to places directed by Engineer incharge (i.e. From station to tower wagon, station to station etc.) (applicable for material more than 2 MT)	Each occasion	130	3988.66	518525.28

2	Erection of Catenary wire splicing or Contact wire splicing.	Each	20	3019.89	60397.82
3	Replacement / Re-erection of various types of insulators	Each	300	880.68	264202.56
4	Breakdown attention by a gang for restoration of 25 KV OHE during accidents/ unusual occurrence for checking OHE parameters- (one gang consisting of 7 staff)	Hour	240	1561.67	374800.90
5	Erection of traction masts & portal other than boom	Nos	15	2853.28	42799.25
6	Transfer of OHE equipment from one mast or support to another.	Each	35	1163.09	40708.08
			Schedule-2 Total		**1301433.89**

Schedule -03 Foundation items

S. No	Description of Work	Unit	Qty.	Rate	Total Amount
1	Casting of all types of foundation (The rate includes supply of the material- ballast, sand, cement, mixture & reinforcement etc.) with shuttering	Cum	120	7357.75	882929.66
	Schedule-3 Total			**7357.75**	**882929.66**

Schedule-4

S. No	Description of Work	Unit	Qty.	Rate	Total Amount
1	Supply and maintenance of petrol/Diesel operated telescopic pole pruner model no. HT 75 of STIHL or equivalent model of FISKAR make for tree trimming purpose	Each	5	56508.75	282543.74
2	Supply and fixing of Splicing Clamp Assembly For 150 sq. mm Contact Wire (Crocodile Type)	Each	10	5295.87	52958.69
3	Supply and fixing Catenary Wire Splice 125 Sq. mm	Each	10	2483.89	24838.94
4	Supply and fixing Feeder wire splice for 288 sq. mm AAAC conductor	Each	10	3168.13	31681.34
5	Supply and fixing Aerial Earth wire splice for 93.3 sq. mm ACSR conductor	Each	10	1449.71	14497.06
6	Erection of Cantilevers	Each	50	1569.55	78477.60

7	Erection of material for solid core cut in insulator	Each	20	603.89	12077.76
8	Erection of material for suspension in insulator	Each	20	426.65	8533.06
9	Erection of structure bonds	Each	200	229.37	45874.56
10	Supply of material for single earth electrode	Each	25	2306.82	57670.56
11	Erection of material for single earth electrode	Each	25	1046.49	26162.16
12	Slewing of OHE	Span	30	3201.78	96053.47
13	Preparation of design and drawing for overhead equipment and verification as per plan	TKM	15	12823.16	192347.42
14	Erection of rolled / fabricated and galvanized traction mast, TTC, Portals, AT Mast, Feeder Mast, bridge mast etc.	MT	10	6578.79	65787.94
15	Erection of material for Guy rod/Guy wire assembly	Each	20	1129.20	22584.00
16	Erection of large span wire	Mtr	600	72.17	43303.68
17	Erection of material for Regulating Equipment (ATD)	Each	20	4500.88	90017.66
18	Erection of Material for termination of single/double conductor of overhead equipment.	Each	20	1737.65	34752.96
19	Erection of Anticreep wire	Each	10	3256.05	32560.51
20	Erection of Section Insulator assembly and associate Fittings & fasteners.	Each	3	5451.32	16353.96
21	Erection of PTFE neutral section assembly and associate Fittings & fasteners	Each	3	7233.83	21701.49
22	Erection of 25 kV DP Isolator with all material as required.	Each	5	6326.63	31633.15
23	Erection of 25 kV SP Isolator with all material as required.	Each	5	5777.57	28887.84
24	Dismantling of traction structure, Portals, TTC and associate SPS by cutting	MT	20	1538.92	30778.37
25	Supply and Erection of Retro-reflective type boards-2x25/25KV AC OHE danger board/danger board for height gauge, public, staff caution board , neutral section board and special boards, etc	Each	400	596.65	238659.84
	Schedule-4 Total				**1580737.78**
Schedule-05 Additional OHE items					

S. No	Description of Work	Unit	Qty.	Rate	Total Amount
1	Supply of spares, tools & equipment required during maintenance & break downs for a period of 2 years- As per Appendix -A	As per Appendix-A	As per Site Requirement		6063191.08
	Schedule-5 Total as per appendix-A				**6063191.08**
	Total (Including GST)				**6063191.08**

APPENDIX-A

PART-I

S. No.	Description of Item	Unit	Qty.	Rate	Total Amount
1.	Counter weight Guide tubes (6.3m long) (RI NO: 5062-1 (S) for OHE.	Nos	50	1642.01	82100.64
2.	9 Tone adjuster complete with Both side eye (5020) for OHE	Nos	20	649.86	12997.25
3.	Anchor Double strap (set of 2 nos. of 5031) (RI NO: 5030) complete with nut ,bolt, washer & split pin (RI 5031)	Nos (set)	20	184.96	3699.26
4.	Typical Structural number plate (125mm size) ((RI No 7503) Size: 310mm x 340mm x 2mm	Nos	100	479.90	47990.40
5.	Contact wire parallel clamp Large with GI bolt and nut 16x50/38 MM and spring washer B-16 as per RDSO Drg No ETI/OHE/P/1030-2 (Mod-D) (RI 1031-2)	Nos	50	242.95	12147.36
6.	Contact wire parallel clamp (part 2 Nos of 1031-3) (RI NO 1030-3) (157-65/107/150) (RI 1031-3)	Nos	50	489.90	24494.88
7.	Contact wire parallel clamp small Part no 1041-2 with fasteners Drg no ETI/OHE/P/1040-2 (Mod-E) (RI 1041-2)	Nos	50	242.95	12147.36
8.	Parallel Clamp (150/105 - 150) RI No: 1050-2 (RI 1051-2)	Nos	20	489.90	9797.95
9.	105 SQMM Large jumper wire annealed copper wire .	Metre	200	599.88	119975.04
10.	50 Sqmm flexible copper jumper wire.	Metre	200	262.94	52588.80
11.	Large suspension clamp to suit 288sqmm AAAC feeder wire (22.05 mm dia) complete assembly with armour tape and ferrule (RI No 1580)	Nos	50	989.80	49489.92

12.	160 sqmm Large jumper annealed flexible copper wire .	Metre	200	1569.16	313831.68
13.	Post Insulator Jumper Clamp (set of 2 nos) (RI NO: 6094)	Nos	200	274.94	54988.80
14.	Terminal Connector (19mm) Multiple hole (bolted type) (RI No:1009 & 1009-1)	Nos	20	1599.66	31993.15
15.	Structure bonds (50X6)	Nos	200	615.60	123120.00
16.	Single earth electrode (RI 7021)	Nos	50	2729.75	136487.52
17.	GS Snap Pin 16x50 mm	Nos	500	34.99	17496.00
18.	GS Flat Washer 16 mm	Nos	1000	6.00	6000.00
19.	GS Split Pin 4x32 mm	Nos	1000	5.49	5491.20
20.	GS Split Pin 4x36mm	Nos	1000	6.00	6000.00
21.	Anchor V Bolt	Nos	20	309.94	6198.72
22.	Anchor Bolt RI 5001-3	Nos	20	304.93	6098.69
23.	Anchor Loop RI 5008	Nos	10	1449.71	14497.06
24.	GS Bolt 16x 50/30 mm with Nut & Flat washer	Nos	1000	27.99	27993.60
25.	GS Bolt 16x 50/38 mm with Nut & Flat washer	Nos	1000	27.99	27993.60
26.	Copper Split Pin 2.5x25 mm	Nos	1000	4.00	4003.20
27.	Copper Split Pin 4x36 mm	Nos	1000	9.00	8995.20
28.	GS 'J' Bolt 16X55 mm with Nut & flat Washer	Nos	100	41.99	4199.04
29.	GS 'J' Bolt 16X120 mm with Nut & flat Washer	Nos	100	77.99	7799.04
30.	GS Bolt 12x100/30 with Nut, Locknut & Flat Washer	Nos	1000	20.00	19996.80
31.	GS Bolt 12x55/30 with Nut, Locknut & Flat Washer	Nos	1000	16.99	16992.00
32.	GS Bolt 12x75/30 with Nut, Locknut & Flat Washer	Nos	1000	18.00	18000.00
33.	GS Bolt 12x50/35with Nut, Locknut & Flat Washer	Nos	1000	22.00	22003.20
34.	GS Bolt 12x200/49 with Nut & Spring washer	Nos	1000	34.99	34992.00
35.	GS Bolt 16x40/38 with Nut, Locknut & Spring Washer	Nos	1000	26.00	25996.80
36.	GS Bolt 16x220/57 with Nut, Locknut & Flat Washer	Nos	500	54.99	27494.40
37.	GS Bolt 16x260/57 with Nut, Locknut & Flat washer	Nos	500	59.98	29990.40
38.	GS Bolt 16x300/57 with Nut, Locknut & Flat Washer	Nos	500	84.98	42489.60
39.	GS Bolt 16x 360/57 with Nut, Locknut & Flat Washer	Nos	500	94.97	47486.40
40.	GS Bolt 20x65/46 with Nut, Locknut & tapered washer	Nos	500	42.99	21494.40
41.	GS Bolt 20x85/46 with Nut Lock nut & Tapered Washer	Nos	500	46.99	23496.00

42.	GS Bolt 16x175/44 with Nut, Locknut & Flat Washer	Nos	500	48.01	24004.80
43.	GS Bolt 16x 220/57 with Nut, Locknut & Flat Washer	Nos	500	52.99	26496.00
44.	GS Bolt 10x50/26 with Nut & Flat Washer	Nos	1000	15.00	14995.20
45.	GS Bolt 16x65/38 with Nut, Locknut & Flat Washer	Nos	1000	30.00	30000.00
46.	GS Bolt 16x260/100 With Nut, Locknut	Nos	500	57.00	28497.60
47.	GS Bolt 16x320/100 with Nut, Locknut	Nos	500	79.99	39993.60
48.	GS bolt 20x50/37 with Nut, Locknut & Flat Washer	Nos	1000	41.99	41990.40
49.	GS bolt 20x260/65 with Nut, Locknut & Flat Washer	Nos	500	94.98	47491.20
50.	GS bolt 20x280/65 with Nut, Locknut & Flat Washer	Nos	500	99.98	49992.00
51.	GS bolt 20x330/65 with Nut, Locknut & Flat Washer	Nos	500	129.97	64987.20
52.	GS bolt 16x360/57 with Nut, Locknut & Flat Washer	Nos	500	94.98	47491.20
53.	GS bolt 24x70/54 with , Locknut & Copper Split Pin 5x40 mm	Nos	500	69.98	34992.00
54.	GS bolt 20X85/37 with Nut, Locknut & Flat Washer	Nos	1000	69.78	69782.40
55.	Pin Contact wire Swivel Clip RI 1222	Nos	1000	22.43	22425.60
56.	Pin Copper Split 4x36 mm	Nos	500	9.24	4617.60
57.	Pin Copper Split 4x40 mm	Nos	500	7.18	3590.40
58.	Pin Copper Split 2.5x20 mm	Nos	500	5.14	2568.00
59	SNAP HEAD Pin Clevice GS 20x65 mm	Nos	500	36.94	18470.40
60	SNAP HEAD Pin Clevice GS 20x105 mm	Nos	500	98.52	49257.60
61	SNAP HEAD Pin Snap Head GI 20x65	Nos	500	40.02	20011.20
62	SNAP HEAD Rivet Copper 6 x 50 mm	Nos	500	32.84	16420.80
63	SNAP HEAD Rivet Copper 12x65 mm	Nos	500	87.24	43617.60
64	SNAP HEAD Rivet Copper 6x55 mm	Nos	500	32.84	16420.80
65	SNAP HEAD Rivet Copper 6 x 50 mm	Nos	500	36.94	18470.40
66	Rivet Aluminium 6x35 mm	Nos	500	7.18	3590.40
67	SS Bolt 16x50	Nos	1000	83.13	83126.40
68	SS Nut 16 mm Dia	Nos	1000	30.79	30787.20
69	SS Lock Nut 16 mm Dia	Nos	1000	24.62	24624.00
70	SS Bolt 12 X 60 / 30 mm	Nos	1000	52.34	52339.20

71	SS Bolt 12x45x30	Nos	1000	40.02	40022.40
72	SS Bolt 10 X 35 / 30 mm	Nos	1000	26.68	26678.40
73	SS Bolt 10 X 25 / 30 mm	Nos	1000	22.58	22579.20
74	SS Bolt with Nut, L. Nut & Washer 10x65x30	Nos	1000	52.34	52339.20
75	SS Bolt 10x35/30 with hole	Nos	1000	26.68	26678.40
76	SS Nut 10 mm	Nos	1000	17.45	17452.80
77	SS Lock Nut 10 mm	Nos	1000	5.14	5136.00
78	SS Nut 12 mm	Nos	1000	13.34	13344.00
79	SS Lock Nut 12 mm	Nos	1000	15.40	15398.40
80	Bull dog clamp for 120 Sq. mm catenary (14mm dia.) copper material	Nos	20	738.90	14778.05
81	Bull dog clamp steel rope (14mm Dia) steel material	20	10	328.40	3283.97
82	14mm dia steel rope for Emergency mast guy rod	MTR	200	373.56	74712.96
83	LV junction Box for 25 kVA Auxiliary Transformer	Nos	8	14367.66	114941.26
84	LV junction Box for 10 kVA AT Auxiliary Transfomer	Nos	8	14367.66	114941.26
85	LV junction Box for 50 kVA AT Auxiliary Transformer	Nos	8	15907.05	127256.37
86	LV junction Box for 100 kVA AT Auxiliary Transformer	Nos	6	20012.09	120072.56
87	Sigma Board Retro Reflective	Nos	50	3201.94	160096.80
88	Supply of Retro - Reflective structure number plate as per RDSO Spec No. ETI/OHE /33A (12/97) Rev. 8	Nos	1000	406.05	406051.20
89	One set consisting of (i) Fuse carrier tube, glass fibre 500 mm long-1 No. (ii) Jaw tin bronze-1 No (iii) end fitting (FUSE carrier) 1 No (iv) Swivel with hook-1 no. (v) horn link 1 no. (vi) Terminal connector-2 nos . For 25 kV DO FUSE switch as per RDSO drawing nol ETI/PSI/032 REV. "D", Make IM as per CORE-ALD approved drg No. IM/120/04	Nos	50	5762.40	288120.00
90	Drop out fuse (Fuse Link of 1A)	Nos	1000	83.82	83817.60
91	Drop out fuse (Fuse Link of 5A)	Nos	500	115.25	57624.00

92	25 kV Earthing Discharge Rod for OHE With length of cable 13 mtr (11.5+1.5) mtrs with folding fibre stick of total length 6700 mm in 4 equal sections, cable size 248/0.45 mm single core flexible multi stranded annealed copper as per our CORE-ALD approved Drg No IM. 107/95 Rev-A & RDSO spec no. ETI/OHE/51 (9/87) Rev-A (oct-92)	Nos	8	22918.46	183347.71
93	Operating pole for 25 kv drop out fuse switch make IM as per our core ALD approved dwg no. IM/118/04 and RDSO spect no. ET/PSI/14(1/56).	Nos	10	7258.94	72589.44

PART-2

S. No.	Description of Item	Unit	Qty.	Rate	Total Amount
1	Supply of GEARLESS HAND OPRATED PULLING AND LIFTING MACHINE TIRFOR, CAPACITY LIFTING 3 TON,PULLING 5 TON WITH 20 MTRS STEEL WIRE ROPE TO RDSO SPECIFICATION NO. TI/SPC/OHE/ TOOLPL /0990 with A & C Slip No. 1 & 2 or latest" & EDFC requirement. ACCEPTED MAKE: IM, TRACTEL , OCC, CMIS or Similar- RDSO Approved.	Sets	4	21766.14	87064.55
2	Supply of RATCHET LEVER HOIST(PULL LIFT) WITH ROLLER CHAIN (20 Meter) WITH LIFTING CAPACITY OF 3 TON. AS PER RDSO SPEC NO.TI/SPC/ OHE/ TOOLPL/0990 with A & C Slip No. 1 & 2 or latest" & EDFC requirement 1.4 M LIFT OR LATEST. ACCEPTED MAKE : IM, OCC, TRACTEL, SAMSON, SHAKTI or Similar-RDSO Approved.	Nos	4	9948.77	39795.07

3	Supply of RATCHET LEVER HOIST(PULL LIFT) WITH ROLLER CHAIN (20 Meter) WITH LIFTING CAPACITY OF 0.75 TON. AS PER RDSO SPEC NO.TI/SPC/OHE/ TOOLPL/0990 with A & C Slip No. 1 & 2 or latest" & EDFC requirement 1.4 M LIFT OR LATEST. ACCEPTED MAKE : IM, OCC, TRACTEL, SAMSON, SHAKTI or Similar- RDSO Approved.	Nos	16	5903.55	94456.78
4	Supply of COME ALONG CLAMP FOR Catenary WIRE SUITABLE FOR 125 SQMM 2.5 TONNE AS PER DRAWING NO. RE/33/P/550 & EDFC requirement WITH LOAD TEST CERTIFIED Make: IM/Shree Ram Engineers or Similar- RDSO Approved.	Nos	8	2156.08	17248.67
5	Supply of COME ALONG CLAMP FOR Contact WIRE SUITABLE FOR 150 SQMM 2.5 TONNE AS PER DRAWING NO. RE/33/P/550 & EDFC requirement WITH LOADTEST CERTIFIED. Make: IM/Shree Ram Engineers or Similar- RDSO Approved.	Nos	8	2156.08	17248.67
6	Supply of Come along clamp for 93.3 sq.mm AEC Wire (ACSR) BOLT TYPE & EDFC requirement. Make- Sri ram Engineers or similar	Nos	8	8758.81	70070.48
7	Supply of Come along clamp for 288 sq.mm Feeder (AAAC) BOLT TYPE & EDFC requirement Make- Sri ram Engineers or similar	Nos	8	8758.81	70070.48
8	Supply of D' Shackles made of alloy steel. Set consisting one no. shackle of each size (1", 3/4", 5/8", 1/2"). Shackles shall have loading capacity upto 5T and made as per IS: 6132 and shall be suitable for use in TRD works Make IM or Similar- RDSO Approved.	Set	8	667.35	5338.83
9	Supply of Single sleeve pulley block 3 1/2 x 1/2" groove steel with capacity 2.5 ton Make IM or similar RDSO approved.	Nos	8	1221.78	9774.26

10	Supply of Double sleeve pulley block 3 1/2 x 1/2" groove steel with capacity 2.5 ton Make IM or similar RDSO approved.	Nos	8	1263.24	10105.96
11	Single sleeve pulley block 3 1/2" x 1/2" groove FIBER with capacity 2.5 ton Make IM or similar RDSO approved.	Nos	8	1607.76	12862.08
12	Single sleeve pulley block 6"X1" groove steel with capacity 3 ton Make IM or similar RDSO approved.	Nos	8	1078.04	8624.33
13	Supply of Steel slings with eye each end 16 mm dia 1.5 mtr long. Flexible Make : IM/Mahadev/Bharat Wires/Usha Martin or equivalent	Nos	8	685.72	5485.75
14	Supply of Steel slings with eye each end 16 mm dia 2 mtr longflexible Make : IM/Mahadev/Bharat Wires/Usha Martin or equivalent	Nos	8	926.39	7411.12
15	Supply of Steel slings with eye each end 16 mm dia 3 mtr longflexible Make : IM/Mahadev/Bharat Wires/Usha Martin or equivalent	Nos	8	1164.41	9315.30
16	Supply of Steel slings with eye each end 16 mm dia 4.5 mtr longflexible Make : IM/Mahadev/Bharat Wires/Usha Martin or equivalent	Nos	4	1468.60	5874.39
17	Supply of Steel slings with eye each end 16 mm dia 10 m long. Flexible Make : IM/Mahadev/Bharat Wires/Usha Martin or equivalent	Nos	4	2806.14	11224.55
18	Supply of Contact wire twist cum bender for(107 Sq. mm and 150 sq.mm size wires) 6", Accepted make:IM or similar as per approved Drg No. IM/CWTB/05 /12/101 Similar to RE/DNR drg.	Nos	4	693.02	2772.10
19	Contact wire Splicing jig (107 & 150 Sq.mm). (Contact wire splicing jig for contact wire as per Drg. No. RE/DNR/EL/ TP/110 &as per our RE approved Drg No. IM/CWSJ/05/12/103, similar to RE/DNR Drg.	Nos	4	5996.99	23987.94
20	Supply of Manilla rope 20 mm dia. Circular GRADE 1 MANILA ROPE WITHOUT ROT PROFFING AS PER IS 1084: 2005 AMDS 2	Meter	200	139.15	27830.40

21	Supply of Manilla rope 16 mm dia. Circular GRADE 1 MANILA ROPE WITHOUT ROT PROFFING AS PER IS 1084: 2005 AMDS 2	Meter	200	124.84	24967.68
22	Supply of Manilla rope 12 mm dia. Circular GRADE 1 MANILA ROPE WITHOUT ROT PROFFING AS PER IS 1084: 2005 AMDS 2	Meter	200	111.53	22306.56
23	Supply of Highly insulated fibre glass hot line stick telescopic- 10 m long with MS Hook, Make:IM as per Drg No. IM/145A/05/145B/08.	Nos	12	13634.47	163613.61
24	Hydraulic Crimping tools-Capacity 25 sq. mm to 400 sq. mm, Model: Ashoka-400, Make: Jainson	Nos	4	21698.75	86794.98
25	Supply of Insulator testing machine Tensile load Testing machine for testing of 25 kV porcelain and composite insulator as per RDSO specifiction No. TI/SPC/OHE/INSTEST/ 0090 (02/2009) with A&C slip No. of latest (Hydrolic Insulator Testing Jig) Make : BCPL or CCSPL or any other RDSO approved.	Nos	1	260052.58	260052.58
26	Supply of Industrial Safety Helmet (White & Yellow) as per IS CODE 2951 : 1984 or latest Make: Karam or similar	Nos	50	321.20	16059.84
27	Supply of Industrial Safety belt and harness Class:A, as per IS 3521 or latest Make: Karam or similar	Nos	30	1274.59	38237.76
28	Supply of Rubber insulated Safety Hand Gloves 25/33 kV as per IS 4770-1991 or latest , Make: Jyoti/Vidyut/Karam	Set	50	866.73	43336.32
29	Supply of Safety Anti acid hand gloves Make: Jyoti/Vidyut/Karam or similar	Nos	20	173.95	3479.04
30	Supply of Safety Shoes , Make : Allen Cooper/ Bata or similar , 7 No-10 , 8 No-20, 9 No-10, 10 No-10.	Nos	50	1167.53	58376.64
31	Supply of Safety Jacket as per IS 15809 (2008) or latest	Nos	100	181.50	18149.76
32	Supply of Protective Glass (Eye protection) Make: Karam/PEC/Venus	Nos	40	828.82	33152.64
33	Supply of Personal tool bag	Nos	20	1657.62	33152.45

34	Petroleum jelly for battery cell maintenance	KG	50	634.41	31720.32
35	HRC Fuse 6A	Nos	50	184.19	9209.28
36	HRC Fuse 16A	Nos	50	194.41	9720.48
37	Cell tester analog (galvano meter)	Nos	4	1437.64	5750.55
38	Kit kat fuse 250A	Nos	10	636.44	6364.42
39	Kit kat fuse 200A	Nos	10	624.16	6241.63
40	Kit kat fuse 100A	Nos	10	613.93	6139.30
41	Battery Operated Metal Cutter Heavy Duty (PG CLAMP)	Nos	5	23288.60	116443.01

PART B. PSI Maintenance Activity					
Schedule 6: Maintenance of Traction Sub Stations:					
SN	**Description of Work**	**Unit**	**Quantity**	**Unit Rate (Incl GST)**	**Total amount (Rs.)**
1	Monthly Maintenance of 132kV/55kV, 60/84/100 MVA Traction Power Transformer (Scott) and 220/132 kV, 150 MVA Power transformer.	Each	110	1278.33	140616.73
2	Half Yearly Maintenance of 132 kV/55kV, 60/84/100 MVA Traction Power Transformer.	Each	15	1710.59	25658.78
3	Yearly Maintenance of 132kV/55kV, 60/84/100 MVA Traction Power Transformer.	Each	10	2673.92	26739.21
4	Monthly Maintenance of 220/132 kV TP SF-6 Circuit Breaker	Each	280	855.29	239480.58
5	Half Yearly Maintenance of 132kV TP SF-6 Circuit Breaker	Each	26	1332.36	34641.44
6	Yearly Maintenance of 132 kV TP SF-6 Circuit Breaker	Each	24	1602.52	38460.42
7	Three Yearly Maintenance of 132kV TP SF-6 Circuit Breaker	Each	12	1715.37	20584.41
8	Monthly Maintenance of 220/132kV Current Transformer	Each	1104	423.05	467042.89
9	Half Yearly Maintenance of 220/132kV Current Transformer	Each	108	635.11	68591.61
10	Yearly Maintenance of 220/132kV Current Transformer	Each	96	855.29	82107.63
11	Three Yearly Maintenance of 220/132kV Current Transformer	Each	48	915.98	43967.07
12	Half Yearly Maintenance of 220/132kV Potential Transformer	Each	174	383.37	66706.92
13	Yearly Maintenance of 220/132kV Potential Transformer	Each	66	775.09	51155.82
14	Monthly Maintenance of 198/120 kV Lightning Arrester	Each	768	680.13	522343.60
15	Quarterly Maintenance of 198/120 kV Lightning Arrester	Each	192	576.34	110656.36
16	Half Yearly Maintenance of 198/120 kV Lightning Arrester	Each	135	855.29	115463.85
17	Yearly Maintenance of 198/120 kV Lightning Arrester	Each	90	775.09	69757.94
18	Monthly Maintenance of 220/132 kV TP Motorised Isolator with or without earthing heel	Each	460	423.70	194900.16

19	Half Yearly Maintenance of 220/132 kV TP Motorised Isolator with or without earthing heel	Each	69	639.16	44102.18
20	Yearly Maintenance of 220/132 kV TP Motorised Isolator with or without earthing heel	Each	64	963.35	61654.13
21	Monthly Maintenance of 66/25kV DP Circuit Breaker	Each	520	324.02	168489.78
22	Half Yearly Maintenance of 66/25kV DP Circuit Breaker	Each	78	639.16	49854.64
23	Yearly Maintenance of 25kV DP Circuit Breaker	Each	52	1277.94	66452.68
24	Three Yearly Maintenance of 25kV DP Circuit Breaker	Each	26	1277.94	33226.34
25	Monthly Maintenance of 25 kV DP Motorised Isolator without earthing heel	Each	200	638.33	127665.58
26	Half Yearly Maintenance of 25 kV DP Motorised Isolator without earthing heel	Each	30	1071.21	32136.29
27	Yearly Maintenance of 25 kV DP Motorised Isolator without earthing heel	Each	20	1602.31	32046.28
28	Monthly Maintenance of 42 kV Lightning Arrester	Each	648	323.95	209920.18
29	Quarterly Maintenance of 42 kV Lightning Arrester	Each	144	293.58	42275.55
30	Half Yearly Maintenance of 42 kV Lightning Arrester	Each	106	531.10	56297.03
31	Yearly Maintenance of 42 kV Lightning Arrester	Each	72	481.30	34653.91
32	Quarterly Maintenance of 25 kV Potential Transforme PT (Type I)	Each	20	423.05	8460.92
33	Half Yearly Maintenance of 25 kV Potential Transformer PT (Type I)	Each	12	639.38	7672.51
34	Yearly Maintenance of 25 kV Potential Transformer PT (Type I)	Each	8	855.29	6842.30
35	Quarterly Maintenance of 25 kV Potential Transforme PT (Type II)	Each	80	423.05	33843.69
36	Half Yearly Maintenance of 25 kV Potential Transformer PT (Type II)	Each	48	639.38	30690.02
37	Yearly Maintenance of 25 kV Potential Transformer PT (Type II)	Each	32	855.29	27369.21
38	Monthly Maintenance of 25 kV Current Transformer	Each	800	423.05	338436.88
39	Half Yearly Maintenance of 25 kV Current Transformer	Each	120	639.38	76725.06
40	Yearly Maintenance of 25 kV Current Transformer	Each	80	855.29	68423.02
41	Three Yearly Maintenance of 25 kV	Each	40	915.98	36639.23

	Current Transformer				
42	Monthly Maintenance of 25 kV Vacuum DP Interrupter	Each	80	324.18	25934.70
43	Half Yearly Maintenance of 25 kV Vacuum DP Interrupter	Each	12	639.16	7669.95
44	Yearly Maintenance of 25 kV Vacuum DP Interrupter	Each	8	1278.33	10226.67
45	Quarterly Maintenance of 25kV/240V, 100kVA LT Auxiliary Transformer	Each	40	314.48	12579.35
46	Half Yearly Maintenance of 25kV/240V, 100kVA LT Auxiliary Transformer	Each	24	639.16	15339.89
47	Yearly Maintenance of 25kV/240V, 100kVA LT Auxiliary Transformer	Each	16	1710.58	27369.21
48	Quarterly Maintenance of 25kV/240V, 10kVA LT Auxiliary Transformer	Each	5	324.17	1620.87
49	Half Yearly Maintenance of 25kV/240V, 10 kVA LT Auxiliary Transformer	Each	3	639.16	1917.49
50	Yearly Maintenance of 25kV/240V, 10 kVA LT Auxiliary Transformer	Each	2	1710.58	3421.15
51	Quarterly maintenance of 2500 KVAR CAPACITOR BANK INCLUDING SERIES REACTOR	Each	10	639.16	6391.62
52	Half yearly maintenance of 2500 KVAR CAPACITOR BANK INCLUDING SERIES REACTOR	Each	6	1710.58	10263.45
53	Yearly maintenance of 2500 KVAR CAPACITOR BANK INCLUDING SERIES REACTOR	Each	4	2565.86	10263.45
54	Quarterly Maintenance of 25 kV Neutral Current Transformer	Each	30	443.45	13303.65
55	Yearly Maintenance of 25 kV Neutral Current Transformer	Each	12	886.92	10643.03
56	Fortnightly battery & battery charger maintenance of TSS	Each	192	423.05	81224.85
57	Yearly battery & battery charger maintenance of TSS	Each	8	10254.27	82034.14
58	Half Yearly maintenance of Earthing station	Each	350	162.10	56733.85
59	Yearly maintenance of Earthing station	Each	350	162.10	56733.85
60	Yearly Buried Rail Connection	Each	4	17096.57	68386.28
61	Half Yearly Thermal Imaging of Equipment connector	Each	1200	423.05	507655.32
62	Yearly Maintenance of Earth Screen Conductor	Each	4	1602.52	6410.07
63	Yearly maintenance of Cable Trench Cleaning	Each	4	8543.69	34174.77

64	Reclamation of DCP(5kG,10 kG & 25 kG),CO2(9kG) & foam type fire extinguisher.	Each	12	67.35	808.17
65	Refilling of DCP(5kG,10 kG & 25 kG),CO2(9kG) & foam type fire extinguisher.	Each	12	548.57	6582.89
	Total for Sch 6				**4970441.51**
Schedule 7: SP/SSPs/ATS/PP Maintenance :					
S.No	**Description of Work**	**Unit**	**Quantity**	**Unit Rate (Incl GST)**	**Total amount (Rs.)**
1	Monthly Maintenance of 12/9/8 MVA Auto Transformer	Each	600	1271.30	762780.39
2	Half Yearly Maintenance of 9 MVA Auto Transformer	Each	90	1700.45	153040.12
3	Yearly Maintenance of 9 MVA Auto Transformer	Each	60	2658.81	159528.40
4	Monthly Maintenance of 25 kV DP Interrupter	Each	1300	322.51	419266.45
5	Half Yearly Maintenance of 25 kV DP Interrupter	Each	195	635.87	123994.15
6	Yearly Maintenance of 25 kV DP Interrupter	Each	130	1271.74	165326.79
7	Monthly Maintenance of 25 kV DP Isolator	Each	2160	632.68	1366595.17
8	Half Yearly Maintenance of 25 kV DP Isolator	Each	324	1065.89	345348.60
9	Yearly Maintenance of 25 kV DP Isolator	Each	216	1594.26	344359.56
10	Quarterly Maintenance of 25 kV Potential Transformer	Each	170	420.87	71547.13
11	Half Yearly Maintenance of 25 kV Potential Transformer	Each	102	636.08	64880.13
12	Yearly Maintenance of 25 kV Potential Transformer	Each	68	850.88	57859.78
13	Monthly Maintenance of 42 kV Lightning Arrester	Each	1224	322.28	394472.01
14	Quarterly Maintenance of 42 kV Lightning Arrester	Each	340	292.07	99302.75
15	Half Yearly Maintenance of 42 kV Lightning Arrester	Each	204	528.37	107786.76
16	Yearly Maintenance of 42 kV Lightning Arrester	Each	136	478.82	65119.98
17	Quarterly Maintenance of 25kV/240V, 10kVA LT Auxiliary Transformer	Each	45	322.50	14512.64
18	Half Yearly Maintenance of 25kV/240V, 10kVA LT Auxiliary Transformer	Each	27	635.87	17168.42

19	Yearly Maintenance of 25kV/240V, 10kVA LT Auxiliary Transformer	Each	18	1701.76	30631.65
20	Fortnightly battery & battery charger maintenance at SPs/SSPs.	Each	864	420.87	363627.75
21	Yearly Maintenance of Battery AND Battery Charger.	Each	36	10201.41	367250.78
22	Half Yearly maintenance of Earthing station.	Each	740	161.26	119333.25
23	Yearly maintenance of Earthing station.	Each	420	161.26	67729.68
24	Yearly Buried Rail Connection.	Each	18	17008.44	306151.98
25	Monthly Maintenance of 25 kV SP Interrupter	Each	40	322.51	12900.51
26	Half Yearly Maintenance of 25 kV SP Interrupter	Each	6	635.87	3815.20
27	Yearly Maintenance of 25 kV SP Interrupter	Each	4	1271.74	5086.98
28	Half Yearly Thermal Imaging of Equipment connector	Each	720	420.87	303023.12
29	Yearly Maintenance of Earth Screen Conductor	Each	56	1594.26	89278.40
30	Yearly maintenance of Cable Trench Cleaning	Each	18	3403.53	61263.47
31	Reclamation of DCP(5kG,10 kG & 25 kG),CO2(9kG) & form type fire extinguisher.	Each	18	67.00	1206.00
32	Refilling of DCP(5kG,10 kG & 25 kG),CO2(9kG) & form type fire extinguisher.	Each	18	545.75	9823.43
	Total for Sch7				**6474011.42**
Schedule 8: Panels & Gantry Bus Bar insulator other Maintenance:					
S.No	**Description of Work**	**Unit**	**Quantity**	**Unit Rate (Incl GST)**	**Total amount (Rs.)**
1	Monthly panel maintenance in RSS/TSS	Each	60	2642.73	158563.57
2	Monthly panel maintenance in SP/SSP	Each	216	1321.36	285414.43
3	Half yearly Cross gantry or any others Gantry Bus Bar maintenance of TSS	Each	8	15302.63	122421.06
4	Half yearly Cross gantry or any others Gantry Bus Bar maintenance of of SP/SSPs	Each	36	10571.89	380588.19
5	Removal and re-errection of PSI Equipment	Each	60	5501.70	330102.25
6	Supply & Erection of Caution Board	Each	200	295.26	59051.66
7	Supply and spreading of ballast/Pebbles/Gravels in Switching Stations/TSS yard	CUM	800	1329.13	1063306.24

8	Reinforce concrete for cable trench & cover	Sqm.	350	1279.27	447746.18
9	Supply and repaininting of PSI Equipment like Transformer CT ,PT ,LA, BM, CB, AT as per site requirement with water proof gray enamled paint by apprved brand i.e. Asian, Berger etc. or equivalent as per IS 2932 or latest	Sqm.	325	37.60	12219.09
10	Supply and repaininting of PSI assets ie. Fencing Panels, FencingUP right, barbared wire, Tubular pole at TSS/SP/SSP with Aluminum Paint i.e. Asian Berger etc. or equivalent as per IS 2339 or latest	Sqm.	325	34.34	11159.85
11	Supply and erection of Earth Pit cover & Box	Each	200	873.01	174601.94
12	Provision of Shock Treatment Chart	Each	30	838.03	25140.95
13	Drilling of holes in mast/ rails with contractror own labour and T&P complete.	Each	200	36.28	7255.60
14	Removal of Wild vegetation in SS/SP/SSPs	Sq. m	25000	8.60	215097.50
15	Supply and erection of earth leads 75 x 8 mm mild steel flat laid in the ground or exposed as per site requirement	Mtr	350	250.51	87679.27
16	Supply and erection of earth leads 50 x6 mm mild steel flat laid in the ground or exposed as per site	Mtr	500	139.27	69636.30
17	Supply and erection of 8 SWG GI Wire for earthing.	Mtr	600	36.45	21871.56
	TOTAL for Sch 8				**3471855.64**
Schedule 9: Break down attention					
S.No	**Description of Work**	**Unit**	**Quantity**	**Unit Rate (Incl GST)**	**Total amount (Rs.)**
1	Breakdown attention of PSI equipments at TSS/SP/SSPs	Hrs	480	664.57	318991.87
2	Maintenance of 25 KV dropout fuse AT TSS/SP/SSP /ALH/RH/DH/ LC and station.	Each	360	1113.50	400860.65
3	Manning of SP/SSP in case of Emergency	Man Day	100	1313.77	131376.80
	TOTAL for Sch 9				**851229.32**
Schedule 10: Additional PSI maintenance Activity					
S.No	**Description of Work**	**Unit**	**Quantity**	**Unit Rate (Incl GST)**	**Total amount (Rs.)**

1	Dismantling, supply, erection & commissioning of LA, CT, PT, CB & BM in case of break down/bursting of the equipment- As per Appendix-**B**	Lump Sum		As per Appendix-B	**4805500.00**
Schedule 11: Maintenance of Traction Sub Stations /SCPs (Optional)					
S.No	**Description of Work**	**Unit**	**Quantity**	**Unit Rate (Incl GST)**	**Total amount (Rs.)**
1	Maintenance of Traction Sub Stations Note: Schedules are available in Tender Document 'Appendix-C'	Lump Sum		1164000.00	1164000.00
	TOTAL			**1164000.00**	
	PART (B) Grand Total of Sch-6+Sch-7+Sch-8+Sch9+Sch10+Sch-11			**21737037.89**	
PART (B) Grand total amount = Rs. 2,17,37,037.89					

APPENDIX-B

	Description of Work	UNIT	RATE
1	Supply of Lightening Arrester- 42 kV	Each	44440.36
2	Erection/Dismantling of Lightening Arrester- 42 kV	Each	911.46
3	Supply of Lightening Arrester- 120 kV	Each	271655.21
4	Erection/Dismantling of Lightening Arrester- 120 kV	Each	1909.21
5	Supply of CT- 132 kV	Each	464254.29
6	Erection/Dismantling of CT- 132 kV	Each	2695..01
7	Supply of CT- 25 kV	Each	129856.92
8	Erection/Dismantling of CT- 25 kV	Each	1112.83
9	Supply of PT- 25 kV	Each	123234.47
10	Erection/Dismantling of PT- 25 kV	Each	1302.08
11	Supply of PT- 132 kV	Each	319735.32
12	Erection/Dismantling of PT- 132 kV	Each	17743.13
13	Supply of CB- 25 kV SP	Each	715113.97
14	Erection/Dismantling of CB- 25 kV SP	Each	8460.51
15	Supply of Isolator 25 kV DP with Insulators	Each	149949.91
16	Erection/Dismantling of Isolator 25 kV DP	Each	4775.3
17	Supply of Isolator 25 kV SP	Each	82912.33
18	Erection/Dismantling of Isolator 25 kV SP	Each	4775.3
19	Supply and erection Earth Electrodes	Each	6166.73
20	**Supply and erection of all types of galvanized Steel Structures, Small Parts Steel etc**	Each	157021.99
21	Erection/Dismantling of all types of galvanized Steel Structures, Small Parts Steel etc.	MT	5276.47

	25 kV Outdoor Double Pole VCB type VSE 5/20 DP/Single POLE VCB Type VSE 5/20 Make:ALIND		
22	Tripping Coil	Each	14534.87
23	Closing COIL	Each	14534.87
24	Spring Charging Motor With latch	Each	65104.09
25	Auxiliary Switch (8NC+8NC) with crank	Each	34520.31
26	Motor Limit Switch (3No+3No) with Crank	Each	17411.56
27	Local/Remote Selector Switch	Each	11809.58
28	**25 kV Outdoor Double Pole VI Type VSE 5/8 DP/Single POLE VI TYPE VSE 5/8 Make: ALIND**		
29	Tripping Coil	Each	14534.87
30	Closing COIL	Each	14534.87
31	Supply of 132 kV support insulator	Each	56666.3
32	Erection/Dismanteling of 132 kV support insulator	Each	902.37
33	Supply of 25 kV support insulator	Each	6926.78
34	Erection/Dismanteling of 25 kV support insulator	Each	260.41
35	Supply 28.62 mm Dia ACSR conductor	Mtrs	1545.85
36	Erection/Dismanteling of ACSR conductor	Mtrs	28.77
37	Supply of 19/2.5 mm Gavanised steel stranded earth wire including termination	Mtrs	396.69
38	Erection/Dismanteling of 19/2.5 mm Gavanised steel stranded earth wire including termination	Mtrs	19.69
39	Supply of 50 mm dia aluminum tubular busbar including including connectors	Mtrs	2233.23
40	Erection/Dismanteling of 50 mm dia aluminum tubular busbar including including connectors	Mtrs	89.33
41	Battery set for TSS- 400Ah	Set	1110560.51
42	Battery set for SP SSP 120Ah	Set	414334.04
	APPENDIX-C		
1	Oil Filtration for power/traction/auto/CT/PT Transformer: Streamline Oil filtration work & Conservator tank	Litres	3.93
2	Oil Filtration for power/traction/auto/CT/PT Transformer :Oil to be drained from main tank and to be stored in separate Containers	Litres	1.06
3	Oil Filtration for power/traction/auto/CT/PT Transformer:	Litres	1.06

	Refilling of oil from container to Main Tank after filtration.		
4	Bushings Oil leakage attention in Transformer: Streamline Oil filtration work & Conservator tank	Litres	3.93
5	Bushings Oil leakage attention in Transformer: Refilling of oil from container to Main Tank after filtration.	Litres	1.06
6	Bushings Oil leakage attention in Transformer: Leakage attention to OLTC tapping Gear and new Gasket O-ring changing work	Job	11688.03
7	Bushings Oil leakage attention in Transformer: Leakage attention of HV Bushings - 3 Nos and bottom Flange and its related works	Job	15207.39
8	Bushings Oil leakage attention in Transformer :Leakage attention of LV Bushing CT Box and replacement of new gasket and its related works	Job	6375.28
9	Bushings Oil leakage attention in Transformer:Leakage attention of HV inspection covers, Pipe line Gasket attention and replacement and its related works	Job	11688.03
10	Bushings Oil leakage attention in Transformer: Rental Charges for Cranes	Day	6970.06
11	Bushings Oil leakage attention in Transformer:Transport charges for oil filtration van up & down, Toll	Trip	14003.47
12	Bushings Oil leakage attention in Transformer:Transport Charges for empty barrels vehicle up & down, Toll	Trip	21543.8
13	Bushings Oil leakage attention in Transformer: Supply of Grade-1 New gasket (6mm and 10mm)	Set	14875.67
14	Bushings Oil leakage attention in Transformer:Oil leakage attention and overhauling of TAP Changer Streamline Oil filtration work & Conservator tank	Litres	2.27
15	Oil Leakage attention and overhauling of TAP changer: Leakage attention to OLTC tapping gear and new Gasket O ring changing work	Job	5702.77
16	Oil Leakage attention and overhauling of TAP changer: Rental and Transportation charges for oil barrels for storing Transformer oil	Job	8237.33

17	Oil Leakage attention and overhauling of TAP changer: oil Transportation charges for oil filtration van up & down	Trip	4562.22
18	Calibration of Measuring and tesing instruments [Will be paid based on the submission of proof of bill of calibrated instruments in the NABL accredited labs]	LS	150000
19	Transformer Oil testing by Accredited agency, Rate referance:EDFC FIELD UNIT-DDU-ELECTRICAL/DFCC-DDU-EL-MAINT-TRD-O1/01550800054317, DTD 12.05.2022	NUMBER	24267.88

(C).MISCELLANEOUS Electrical Manning ,Testing & Miscellaneous items

Schedule 12: MISCELLANEOUS OHE/PSI Manning for Electrical Work, Operator, Housekeeping and Regular Foot Patrolling in the section.

S.No.	Description of Work	Unit	Qty	Rate	Rate(Including Service Charges Min@3 %)	Rate (Including GST 18%)	Amount(Rs)
1	Manning of TSS (Durgawati and Karwandia TSS) (Skilled person for maintaining registers,operation of equipments and monitoring PSI equipment) (Total 02 TSS =02 Location*03 shift=06 Person) (Total 06 Person+16% reliever=7 Person (8*3=24 Hour shift). Releiver for both location (Class C Salary)	Man Month	168	23388.98	24090.65	28426.97	4775730.58
2	Regular Housekeeping of TSS (Durgawati and Karwandia TSS) and Stores (SEBN, DGON & KWDN) +TW Maintainer (Unskilled person at 02 No.TSS and 01 IMD+02 ISMD+02 TW=total 07) (08 Hour shift only) (Class C Salary)	Man Month	168	17037.56	17548.69	20707.45	3478851.83
3	Data Entry Operator Cum Store Maintainer at IMD/ISMD (Skilled Person at 01 SEBN/IMD, 01 DGON/ISMD, 01 DDUN/CGM office & 01 KWDN/ISMD= Total 04) (08 Hour shift only)(Class C Salary)	Man Month	96	23388.98	24090.65	28426.97	2728988.76
4	Regular Foot Patrolling Skilled Person for 01 IMD SEBN & 02 ISMD = 06 Person i.e 02/Location (08 Hour shift only) (Person having Knowledge of OHE/PSI Equipments and competent to attend the fault, insulator cleaning and other miscellaneous OHE/PSI Work during Power and traffic block in supervision of DFCCIL Official) (During Foot patrolling Person will carry Operating rod+Hammer+Flag+Spiner/ Wrenches) Per day 6-8 TKM	Man Month	144	23388.98	24090.65	28426.97	4093483.15

	Foot patrolling.(Class C Salary)						
				Total Sch 12 =			**15077054.33**
	Note (for C Schedule 12 only):-Bidder should not quote his rate below the advertised value. **Bidder Quoting rates below the advertised value shall be summarily rejected (disqualified)**. Bidder may advised to go as per circular issued by office of Chief Labour commissioner ('C) New Delhi 25.09.2024 and Structure as per DFCCIL HQ/HR/3/Outsource Pol./9/201602199 dated 07.07.2017. Bider will have to pay the salay as per the DFCCIL HQ/HR/3/Outsource Pol./9/201602199 dated 07.07.2017 salary structure and Revised rate as per office of Chief Labour commissioner ('C) New Delhi. Bidder is advised to quote the rate accordingly.						

Schedule 13: Testing of equipment at RSS/TSS/SP/SP

Item No.	Description Unit Qty	Unit	QTY	Rate(Including GST 18%)	Total
1	Charges for a team Testing & Commissioning (1 Sr Engg & 1 Asst Engg) with conventional testing kit applicable for testing (Annexure-4)	Per Days	120	6867.60	824112
2	Charges for Tan Delta kit	Per Days	24	19458.20	466996.8
3	Charges for CT Analyzer kit	Per Days	36	16024.40	576878.4
4	Mobilization Lum sum for Individual line items	Per Trip	4	17169.00	68676
5	Accommodation Charges	Per Days	180	2289.00	412020
			Total		2348683.20
	Final Total Sch-13				**2348683.20**
	Note:- Engineer will perform every test under supervision of DFCCIL with the help of Conventional Testing kit, TAN Delta Kit, CT Analyser etc. Payment will be made to contractor after submission of final Report to DFCCIL.				

Schedule 14: Miscllenious items for OHE/PSI

	Description of Work	unit	QTY	Rate(Including GST 18%)	Amount (in Rs)
	Supply of Miscllenious spares, tools & equipment required during maintenance & break downs as well as day to day use for a period of 2 years- As per Appendix -D	As per Appendix-D	As per Site Requirement	As per Appendix-D	8124216.18

	Schedule-14 Total as per appendix-D				8124216.18
					APPENDIX-D
Item No.	**Description Unit Qty**	**Unit**	**QTY**	**Rate**	**Total**
1	Silica Gel	KG	500	160	80000.00
2	Silica Gel Breather	Each	50	885	44250.00
3	Hiring charge for Hydra on occassional basis	Per Hour	20	4500.00	90000.00
4	Rail earth camp for bond (200 set) 200 set LEFT + 200 set right =400 nos)	Set	200	415.00	83000.00
5	Loctite Thread sealant	Per 50 Ml	20	804.00	16080.00
6	Inhibited Mineral Insulating Oil as per type II transformer OIL of IS 335:2018 and railway requirement as per RDSO letter No. TI/PSI/ INSOL/POLICY/19, Dated 26.07.2019	Per Litre	5500	185.80	1021900.00
7	Cable Junction box IP 66/67 weather proof , for outdoor installation (with knockouts for cable entry) with terminals As per site requirement size 225x295x122 make Hensal or similar.	Each	10	8269.00	82690.00
8	Surge Counter/Monitor electro mechanical type for 42/60 kv Lightening Arrestor, system voltage 380 kV	Each	10	10860.72	108607.20
9	Disconnector for Lightening Arrestor 42 Kv, Distinct material :-ISOLATOR, System Volate:-765 kv; Spare detail:- Copper Contact Finger for Disconnector male & Female contact for one complete disconnector.	Each	60	3411.38	204682.80
10	BINOCULARS - Heavy duty Binocular for inspection of OHE and PSI Equipments etc	Each	4	4200.00	16800.00
11	TORCH- Hand held rechargeable Torch for Patrolman with energy efficient LED lamp fitted good quality reflector size 50-70mm. Torch shall be dual purpose use i.e. it should also be able to use as emergency table lamp as well as patrolling purpose duly fitted with low power consumption rechargeable type with Lithium ion battery complete with charger for	Each	30	1200.00	36000.00

	use on railway works.				
12	UMBRELLA- Hand held folding umbrella with complete central rod and its ridges made from wood /fibre electrically non conductive and also fitted with PVC handle electrically non conductive. Having waterproof heavy duty synthetic cladding with folding strap for cladding specially using for patrolling on track and staff for Railway works.	Each	30	650.00	19500.00
13	RAIN SUIT- Rain Jacket with hood and pant made from heavy duty synthetic material with waterproof coating inside of the coat & pant to make it waterproof in orange color with retro-reflective tape bands on jacket and DFCCIL logo on the back or as decided by DFCCIL.	Each	50	1555.00	77750.00
14	PUNJI- Heavy duty wire punji (claw) made from alloy steel wire, 8 teeth for handling ballast on track etc.	Each	10	311.00	3110.00
15	BANNER FLAG- Red color Banner flag size approx.1750x600mm for temporarily fixing on railway track while working complete with its wooden/PVC holding arm. Complete as per Rly. specification.	Each	10	1150.00	11500.00
16	HS FLAG- Red color hand flag approx. size 21”x21” with wooden/PVC handles for railway staff.	Each	20	190.00	3800.00
17	Supply of power and control cable 12Cx2.5 sqmm Copper PVC insulated FRLSH Armoured cable	Metre	400	361.08	144432.00
18	Supply of power and control cable 2Cx6 sqmm Copper PVC insulated FRLSH Armoured cable	Metre	500	184.08	92040.00
19	Supply of power and control cable 2Cx10 sqmm Copper PVC insulated FRLSH Armoured cable	Metre	500	270.22	135110.00
20	Supply of power and control cable 2Cx25 sqmm Copper PVC insulated FRLSH Armoured cable	Metre	500	585.28	292640.00
21	Supply of power and control cable 12Cx2.5 sqmm Copper PVC insulated FRLSH Armoured cable	Metre	200	1509.22	301844.00
22	Supply of power and control cable 2Cx150 sqmm Aluminium Conductor PVC insulated Armoured cable	Metre	200	377.6	75520.00

23	Supply of power and control cable 4Cx4 sqmm Copper XLPE insulated Armoured cable	Metre	200	182.9	36580.00
24	Supply of power and control cable 12Cx1.5 sqmm Copper XLPE insulated FRLSH Un- Armoured cable	Metre	200	186.44	37288.00
25	Supply of power and control cable 19Cx2.5 sqmm Copper XLPE insulated Armoured cable	Metre	200	470.82	94164.00
26	Supply of power and control cable 2Cx300 sqmm Al Conductor PVC insulated Armoured cable	Metre	200	735.5	147100.00
27	Rigid Bimetallic Terminal Connector Suitable for 50 mm Dia Al Tubular Bus bas to Terminal pad of 25 kV isolator and CT (RI No.-11090) (RI No. 11091 & 11092)	Set	25	1239.00	30975.00
28	Expansion Type Terminal Connector to suit 50 mm Dia Al Tubular Bus Bar to Terminal Pad of 25 kV Isolator, CT, CB and Interrupter. (RI No. 11060) (RI No. 11061,11062 &11063)	Set	25	3894.00	97350.00
29	25 kV System Rigid Connector on SL to Suit 50 mm O/D Al Bus Bar (RI No.11200) (RI No.11201)	Set	25	1121.00	28025.00
30	Supply of 110 V 40Ah low Maintenance battery with accessories and stand RDSO no.RDSO/PE/SPEC/TL/0040-2003 Rev-o with A & C slip no.	Set	4	125600.00	502400.00
31	Supply and erection of 110 V DC Distribution Board	Numbe r	2	17685.00	35370.00
32	25 kV DO fuse Operating Rod as per RDSO specication &CORE approval	Each	24	4248.00	101952.00
33	25 KV FRP Discharge Rod as per RDSO Specification No.ETI/OHE/51(9/87) REV-I	Each	24	9440.00	226560.00
34	Supply of Electrical safety Rubber mat near panel for working staff (size 2mtr X1 mtr)	Each	24	3176.89	76245.36
35	Supply of First Aid Box	Each	15	471.00	7065.00
36	Supply of Portable Fire Extinguishers , type of extinguisher medium-powder, capacity- 6 kg min class - Afire ratiing:2A min class B fire rating:21 B, design-sored pressure	Each	22	1074.66	23642.52
37	220 kV System Bimetallic Terminal Connector to suite Zebra (28.58) ACSR conductor and Al/Cu Pad RI No 11031 & 11032	Each	10	1534.00	15340.00
38	220 kV System Rigid Connector On SI	Each	10	1168.20	11682.00

	to suite Zebra (28.58 Dia) ACSR Conductor				
39	LEAD ACID BATTERY Set CONSTRUCTION TYPE Low Maintenance ,System Voltage-110 V 200 AH ,End voltage-1.85V ,With Wodden battery Stand ,Electrolyte and accessories as per RDSO Spech IRS-S-88/2004 . (01 Set 55 nos 2v cell)	Set	3	323136.00	969408.00
40	LEAD ACID BATTERY Set CONSTRUCTION TYPE Low Maintenance ,System Voltage-110 V 80 AH ,End voltage-1.85V ,With Wodden battery Stand ,Electrolyte and accessories as per RDSO Spech IRS-S-88/2004 . (01 Set 55 nos 2v cell)	Set	2	160640.00	321280.00
41	Bimetallic terminal contector to suit Zebra ACSR conductor and 30 mm dia Cu stud of CT/CB (11011 & 11012)	Each	10	1416.00	14160.00
42	Counter weight piece (40 kg) base with hook (RI NO:5091)	Each	10	1244.39	12443.90
43	Counter weight piece (40 kg) (RI NO:5092)	Each	180	1244.39	223990.20
44	Counter weight piece (20 kg) (RI NO:5093)	Each	20	622.19	12443.80
45	Counter Weight eye rod 1300 mm long with Gsnut M20, washer and annealed copper split pin 4x40 (RI NO:5095)	Each	10	435.54	4355.40
46	50 kVA LT Auxliary transformers, 50 kVA, 25KV/240 VOLT SINGLE PHASE ,50 KZ Oil Filled Auxliary Transformer as per RDSO SPECS NO-ETI/PSI/15 (08/2003)	Each	3	202960.00	608880.00
47	100 kVA LT Auxliary transformers, 100 kVA, 25KV/240 VOLT SINGLE PHASE , 50 KZ Oil Filled Auxliary Transformer as per RDSO SPECS NO-ETI/PSI/15A (07/82)	Each	1	401200.00	401200.00
48	Any non-identified /hidden miscellaneous items which may be used at any time as per requirement of site.	LUM-SUM	As per Actual on the production of GST invoice		1000000.00
49	Structural steel work single section including cutting, bending, straightening,drilling,rivetting, bolting, hoisting, fixing in position, including applying a priming coat of	Kg	2000	71.53	143060.00

	approved steel primer, complete up to 6 m height above GL. (In flats, Plates, round or square bars)				

TOTAL PART (C) , i.e. Sch 12+ Sch13 + Sch 14	**25549953.71**
PART (A) TOTAL	**36693774.71**
PART (B) TOTAL	**22454502.05**
PART (C) TOTAL	**26584205.71**
GRAND TOTAL, i.e. PART-(A)+PART-(B)+ PART-(C)	**83980766.31**
TOTAL ESTIAMTED VALUE (inclusive GST)	**8,39,80,766.31**

NOTE: TRANSPOTATION (MOVEMENT OF Contractor's staff to different work site for regular maintenance and to attend emergency site) will be the responsibility of Contractor. To ensure this, Contractor has to mandatorily to depute minimum 03 nos. MUV suitable vehicle (01 at IMD, 01 no. at each IMSD = Total 03 nos. vehicle) in 24x7 mode during entire currency of contract for movement of his gang to different work sites. DFCCIL will not facilitate any road vehicle for contractor's staff movement and only provide Tower Wagon as per avaliability. Contractor should quote his offer considering above requirement.

Offer sheet

Offer to be filled by tenderer(s) in below table

Description of Work:- ***Maintenance of 2x25 kV OHE/PSI and Miscellaneous OHE/PSI and Testing of PSI equipment in New Pt Deen Dayal Upadhaya Nagar to New Sone Nagar/ New Chiraila Pauthu (SEBN/CPBN) section of DFCCIL including IR link line/Connecting line connection to Indian Railways for a period of 24 (Twenty-Four) months under CGM DDU Unit.***

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Column 1	Column 2	Column 3	
S.N.	**Description of Work**	**Estimated Rate**	
1.	**Schedule 1: Regular Maintenance Activity**	26865482.30	
2.	**Schedule 2: Emergency & Other maintenance activities**	1301433.89	
3.	**Schedule 03 - Foundation items**	882929.66	
4.	**Schedule -04 Additional OHE work**	1580737.78	
5.	**Schedule -05 Additional OHE items**	6063191.08	
6.	**Schedule-06 Maintenance of Traction Sub Stations**	4970441.51	
7.	**Schedule-07 SP/SSPs/ATS/PP Maintenance**	6474011.42	
8.	**Schedule-08 Panels & Gantry Bus Bar insulator other Maintenance**	3471855.64	
9.	**Schedule-09 Break down attention**	851229.32	
10.	**Schedule-10 Additional PSI maintenance Activity**	4805500.00	
11.	**Schedule-11 Maintenance of Traction Sub Stations /SCPs (Optional)**	1164000.00	
12.	**Schedule-12 MISCELLANEOUS OHE/PSI Manning for Electrical Work, Operator, Housekeeping and Regular Foot Patrolling in the section.**	15077054.33	
13.	**Schedule-13 Testing of equipment at TSS/SP/SP**	2348683.20	
14.	**Schedule-14 Miscellaneous items for OHE/PSI**	8124216.18	
	Total	**83980766.31**	

Note : 1. Offered rate shall be quoted under this table in % below, above & at par (except Schedule-12) in figures as well as in words. Please quote the rate either Above or at Par for Schedule - 12.

(2) Above rate are inclusive GST as applicable.

(3) Tenderer is not allowed to quote for individual section(s).

Quoting of rates

Rate ***will be*** ..... ***% (Percentage) below/above/at par (to be filled by the bidder in figure).***

Rate **will be** ..... **(Percentage) below/above/at par (to be filled by the bidder in words).**

I/We offer and agree to execute the above work at rate uploaded online at www.ireps.gov.in through digital Signature.

Signature of tenderer with seal

Explanatory Notes for BOQ:

(i) *The rates shall also be inclusive of all GST and / or any other taxes, license fee and royalty charges etc. if any.*

(ii) **Contractor should bear the fact in mind while quoting the rates that GST will be paid to Contractor by DFCCIL as per prevailing rate for further deposition of GST to State Govt. and/or Central Govt.** as applicable. Documentary evidence of deposition of GST will be produced by contractor.

(iii) *The above quantity is approximate:-The DFCCIL reserves the right to increase / decrease the same.*

(iv) The contractor should adhere to **Anti Profiteering Provisions** as per section 171 of the CGST Act. Where due to change in the rates of GST / Change in law, the contractor gets any credits / benefits, the same shall be passed on to DFCCIL by way of reduction in prices.

FORM No. 2

TENDERER'S CREDENTIALS

S. No	Description
1.	For technical experience/competence, give details of similar completed works during the last Seven financial years in the Performa given in Form-2A
2.	Bid Capacity- Details Of Existing Commitment And Balance Work Form-2B
3.	Give constitution of your firm. Attach certified copies of legal documents in support thereof. Form-2C

FORM No. 2A

TECHNICAL ELIGIBILITY CRITERIA DETAILS

Details of the similar works completed (as per Para 10 of Preamble and General Instruction to Tenders)

Similar Contract No.		
Contract Identification		
Award date		
Completion date		
Role in Contract	Prime Contractor	Member in JV
Total Contract Amount (Rs.)		
If member in a JV, Specify participation in total contract amount	[insert a percentage amount]	Total contract amount in Rs.
Total work done (Final Bill/Last Bill paid in case final bill under preparation)		
Amount of work executed having similar nature of work i.e "Any Electrical Work"		
Employer's Name: Address: Telephone/Fax number E-Mail:		
Description of the similarity in accordance with Criteria as per Para 10 of Preamble and General Instruction to Tenders		

Note:-The Bidder shall attach certified work completions certificates / certified copy of final bill/last bill paid issued by clients for Any Electrical Work. In case main contract is not exclusively for Any Electrical Work, the client's certificate indicating the amount of executed work for Any Electrical Work shall be attached by the bidder.

In case above documents clearly showing the amount of work done for similar nature of work i.e. "Any Electrical Work" are not submitted by the bidder at the time of submission, his bid will be treated as invalid and shall not be considered for evaluation.

Signature of the
Tenderer with Seal

Form No.2B

Statement of Works in Progress for Bid Capacity

BID CAPACITY- DETAILS OF EXISTING COMMITMENT AND BALANCE WORK

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

Name of Tenderer/JV partner:

S. N	Name and plac e of work	Organization for whom work is being carried out	Date of award of contract. Contract Agreement No. & Date	Original Cost of Work/Revised Cost (Up to latest corrigendum)	Date of Completion (Original/ Extended)	Payment Received till date of opening of present tender	Balance amount of the work to be executed	B' value of work to be done in 'N' years

Note:-
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)=Rs……..

N = (Number of years prescribed for completion of work for which bids has been invited). ….....Years

B = (Existing commitments and balance amount of ongoing works with the tenderer as per the above format for statement of all works in progress and also the works which are awarded to tenderer but yet not started up to the date of inviting of tender)=Rs…….

Calculated Bid Capacity of the Tenderer / JV Partner [AxNx2- 0.33xNxB] =Rs…….

2. This statement should be submitted duly verified by Chartered Accountants.

Form-2C

APPLICANT'S PARTY INFORMATION FORM

Applicant name: *[insert full name]*
Applicant's Party name: *[insert full name of Applicant's Party]*
Applicant's Party country of registration: *[indicate country of registration]*
Applicant Party's year of constitution: *[indicate year of constitution]*
Applicant Party's legal address in country of constitution: *[insert street/ number/ town or city/ country]*
Applicant Party's authorized representative information Name: *[insert full name]* Address: *[insert street/ number/ town or city/ country]* Telephone/Fax numbers: *[insert telephone/fax numbers, including country and city codes]* E-mail address: *[indicate e-mail address]*
1. Attached are copies of original documents of ☐ Articles of Incorporation (or equivalent documents of constitution or association), and/or registration documents of the legal entity named above. ☐ In case of a Government-owned enterprise or institution, documents establishing legal and financial autonomy, operation in accordance with commercial law, and absence of dependent status. 2. Included are the organizational chart, a list of Board of Directors, and the beneficial ownership.

Signature of the
Tenderer with Seal

FORM No. 3

ECS / NEFT / RTGS MANDATE FORM

Date:-
To,
Dy.CPM/Finance
DFCCIL/DDU
Sub: ECS / NEFT / RTGS payments

We refer to the ECS / NEFT / RTGS set up by DFCCIL for remittance of our payments using RBI's NEFT / RTGS scheme, our payments may be made through the above scheme to our under noted account.

Name of Bank	
Name of City	
Bank Code No	
Name of Bank Branch	
Branch Code No	
Address of Bank Branch	
Telephone Number of Bank Branch	
Fax No of Bank Branch	
Name of customer / Tenderer as per account	
Account Number of Tenderer appearing on cheque book	
Type of Account (S. B. / Current / Cash credit)	
IFSC code for NEFT	
IFSC code for RTGS	
9-Digit-code number of the bank and branch appearing on the MICR cheque issued by the bank.	
Details of Cancelled Cheque leaf	
Telephone no of tenderer	
Cell Phone Number of the tenderer to whom details with regard to the status of bill submitted to Accounts Office i.e. Co6 & Co7 & Cheque Purchase Orders particulars can be intimated through SMS	
Tenderer's E - mail ID	

Confirmed by Bank signature of tenderer with stamp and address
Enclose a copy of crossed cheque

FORM No. 4

SAMPLE

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 Managing Director/ DFCCIL acting in the premises through the Chief General Manager/Co / DFCCIL/ D D U or his successor (hereinafter referred to as "The Employer") all materials for which "On Account" payments have been made to us against the Contract for (_____) on the section DFCCIL also referred to as Group/s_____vide letter of Acceptance of Tender _____dated_____and material handed over to us by the employer 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 employer or as he may direct otherwise and shall indemnify the employer against any loss /damage or deterioration whatsoever in respect of the said material while in our possession and against disposal of surplus materials. The said materials shall at all times be open to inspection by any officer authorized by the CGM, DFCCIL/ DDU in charge of Dedicated Freight Corridor Corporation of India Limited (Whose address will be intimated in due course).

Should any loss, damage or deterioration of materials occur or surplus material disposed off and refund becomes due, the Employer shall be entitled to recover from us the 85% of supply portion of the Contract (as applicable) 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_____200 For and on behalf of
M/s_____(Contractor) Signature of witness
Name of witness in Block letter. Address.

Form no.5

PRE CONTRACT INTEGRITY PACT

General

This pre-bid pre-contract Agreement(herein after called the Integrity Pact) is made on----------day of the month of---------- , between, on one hand, the DFCCIL acting through Shri ---------- Designation of the officer, (hereinafter called the CLIENT, which expression shall mean and include, unless the context otherwise requires, his successors in office and assigns) of the First Part and M/s---------- represented by Shri----------Chief Executive Officer (hereinafter called the "BIDDER/SELLER" which expression shall mean and include, unless the context otherwise requires, his successors and permitted assigns) of the Second part.

WHEREAS the CLIENT proposes to procure (Name of the Stores/Equipment/Item, Name of the Consultancy Service, Name of Works Contract, Name of Services) and the BIDDER is willing to Offer/has offered for stores or works.

WHEREAS the BIDDER is a private company/ public company/ Government undertaking/ partnership/ registered export agency, constituted in accordance with the relevant law in the matter and the CLIENT is a PSU performing its functions or behalf of the President of India.

NOW, THEREFOR,

To avoid all forms of corruption by following a system that is fair, transparent and free from any influence/prejudiced dealings prior to, during and subsequent to the currency of the contract to be entered into with a view to:-

Enabling the CLIENT to obtain the desired said (Name of the Stores/Equipment/Item, Name of the Consultancy Service, Name of Works Contract, Name of Services) at a competitive price in conformity with the defined specifications by avoiding the high cost and the distortionary impact of corruption on public procurement, and

Enabling BIDDERs to abstain from bribing or indulging in any corrupt practice in order to secure Contract by providing assurance to them that their competitors will also abstain from bribing and other corrupt practices and the CLIENT will commit to prevent corruption, in any form, by its Officials by following transparent procedures.

The parties hereto hereby agree to enter into this Integrity Pact and agree as follows:

Commitments of the CLIENT

1.0 The CLIENT undertakes that no official of the CLIENT, connected directly or indirectly with the Contract, will demand, take a promise for or accept, directly or through intermediaries, any bribe, consideration, gift, reward, favour or any material or immaterial benefit or any other advantage from the BIDDER either for themselves or for any person, organization or third party related to the Contract, in exchange for an advantage in the bidding process, bid evaluation, contracting or implementation process related to the Contract.

1.1 The CLIENT will, during the pre-contract stage, treat all BIDDERs alike, and will

provide to all BIDDERs the same information and will not provide any such information to any particular BIDDER which could afford an advantage to that particular BIDDER in comparison to other BIDDERs.

1.2 All the officials of the CLIENT will report to the appropriate Government office any attempted or completed breaches of the above commitments as well as any substantial suspicion of such abreach.

2. Incaseanysuchprecedingmisconductonthepartofsuchofficial(s)inreportedbythe BIDDER to the CLIENT with full, and verifiable facts and the same is prima facie found to be correct by the CLIENT, necessary disciplinary proceedings, or any other action as deemed fit, including criminal proceedings may be initiated by the CLIENT and such a person shall be debarred from further dealings related to the Contract process. In such a case while an enquiry is being conducted by the CLIENT the proceedings under the Contract would not be stalled.

Commitments of BIDDERS

3. The BIDDER commits itself to take all measures necessary to prevent corrupt practices, unfair means and illegal activities during any stage of its bid or during any pre-contract or post- contract stage) in order to secure the Contract or in furtherance to secure it and in particular committee itself to the following:-

3.1 The BIDDER will not offer, directly or through intermediaries, any bribe, gift, consideration, reward, favour, any material or immaterial benefit or other advantage, commission fees, brokerage or inducement to any official of the CLIENT, connected directly or indirectly with the bidding process, or to any person, organization or third party related to the (B] in exchange for any advantageinthebidding,evaluation,contractingandimplementationoftheContract.

3.2 The BIDDER further undertakes that it has not given, offered or promised to give, directly or indirectly any bribe, gift, consideration, reward, favour, any Material or immaterial benefit or other advantage, commission, fees, brokerage or inducement to any official of the CLIENT or otherwise in procuring the Contract or forbearing to do or having done any act in relation to the obtaining or executionoftheContractoranyotherContractwiththeGovernmentforshowingorforbearing to show favour or disfavour to any person in relation to the Contract or any other Contract with the Government.

3.3 *BIDDER shall disclose the name and address of agents and representatives and Indian BIDDER shall disclose their foreign principals or associates.

3.4 * BIDDER shall disclose the payments to be made by them to agents/brokers or any other intermediary, in connection with this bid/contract.

3.5 The BIDDER further confirms and declares to the CLIENT that the BIDDER is the original manufacturer/ integrator/ authorized government sponsored export entity of the defense stores and has not engaged any individual or firm or company whether Indian or foreign to intercede, facilitate or in any way to recommend to the CLIENT or any of its functionaries, whether officially or unofficially to the award of the Contract to the BIDDER nor has any amount been paid, promised or intended to be paid to any such individual, firm or company in respect of any such intercession, facilitation or

recommendation.

3.6 The BIDDER either while presenting the bid or during pre-contract negotiations or before signing the Contract shall disclose any payments he has made, is committed to or intends to make to officials of the CLIENT or their family members, agents, brokers or any other intermediaries in connection with the Contract and the details of services agreed upon for such payments.

3.7 The BIDDER will not collude with other parties interested in the Contract to impair the transparency, fairness and progress of the bidding process, bid evaluation, contracting and implementation of the Contract.

3.8 The BIDDER will not accept any advantage in exchange for any corrupt practice, unfair means and illegal activities.

3.9 The BIDDER shall not use improperly, for purposes of competition or personal gain, or pass on to others, any information provided by the CLIENT as part of the business relationship, regarding plans, technical proposals and business details, including information contained in any electronic data carrier. The BIDDER also undertakes to exercise due and adequate care lest any such information is divulged.

3.10 The BIDDER commits to refrain from giving any complaint directly or through any other manner without supportingit with full and verifiable facts.

3.11 The BIDDER shall not instigate or cause to instigate any third person to commit any of the actions mentioned above.

3.12 If the, BIDDER or any employee of the BIDDER or any person acting on behalf of the BIDDER, either directly or Indirectly, is a relative of any of the officers of the CLIENT, or alternatively, if any relative of an officer of the CLIENT has financial.
Interest/stake in the Bidder's firm, the same shall be disclosed by the BIDDER at the time of filling of tender.
The term 'relative' for this purpose would be as defined in section 6 of the companies' act 1956.

3.13 The BIDDER shall not lend to or borrow any money from or enter into any monetary dealing so transactions, directly or indirectly, with any employee of the CLIENT.

4. Previous Transaction

4.1 The BIDDER declares that no previous transgression occurred in the last three years immediately before signing of this integrity Pact, with any other company in any country in respect of any corrupt practices envisaged hereunder or with any public sector enterprise in India or any Government department in India that could justify BIDDER's from the tender process.

4.2 The BIDDER agrees that if it makes incorrect statement on this subject, BIDDER can be disqualified from the ender process or the contact, if already awarded, can be terminated for such reason.

5. Earnest Money (Security Deposit)

5.1 While submitting commercial bid, the BIDDER shall deposit an amount_____(to be specified in RFP) as Earnest Money/Security Deposit, with the CLIENT through any of the following instruments:-

i. Bank draft or a pay order in favour of_____.

ii. A confirmed guarantee by an Indian nationalized bank, promising payment of the guaranteed sum to the CLIENT on demand within three working days without any demur

whatsoever and without seeking any reasons whatsoever. The demand for payment by the CLIENT shall be treated as conclusive proof or payment.

iii. Any other mode or through any other instrument (to be specified in the RFP).

5.2 The earnest money/Security deposit shall be valid up to a period of five years or the contractual obligations to the complete satisfaction of both the BIDDER and the CLIENT, including warranty period, whichever is later.

5.3 In case of the successful BIDDER a clause would also be incorporated in the article pertaining to performance Guarantee in the Contract that the provisions of sanctions for violation shall be applicable for forfeiture of performance bond in case of a decision by client to forfeit the same without assigning any reason for imposing sanction for violation of this pact.

5.4 No interest shall be payable by CLIENT to the BIDDER on earnest Money/Security Deposit for the period of its currency.

6. Sanctions for Violations

6.1 Any breach of the aforesaid provisions by the BIDDER or any one employed by it or acting on its behalf (whether with or without the knowledge of the BIDDER shall entitle the CLIENT to take all or any one of the following actions, wherever required:-

(i) To immediately call off the pre-contract negotiations without assigning any reason or giving any compensation to the [A]. However, the proceedings with the other BIDDER(s) would continue.

(ii) The earnest money deposit (in pre-contract stage) and/or security Deposit/performance Bond (after the Contract is signed) shall stand forfeited fully and the CLIENT shall not be required to assign any reason therefore.

(iii) To immediately cancel the Contract, if already signed, without giving any compensation to the [A].

(iv) To recover all sums already paid by the CLIENT, and in case of an Indian

[A] with interest thereon at 2% higher that the prevailing prime lending rate of state bank of India, while in case of a BIDDER from the country other than India with interest thereon at 2% higher than the LIBOR. If any outstanding payment is due to BIDDER from the CLIENT in connection with any other Contract, such outstanding payment could also be utilized to recover the aforesaid sum and interest.

(v) To encash the advance bank guarantee and performance bond, if furnished by the [A], in order to recover the payments, already made by CLIENT, along with interest.

(vi) To cancel all or any other contracts with the BIDDER. The BIDDER shall be liable to pay compensation for any loss or damage to the Client resulting from such cancellation/rescission and the client shall be entitled to deduct the amount so payable from the money(s) due to the BIDDER.

(vii) To debar the BIDDER from participating in future bidding processes of the Government of India for a minimum period of five years, which may be further extended at the

discretion of the CLIENT.

(viii) To recover all sums paid in violation of this pact by BIDDER to any middleman or agent or broker with a view a view to securing Contract the contract.

(ix) In cases where irrevocable letters of credit have been received in respect of any Contract signed by the client with the BIDDER, The shall not be opened.

(x) Forfeiture of Performance Bond in case of a decision by the client to forfeit the same without assigning any reason for imposing sanction for violation of this pact.

6.2 The client will entitledtotakealloranyoftheactionsmentionedatpara6.1(i)to

(x) of this pact also on the commission by the BIDDER or any one employed by it or acting on its behalf (whether with or without the knowledge of the [A], of an offence as defined in chapter IX of the Indian penal code, 1860 or prevention of CorruptionAct,1988oranyotherstatuteenactedforpreventionofcorruption.

6.3 The decision of the CLIENT to the effect that a breach of the provisions of this pact has been committed by the BIDDER shall be final and conclusive on the [A]. However, the BIDDER can approach the Independent Monitor(s) appointed for the purposes of this Pact.

7. Fall Clause

7.1 The BIDDER undertakes that it has not supplied/is not supplying similar product/systems or subsystems at a price lower than that offered in the present bid in respect of any other Ministry/Department of the Government of India or PSU and if it is foundatanystagethatsimilarproduct/systemorsubsystemswaysuppliedby BIDDER to any other Ministry/Department of the Government of India or a PSU at a lower price, then that very price, with due allowance for elapsed time, will be applicable to the present case and the difference in the cost would be refunded by the BIDDER to the CLIENT, if the Contract has already been concluded.

8. Independent Monitors

8.1 The CLIENT has appointed Independent Monitors (hereinafter referred to as Monitors) for this pact in consultant with the central vigilance commission (Names and addresses of the Monitors to be given)

8.2 The task of the Monitors shall be to review independently and objectively, whether and to what extent the parties comply with the obligations under this pact.

8.3 The monitors shall not be subject to instructions by the representatives of the parties and perform their functions neutrally and independently.

8.4 Both the parties accept that the Monitors have the right to access all the documents relating to the project/procurement, including minutes of meetings.

8.5 As soon as the Monitor notices, or has reason to believe, a violation of this Pact, he will so inform the Authority designated by the CLIENT

8.6 The BIDDER(s) accepts that the Monitor has the right to access without restriction to all Project documentation of the CLIENT including that provided by the BIDOER. The BIDDER will also grant the Monitor, upon his request and demonstration of a valid Interest, unrestricted and unconditional access to his project documentation. The same is applicable to Subcontractors. The Monitor shall be und 'contractual obligation to treat the information and documents of the

[A] With confidentiality.

8.7 The client will provide to the Monitor sufficient information about all meetings

among the parties related to the Project provided such meetings could have an impact on the contractual relations between the parties. The parties will offer to the Monitor the option to participate in such meetings.

8.8 The monitor will submit a written report to the MD/DFCCIL within 8 to 10 weeks from the date of reference or intimation to him by the CLIENT/BIDDER and, should the occasion arise, submit proposal for correcting problematic situations.

9. Facilitation of Investigation

In case of any allegation of violation of any provisions of this Pact or payment of commission, the CLIENT or its agencies shall be entitled to examine all the documents including the Books of Accounts of the BIDDER and the BIDDER shall provide necessary information and documents in English and shall exte4nd all possible help for the purpose of such examination.

10. Law and Place of Jurisdiction

This pact is subject to Indian law. The place of performance and jurisdiction is the seat of the CLIENT.

11. Other Legal Actions

The actions stipulated in this integrity pact are without prejudice to any other legal action that may follow in accordance with the provisions of the extant law in force relating to any civil or criminal proceedings.

12. Validity

12.1 The validity of this integrity pact shall be from date of its signing and extend up to 5 years or the complete execution of the Contract to the satisfaction of both the CLIENT and the BIDDER including warranty period, whichever is later. In case BIDDER is unsuccessful, this integrity pact shall expire after six months from the date of the signing of the Contract.

12.2 Should one or several provisions of this pact turn out to be invalid; the remainder of this pact shall remain valid. In this case, the parties will strive to come to an agreement to their original intentions.

13. The parties here by sign this integrity pact at……On…….

CLIENT	BIDDER
Name of the Officer	
Designation	
Deptt./Ministry/PSU	
Witness	Witness
1._____	1.----------
2._____	2._____

Form No. 6

ANTI-PROFITEERING DECLARATION TO WHOMSOEVER IT MAY CONCERN

I……., age……,years, Son/Daughter of…..... , resident of …..... Do solemnly affirm and state as under:

1) That I am the_____<Designation of the authorized signatory> of …..... And I am duly authorized to furnish this undertaking/declaration on behalf of …..... (Name of the company).
2) That …… (Name of the company) has been awarded the work …… (Name of Work) vide Letter of Award number …….. Dated ..... by M/s Dedicated Freight Corridor Corporation of India Limited.
3) That the Company is fully aware of the anti-profiteering provision under the Goods & Services Tax ("GST")Law(s),
4) That the Company ..... Has passed the benefit of input tax credit available on the……..……..(good/services) having HSN…….

supplied to M/s Dedicated Freight Corridor Corporation of India Limited which it is getting on account of reduced tax liability and input tax credit because of enactment of GST Laws after introduction of Goods and Service Tax w.e.f. 1^{s1} July, 2017. The details and amounts being passed on to DFCCIL are provided in Annexure .....Of this document and are as per applicable GST Laws. These are true and correct to the best of my knowledge, information and belief.

5) Further, it is to confirm also that in case.....(name of the organization) will receive any further benefit in future after 1st July, 2017 by way of availment of input tax creditswhichwerenotallowedtobeavailedbefore1^{sl}July,2017orreductionintaxrates

or in any other manner which results in reduction of cost of the goods/services supplied to M/s Dedicated Freight Corridor Corporation of India Limited, then Company will pass that benefit to M/s Dedicated Freight Corridor Corporation of India Limited also.

6) That I declare that the foregoing is true and correct and the same is a legal obligation and failure to fulfil it could result in penalties under the law.
7) I confirm that I am aware of the implication of the above undertaking and our liability on account of incorrect/misleading declaration under the GST Laws.

Signature of the Authorized signatory/ person
Name and Designation of the Auth. Sign/person of the person
Name of the Organization and Seal
Executed on a non-judicial stamp paper of Rs.100/- duly notarized by notary public

FORM No. 7

DRAFT MEMORANDUM OF UNDERSTANDING (MOU) For
JOINT VENTURE PARTICIPATION
BETWEEN

M/s …….. Having its registered office at …… (Hereinafter referred to as ….....) acting as the Lead Partner of the first part,

and

M/s ……having its registered office at.....(Hereinafter referred to as ` .....') in the capacity of a Joint Partner of the other part.

and

M/s ……having its registered office at..... (Hereinafter Referred to as `..... ') in the capacity of a Joint Partner of the other part.

The expressions of …….. And …….. Shall wherever the context admits, mean and include their respective legal representatives, successors-in-interest and assigns and shall collectively be referred to as "the Parties" and individually as "the Party"

WHEREAS:

Dedicated Freight Corridor Corporation of India Limited (DFCCIL) [hereinafter referred to as "Client"] has invited bids for …….."[Insert name of work] ....."

NOW, THEREFORE, THE PARTIES AGREE AS FOLLOWS:

1. The following documents shall be deemed to form and be read and construed as an integral part of this MOU.
   (i) Notice for Bid, and
   (ii)Bidding document
   (iii) Any Addendum/Corrigendum issued by Dedicated Freight Corridor Corporation of India Limited
   (iv) The bid submitted on our behalf jointly by the Lead Partner.

2. The `Parties' have studied the documents and have agreed to participate in submitting a `bid' jointly.

3. M/s.....shall be the lead member of the JV for all intents and purpose and shall represent the Joint Venture in its dealing with the Client. For the purpose of submission of bid proposals, the parties agree to nominate..... As the leader duly authorized to sign and submit all documents and subsequent clarifications, if any, to the Client. However M/s..... shall not submit any such proposals, clarifications or commitments before securing the written clearance of the other partner which shall be expeditiously given by M/s……..……to M/s…….

4. The `Parties' have resolved that the distribution of responsibilities and their proportionate share in the Joint Venture is as under:
   (a) Lead Partner;

(i) ……
(ii) …….
(iii) …..
(b) Joint Venture Partner
(i) ……
(ii) …….
(iii) …..
[Similar details to be given for each partner]

5. JOINT AND SEVERAL RESPONSIBILITIES

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

6. ASSIGNMENT AND THIRD PARTIES

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

7. EXECUTIVE AUTHORITY

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

8. BID SECURITIES

Till the award of the work, JV firm/Lead Partner of JV firm shall furnish Bid Security to the Client on behalf of the joint venture which shall be legally binding on all the members of the Joint Venture.

9. BID SUBMISSION

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

10. INDEMNITY

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

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

12. DOCUMENTS & CONFIDENTIALITY

Each Party shall maintain in confidence and not use for any purpose related to the Project all

commercial and technical information received or generated in the course of preparation and submission of the bid.

13. ARBITRATION

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

14. VALIDITY

This Agreement shall remain in force till the occurrence of the earliest to occur of the following, unless by mutual consent, the Parties agree in writing to extend the validity for a further period.

a. The bid submitted by the Joint Venture is declared unsuccessful, or
b. Cancellation/ shelving of the Project by the client for any reasons prior to award of work
c. Execution of detailed JV agreement by the parties, setting out detailed terms after award of work by the Client.

15. This MOU is drawn in ….. Number of copies with equal legal strength and status. One copy is held by M/s …… and the other by M/s……. & …….M/s …….. And a copy submitted with the proposal.

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

17. ***NOTICES***

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

Lead Partner	Other Partner(s)
…….	……
(Name & Address)	(Name & Address)

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

M/s……..	M/s…….
……..……	……..
(Seal)	(Seal)

Witness
1..... (Name & Address)
2..... (Name & Address)

Notes: (1) In case of existing joint venture, the certified copy of JV Agreement may be furnished.

FORM No. 8

DRAFT FORMAT OF JOINT VENTURE AGREEMENT

To be executed on non-judicial stamp paper of appropriate value in accordance with relevant Stamp Act and to be registered with appropriate authority under Registration Act.

The JV agreement shall be structured generally as per contents list given below:

A. *CONDITIONS AND TERMS OF JV AGREEMENT*

1. Definitions and Interpretation
2. Joint Venture – Include Equity of members, transferability of shareholding of equity of a partner leaving during the subsistence of the contract.
3. Proposal Submission
4. Performance – To indicate scope of responsibility of each member
5. Language and Law
6. Exclusively
7. Executive Authority
8. Documents
9. Personnel
10. Assignment and Third Parties
11. Severability
12. Member in Default
13. Duration of the Agreement
14 Liability and sharing of risks
15. Insurance
16. Sharing of Promotion and Project Costs, Profits, Losses and Remuneration
17. Financial Administration and Accounting
18. Guarantees and Bonds
19. Arbitration
20. Notices
21. Sole Agreement and Variation

B. *SCHEDULES*

1. Project and Agreement Particulars
2. Financial Administration Services
3. Allocation of the obligations
4. Financial Policy and Remuneration

*****

FORM No. 09

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

(To be executed on non-judicial stamp paper of appropriate value in accordance with relevant Stamp Act and to be registered with appropriate authority under Registration Act.)

No…. Dated

From:
……..
……..

To,
Chief General Manager.,
Dedicated Freight Corridor Corporation of India Limited,
Manas Nagar Railway Colony, Near RPF Post, Pt.
Deen Dayal Upadhyay, Post Office: Alinagar,
Chandauli- 232101, Uttar Pradesh.

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

Ref: Your notice for Invitation for Bid (IFB) No…….
Dated ……..

1. We wish to confirm that our company/firm has formed a Joint Venture with (i)……. & ii)…**.....**For the purposes associated with IFB referred to above.

(Members who are not the lead partner of the JV should add the following paragraph).*

2. 'The JV is led by … whom we hereby authorise to act on our behalf for the purposes of submission of Bid for **.....**and authorise to incur liabilities and receive instructions for and on behalf of any and all the partners or constituents of the Joint Venture.'

OR

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

2. 'In this group we act as leader and, for the purposes of applying for Bid, represent the Joint Venture:
3. In the event of our JV being awarded the contract, we agree to be jointly with i) & ii) …… (names of other members of our JV) and severally liable to the Dedicated Freight Corridor Corporation of India Limited, its successors and assigns for all obligations, duties and responsibilities arising from or imposed by the contract subsequently entered into between Dedicated Freight Corridor Corporation of India Limited and our JV.

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

Yours faithfully,
(Signature)
(Name of Signatory)…….
(Capacity of Signatory)……
Company Seal * Delete as applicable

Note: In case of existing joint venture, the certified copy of JV Agreement may be furnished.

FORM No. 10

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

POWER OF ATTORNEY*

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

Know all men by these presents, we … do hereby constitute, appoint and authorise Mr/Ms …. who is presently employed with us and holding the position of ……as our attorney, to do in our name and on our behalf, all such acts, deeds and things necessary in connection with or incidental to our bid for the work of……..… Including signing and submission of all documents and providing information / responses to Dedicated Freight Corridor Corporation of India Limited, representing us in all matters, dealing with Dedicated Freight Corridor Corporation of India Limited in all matters in connection with our bid for the said project.

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

Dated this the …… day of.....2022.

(Signature of authorised Signatory)

Signature of Lead Partner **Signature of JV Partner(s)**

…… **…….**

(Signature and Name in Block letters of Signatory)

Seal of Company

Witness

Witness 1:
Name:

Address:
Occupation:

Witness 2:
Name:

Address:
Occupation:

**Notes:*

i) To be executed by all the partners jointly, in case of a Joint Venture.

FORM No. 11

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

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

POWER OF ATTORNEY*

Whereas Dedicated Freight Corridor Corporation of India Limited has invited Bids for the Work of providing cover shed over approaches on RUB's under jurisdiction CGM/DDU unit of Western Dedicated Freight Corridor.

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

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

NOW THIS POWER OF ATTORNEY WITNESSETH THAT:

We, M/s. ……, hereby designate M/s. ……, being one of the partners of the Joint Venture, as the lead partner of the Joint Venture, to do on behalf of the Joint Venture, all or any of the acts, deeds or things necessary or incidental to the Joint Venture's bid for the contract, including submission of bid, participating in conferences, responding to queries, submission of information/ documents and generally to represent the Joint Venture in all its dealings with the Railway / DFCCIL or any other Government Agency or any person, in connection with the Bid/contract for the said work until culmination of the process of bidding till the contract agreement if successful, is entered into with the Dedicated Freight Corridor Corporation of India Limited and thereafter till the expiry of the contract agreement.

**To be executed by all the members of the JV except the lead member.*

The mode of execution of the Power of Attorney should be in accordance with the procedure, if any, laid down by the applicable law and the charter documents of the executants(s) and when it is so required the same should be under common seal affixed in accordance with the required procedure.

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

Dated this the …… Day of 2022

…….
(Signature)

… .....(Name in Block letters of Executants)
Seal of Company

Witness 1	
Name:	
Address:	
Occupation:	
Witness 2	
Name:	
Address:	
Occupation:	

Annexure-1

BARE MINIMUM TOOLS & PLANTS TO BE ARRANGED BY CONTRACTOR FOR OHE MAINTENANCE FOR EACH GANG (3 sets)

Sl. No.	Description of material	Unit	Qty .	Supplied by
[I]	**Tirfors**			
1	3/5 tonne tirfors	Sets	3	Contractor
2	1.6/2.6 or 2/3 tonne tirfors	Sets	4	-do-
3	Pull-lift 1.6Ton (As per ACTM 3 Ton -2 Nos.)	No.	2	-do-
4	Pull-lift 0.75Ton	No.	4	-do-
[II]	**Come- along clamps**			-do-
1	Universal come-along clamps	No.	12	-do-
[III]	**Electrical safety items**			-do-
1	FRP type Discharge rods	No.	10	-do-
2	Rail Jumpers with clamps at both ends	No.	10	-do-
3	Rail Jumpers extension with clamps at one end	No.	10	-do-
[IV]	**Steel Slings**			-do-
1	Steel slings 01 mtr. (Fibre reinforced)	No.	10	-do-
2	Polyster Webbing slings 01mtr.	No.	10	-do-
3	Steel slings 02 mtr.	No.	10	-do-
4	Polyster Webbing slings 02mtr.	No.	10	-do-
5	Steel slings 03 mtr.	No.	6	-do-
6	Steel slings 04 mtr.	No.	2	-do-
7	Steel slings 10 mtr.	No.	2	-do-
[V]	**D Shackles**			-do-
1	1" D shackles	No.	15	-do-
2	3/4" D shackles	No.	15	-do-
3	1/2" D shackles	No.	15	-do-
[VI]	**Pulleys**			-do-
1	Steel pulleys 6"	No.	10	-do-
2	Steel pulleys 3½"	No.	15	-do-
3	Fibre pulleys	No.	15	-do-
4	Two way pulley of 3 tonne capacity	Nos.	2	-do-
[VII]	**Electrical Measuring Instruments**			-do-
1	Drop out fuse rod	No.	2	-do-
2	Megger 2500V	No.	1	-do-
2	Earth Megger / Tester	No.	1	-do-
[VIII]	**Miscellaneous**			-do-
2	Counter weight stand	No.	2	-do-
2	Contact wire Splicing jig	No.	2	-do-
3	Contact wire twister cum bender	Sets	2	-do-
4	Ratchet clamp with drill bit (17.5mm)	Sets	2	-do-
5	S Hooks	No.	30	-do-
6	Pulley chain block	No.	1	-do-
7	Discharge Rod	No.	8	-do-

List of PSI Tools			
SN	Tool/Equipment Name	Unit	Qty. per Location
1.	Cell tester	Nos.	01 No.
2.	Hydrometer	Nos.	01 No.
3.	Thermometer	Nos.	01 No.
4.	Clamp Meter	Nos.	01 Nos.
5.	Discharge Rod	Nos.	04 Nos.
6.	Operating Rod	Nos.	02 Nos.
7.	Crimping tool of various sizes	Nos.	01 Nos. of Each size
8.	Digital Multi Meters	Nos.	02 Nos.
9.	Allen Key	Set	01 Set
10.	Soldering stations	Nos.	02 Nos.
11.	AC/DC True RMS clamp meter	Nos.	01 No.
12.	Digital earth tester	Nos.	01 No.
13.	Digital Megger 2500 V /5000V	Nos.	01 No.
14.	Standard set of tools consist of below items: i. Tool bag of regular make- 01 No. ii. Combination plier 8" of Taparia/Deeners/Stanley make- 01 No. iii. Cutting plier 6” of Taparia/Deeners/Stanley make- 01 No. iv. Long nose plier 6” of Taparia/Deeners/Stanley make- 01 No. v. Double ended spanner set (6X7mm to 30X32mm)- of Taparia/Deeners/Stanley make- 01 No. of each size vi. Ring Spanner set (6X7mm to 30X32mm) of Taparia/Deeners/Stanley make- 01 No. of each size vii. Ball pin hammer 500g of Taparia/Deeners/Stanley make- 01 No. viii. PVC rammer 1.5 Pound of Taparia/Deeners/Stanley make- 01 No. ix. Measuring tape 05m, 15m & 30m of regular make- 01 No. of each length x. Adjustable Spanner 08" and 12" of Taparia/Deeners/Stanley make- 01 No each size xi. Spiril Level 12" of regular make- 01 No. xii. Hacksaw frame 12" of regular make- 01 No. xiii. Hacksaw blade of regular make- 10 Blades xiv. plumb bob regular make- 01 No. xv. D shackles 0.5", 0.75" and 1" of regular make- 01 No. each size	Nos.	01 Set.

		xvi. Utility Knife of Taparia/Deeners/Stanley make- 01No. xvii. Flat and Half round files of 12" size of Taparia/Deeners/Stanley make- 01 No. of each size xviii. Crow bar regular make- 01 No. xix. Pick Axe regular make- 01 No.		
15.		Set of screw drivers and pliers i. Screw driver set ("+" and "-" type) consist of 12", 16",18" size of each size ii. Pliers set consist of 8" and 12" insulated cutting pliersof regular make- 01 No. of each size	Nos.	01 No.

Annexure-2

TOOLS AND PLANTS TO BE IN POSSESSION OF CONTRACTOR (3 sets)

Sl. No.	Description of material	Unit	Qty.	Supplied by
[I]	**Cutting Tools**			
1	Tree Pruner	No.	2	Contractor
2	Axe	No.	2	-do-
3	Power Operated grinding cum wire cutter	No.	1	-do-
4	Contact wire cutter	No.	1	-do-
5	Dropper wire cutter	No.	1	-do-
6	Hacksaw frame Adj. 12"	No.	2	-do-
7	Drilling machine	No.	1	-do-
8	Grinding Machine	No.	1	-do-
9	Welding plant (3Ph. Or 1 Ph.)	No.	1	-do-
II]	**Manila Ropes**			-do-
1	3/4" manila rope 20m long	m	200	-do-
2	1/2" manila rope 20m long	m	200	-do-
3	1" maila rope 20m long	m	60	-do-
4	1/2" manila rope 2m long	m	15	-do-
[III]	**Light fittings**			-do-
1	Search lights	No.	2	-do-
2	Torch lights 3 cell	No.	5	-do-
3	Extension board with cable of 20 mtrs.	No.	1	-do-
4	LED Torch light	No.	5	-do-
[IV]	**Safety Items**			-do-
1	Safety Belts	No.	5	-do-
2	Helmets	No.	10	-do-
3	First Aid Box	No.	2	-do-
[V]	**Mechanical Measuring Instruments**			-do-
1	Micrometer	No.	1	-do-
2	Plumb bob	No.	3	-do-
3	Spirit level 12" / 6"	No.	1	-do-

Annexure-3
CONSUMABLE ITEMS TO BE MADE AVAILABLE BY CONTRACTOR

S. No.	Description	Qty
1.	Dungry cloth blue	900
2.	Oil Kerosene	200
3.	Photo copies 4A	4
4.	Toilet soap	300
5.	Cmp. paper 3ply 25.5X30.5cm	4
6.	Brush Paint 100 mm	1
7.	Cotton waste	100
8.	Tape insulation black	50
9.	Cell for hand torch	50
10.	Hacksaw blade 12.5	100
11.	Brush hair 25 m	10
12.	Brush hair 50 mm.	30
13.	Emery cloth paper	25
14.	Emery cloth paper 1	25
15.	Broom coco	20
16.	Duster cloth white khadi	240
17.	Petroleum jelly	20
18.	Naphthalene ball	5
19.	Wire GI 16/SWG	100
20.	Solder soft	5
21.	63 mm brush	20
22.	File covers thin	50
23.	File with eyelets 24x34'5cm	50
24.	Ink violet for rubber stamp	10
25.	Office paste in 75CC bottle	20
26.	Pad un inked for rubber stamp	5
27.	Pins paper straight 26 mm	25
28.	Paper carbon blue	500
29.	File covers thick yellow	100
30.	Soap bar	300

Annexure-4

Schedule 13: Testing of equipment at TSS/SP/SP

NORMAL TESTING EQUIPMENTS LIST			
SL.NO	**DESCRIPTION**	**RANGE**	**QTY**
1	Loading Transformer	800Amps	1
2	H.T.Megger	5000V	1
3	Earth Megger	0-200 ohm	1
4	Single Phase Variac	15A	1
5	Digital Multi Meter	600V	1
6	Welding Cable	185Sqmm	10Mtrs
7	Digital Clamp Meter	2000Amps	1
8	Ac Leakage Tester	200mA -100A	1
9	Single Pole Timer	0-99 mSEC	1
10	Digital Micro Ohm Meter	1A	1
11	Dc Power Pack	25A	1
12	Transformer Winding Resistance	10A	1

PART-VIII

DRAWINGS

DRAWINGS

The indicative drawing for the **Maintenance of 2x25 kV Over Head Equipment and PSI on DDU – Sone Nagar section of DFCCIL including the link lines, connection to Indian Railways for a period of 24 (Twenty Four) months under CGM DDU Unit** can be seen in the office of the Chief General Manager, Dedicated Freight Corridor Corporation of India Ltd., Manas Nagar Railway Colony, Near RPF Post, Pt. Deen Dayal Upadhyay Nagar, Post Office: Alinagar, Chandauli- 232101, Uttar Pradesh.at any time during the office hours.

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