

**INTEGRAL COACH FACTORY, CHENNAI – 600 038**  
**ELECTRICAL DEPARTMENT**



**TENDER DOCUMENT**

**2026-27**

**Tender No.2026245212191**

**Ref. No.EL-W-924**

**Name of the Work**

**“Electrical works for Proposed extension of Road-1A, Road-1 & Road-3 for stabling capacity of 24 car rake in ICF Villivakkam Yard”**

## ANNEXURE – A

### SCOPE OF SUPPLY AND WORK

**Note:**

- i. Tenderer shall furnish clause wise comments on the technical requirements specified, hereunder. Deviations, if any shall be brought out very clearly duly furnishing the techno economical merits, thereof.
- ii. Tenderer shall offer components and sub-assemblies of specified makes only, wherever specifically called for. (However, alternative make(s) may be considered, for which complete technical details for the same duly indicating the techno economical merits and demerits, as compared to the make specified shall be furnished in the offer).
- iii. Technical details, wherever called for shall be furnished.
- iv. The successful tenderer shall purchase branded items from original manufacturer or authorized dealer only and the proof of purchase shall be produced along with the supply.
- v. Any fabrication, welding, machining activities of Schedule item shall be carried out in the Contractor's premises as per ICF specification and offered for inspection before supply.
- v. **All electrical installations, equipment's and erection practices shall comply with latest Indian Electricity Rules.**

### EXPLANATORY NOTES OF SCHEDULE

#### Section - I – General

1. Explanatory notes for various items of work in Schedule are given below.
2. The basic quantities of components and materials required to make up a unit of work for selected items, are indicated for guidance only. There may be minor variations to suit erection but no adjustment in rates of Schedule shall be made on that account. In estimating the rates for various items of works, provision for loss and wastage in transit and erection should be provided for, over and above the basic quantities of components and materials required to make up a unit of work, indicated herein, except where otherwise for materials supplied by the Railway.
3. Railway will supply any materials required for the work, except the materials which are in the scope of contractors supply materials stipulated in the schedule of tender and its Explanatory Notes.
4. The materials supplied by the contractor against various items should be conforming to RDSO's latest specifications and drawing duly supplemented with the latest corrigendum / correction slip as applicable at the time of opening of the tender, where RDSO Specifications are not available, the relevant BSI / BS / ASTM should be followed with the latest corrigendum / correction slips.
5. All the erection works are to be done under power block only. However, no extra payment will be made for doing work under power block.
6. All the materials supplied by the purchaser will be made available at the purchasers OHE / PSI depot and the same are to be transported by the contractor. Necessary tools, pulling and lifting machines, road cranes etc., required for erection and adjustment shall be arranged by the contractor.
7. The drawing / Identification number given is for guidance only. The latest specification / Identification may be referred for procurement of materials.
9. All tools and plants required including cranes shall be arranged by the contractor.

10. The Cantilever assembly tubes are proposed with 800 gms/sq.m galvanization
11. 1050 CD Stay/Bracket/9T porcelain insulators proposed in this tender.
12. Hot dip zinc galvanization for Structural Tubes should conform to Specification ETI/OHE/ 13(4/84) with A&C slip 1 to 3 shall be adopted – if any locations close to coastal areas.
- 13 Bonding and Earthing arrangement should be as per ACTM and Bonding and Earthing code strictly.
14. 160 sq.mm (19/7/1.25mm) flexible copper jumper conforming to RDSO specn. No. ETI/OHE/3 (2/94) with CS-1 or latest shall be used wherever necessary.
15. All materials have to be procured from RDSO/CORE approved supplier and as per RDSO/CORE specifications
16. The OHE and the foundation shall be designed to cater for a wind pressure of concern zone shall be adopted according to their areas.

- I. CONTRACTOR'S SCOPE:** The work involves the scope of supply and work of **“Electrical works for proposed extension of Road-1A, Road-1 & Road-3 for stabling capacity of 24 car rake in ICF Villivakkam Yard”** as per quantity called in the schedule.

Latest RDSO specifications, RDSO (TC/MI/SMI), circulars and guidelines issued by Railway Board, Zonal Railways, IS/IEC will prevail over the drawings / references / RI numbers mentioned in the list. Wherever Railway drawings, reference numbers or RI numbers are not mentioned, shall be referred to as per relevant IS/IEC & Railway practices in force.

The contractor shall provide all labour, supervisors, ladders, cranes, tools, tackles, safety appliances and other equipment required for safe execution of the work.

The work shall be completed to the satisfaction of the Engineer-in-Charge and in accordance with ACTM Manual provisions and applicable Railway/TRD standards

## **II. PARTICULARS: (EXPLANATORY NOTES)**

### **1.0 SOR ITEM NO.1(a) : PREPARATION OF DESIGNS AND DRAWINGS FOR OVER HEAD EQUIPMENT AND VERIFICATION OF PURCHASERS ENGINEERING PLAN SUBMISSION OF CSD, LOA AS PER SPECIFICATION**

The price shall cover verification of Railway's engineering track plans indicating the layout of new lines with respect to the existing lines, which will be issued by the Railways in stages. The preparation of lay out plans and other design are to be finalized by the contractor in consultation and in close coordination with the Railways. The contractor may also be asked to prepare the layout plans based on the site details if the Railways are not able to supply the Engineering track plan. The price shall include the following.

- i} Preparing a detailed Electrification layout plan indicating the existing track and OHE arrangements with the proposed track and OHE arrangements based on the details given in the existing OHE layout proposed alignment track plan/ Site details taken from the site.
- ii} Preparation of cross section drawings and structure erection drawings for each structure for the new locations as well as for the modified structure locations.

- iii} Choice of type and size of foundations to suit the soil and loading conditions, except for the ones which are considered as 'Works under other Agencies'
- iv} Preparation of long section drawings of overhead equipment, wherever found necessary, including detailed study of over line structures such as foot over bridges, road over bridges etc. for maintaining the specified height of contact wire and requisite clearances.
- v} Preparation of other designs and drawings including drawings of small parts steel work (other than those for which RDSO's standard drawings are available} and detailed designs for booster transformer stations and Aux. transformer stations, if any.
- vi} Supply of requisite number of copies of all drawings, as soon as the designs are finalized, for processing for competent authority's approval and for distribution to concerned field officials for execution / supervision of the work
- vii} Supply of 1set of originals in good quality tracing paper/film and 3 sets of copies of all 'As erected' drawings including a soft copy in a CD.

**Note:** All the designs & drawings shall be done in AutoCAD software.

**Note for measurements:** For the purpose of payment against this item the length of track shall be measured as under:

1. **General:** By the difference in the chain ages of the length under consideration as incorporated in the approved layout plans.
2. **Turnouts:** The track taking off shall be deemed as starting from the toe of the switch of the Turnout.
3. **Cross-overs:** The length of track shall be taken as the difference in the chain ages of the toes of switches of the two turnouts constituting the crossover.
4. **Diamond crossing with or without slips:** The two tracks crossing each other shall be measured independently as per Note No. 1 above, as though there were no crossing. No extra shall be provided for slip points.
5. **Dead ends and tops of loops:** The lengths for payment under this item shall be up to the chain age of anchor mast of the terminating OHE.
6. **Feeders and return feeders from grid sub-station to feeding station:** This item will also be applicable independently in case of feeders / return feeders / conductors from grid sub- station to overhead equipment feeding stations or in the case of feeders / conductors running on independent structures (not supporting OHE} along or across tracks.

The length of line to be considered for the purpose of item No. 6 shall be measured

- (i) by the distance between the centre of gantries of the grid sub-station and feeding stations, in case of feeders / return feeders / conductors from grid substation or
- (ii) by the distance between the center line of the two structures to which the feeders / return feeders / conductors are anchored in case of feeders running along the track, if such feeders / return feeders / conductors are running completely on independent structures or

- (iii) by the distance between the centre of the two structures supporting the OHE on either side of the first and last independent structure in case of feeders / return feeders / conductors running along with the track supporting OHE.

**2.0 SOR ITEM NO. 2(b): FOR FOUNDATION TRENCH AND PLINTH-CONCRETE IN OTHER THAN HARD SOIL AND ROCK (SUPPLY & ERECTION) AS PER SPECIFICATION**

The price shall include all works mentioned in item 2a {i} & {ii} above, in all classes of soil except hard soil, concrete or masonry drains & walls and rock.

**Notes**

1. A cubic meter beyond the third decimal shall be rounded off to the nearest third decimal.
2. The price under item 2 {a} & {b} shall apply for concreting of all foundations for masts, gantries, portals, anchor blocks for guy rods, fencing uprights, supporting steel work, cable trenches and for other civil engineering works, wherever required.
3. For the purpose of computation of volume of concrete and brick work under item 2, the volume of steel work embedded in the foundation block or muff shall be ignored.
4. The volume of each muff will be included in the volume of concrete for the respective foundation for purposes of computation of volume of concrete.
5. The prices shall include cost of embedment of drain pipes, conduits for cables or earthing flats, wherever necessary.
6. In respect of concrete for cable trenches, the price shall not include the cost of cable supports and trays, which shall be supplied and erected by the contractor's and shall be paid for under item 3.
7. Dowel bars in special foundations and nominal reinforcement in black cotton soil foundations will be necessary. Such nominal reinforced foundation in black cotton soil will be payable under item 2 {B} and not under item 2 {C}. The steel for nominal reinforcement and dowel bars will be supplied by the contractor and the concrete mixture, in such a case shall be as for normal foundation 1: 2: 4.
8. The prices under items 2 {a} & {b} shall also cover the cost of diversion of masonry/earth drain, wherever necessary for casting of foundations.
9. In case, the anchor foundation cast becomes redundant due to reasons beyond the control of Railways, no extra rates are admissible for the Anchor loops embedded in the anchor foundation.
10. Muffing of OHE mast/structures should be done along with grouting in order to ensure homogeneous bonding between Muffing and grouting concretes.
11. For all foundation works in OHE/Feeder/PSI works - M-15 concrete shall be used and for core - M - 20 concrete shall be used.
12. If any foundation becomes obsolete due to change in track alignment etc., during the execution of the work, the contractor may be asked to recast new foundation in lieu of the old. In such cases, the contractor is eligible to get payment for each such location under item 2.

## Concrete:-

For all OHE / Feeder / Switching stations, concrete for foundations shall be nominal mix of grade M15 concrete obtained by mixing cement, coarse aggregate, fine aggregate and water in accordance with the proportions given in Table-3 of IS:456,1978, which is reproduced below. For grouting, muffing, embedding of structures in foundations and for cable trenches at switching stations, nominal mix of grade M20 obtained by mixing materials in proportions as indicated in the above Table shall be used.

### PROPORTIONS FOR NOMINAL MIX CONCRETE

| Grade of Concrete | Max. Qty. of Dry aggregate per 50 Kg of Cement {in Kg} | Fine Aggregate : Coarse Aggregate by mass         | Max. Qty. of water in Litres |
|-------------------|--|---|------------------------------|
| M-5               | 800  | Generally 1: 2 but may vary from 1: 1.5 to 1: 2.5 | 60                           |
| M-7.5             | 625  |   | 45                           |
| M-10              | 480  |   | 34                           |
| M-15              | 330  |   | 32                           |
| M-20              | 250  |   | 30                           |

**Size and grading of aggregates:-** The graded coarse aggregate 20mm nominal size {table 2 of IS: 383 -1970) shall be used for foundation, grouting & muffs.

**Testing of crushing load:** The contractor shall arrange to provide concrete testing samples for tests, once in every week or as and when required by the Railway, to determine the crushing strength after 7 days or 28 days of curing, as required. Such concrete samples in 15 cm cube shall be indicated with the OHE location number and date of casting. **Testing shall be arranged by the Contractor at their own cost.** The crushing strength of concrete shall not be less than the limits given below:-

#### Crushing strength of 15 cm cubes by work test.

| Concrete | At 7 day's age          | At 28 day's age         |
|----------|-------------------------|-------------------------|
| M 10     | 70 Kg/ cm <sup>2</sup>  | 100 Kg/ cm <sup>2</sup> |
| M 15     | 100 Kg/ cm <sup>2</sup> | 150 Kg/ cm <sup>2</sup> |
| M 20     | 135 Kg/ cm <sup>2</sup> | 200 Kg/ cm <sup>2</sup> |

#### Note:

- (i) Test specimen of work tests shall be taken at the site of work from the mixture of concrete ready for pouring into foundation hole.
- (ii) Tests shall be carried out in accordance with IS: 516-1959 or its latest version.
- (iii) Age is reckoned from the date of casting.

**3.0 SOR ITEM NO: 3a(i) : ERECTION OF TRACTION MASTS AND MAIN MASTS OF SWITCHING STATIONS, BOOSTER STATIONS AND LT SUPPLY TRANSFORMER STATIONS BY MANUAL AS PER SPECIFICATION**

The price shall cover the cost for manual erection, alignment and setting before grouting of individual traction mast and main mast of switching post and booster transformer stations, including dwarf mast and mast for L.T supply transformer stations whether rolled or fabricated including those for head span. Erection of traction mast also includes removal of bends, if any, in the mast supplied by Railways. The price shall also include the cost of repairing of platform shelters in case the shelter is dismantled/removed/damaged during the course of erection of a mast/portal at platforms.

**4.0 SOR ITEM NO. 3a(ii) : SUPPLY ONLY FOR FABRICATED MAST K, B, S SERIES ETC AS PER SPECIFICATION**

Note : For the purpose of payment, the weight of individual traction mast and masts of head span shall be determined for each type on the basis of the payable weights per metre length shown below for standard types. For special type mast, the payable weight per metre length will be indicated by the Railways at the time of approval of designs.

**PAYABLE UNIT WEIGHTS FOR STANDARD MASTS**

| Sl. | Type of masts                    | Weights per Metre |
|-----|----------------------------------|-------------------|
| 1.  | BFB 6" x 6" (Nominal} x 25.15 lb | 38.03             |
| 2.  | RSJ 8" x 6" x 35 lb              | 53.39             |
| 3.  | BFB 8" x 8" (Nominal} x 49.9 lb  | 51.20             |
| 4.  | K 100                            | 23.70             |
| 5.  | K 125                            | 30.30             |
| 6.  | K 150                            | 38.18             |
| 7.  | K 175                            | 43.72             |
| 8.  | K 200                            | 49.87             |
| 9.  | K 225                            | 57.50             |
| 10. | K 250                            | 66.72             |
| 11. | S1                               | 53.30             |
| 12. | S 3                              | 76.40             |
| 13. | S 4                              | 53.39             |
| 14. | S 5                              | 111.53            |
| 15. | S 6                              | 53.39             |
| 16. | S 7                              | 76.40             |
| 17. | S 8                              | 111.53            |
| 18. | s 100                            | 23.72             |
| 19. | s 101                            | 19.98             |
| 20. | 162 x 154 x 27.1 Kg BFB          | 38.00             |
| 21. | B 100                            | 27.71             |
| 22. | B 125                            | 32.47             |
| 23. | B 150                            | 39.07             |
| 24. | B 175                            | 44.61             |
| 25. | B 200                            | 50.76             |
| 26. | B 225                            | 61.50             |
| 27. | B 250                            | 70.72             |

**5-6 SOR ITEM NO. 3c : SUPPLY & ERECTION OF FABRICATED STEEL WORK (SPS) AS PER SPECIFICATION**

The price shall cover the cost of supply and erection of the above steel works including fasteners which are to be supplied by the contractor as per the approved designs and drawings.

For standard fabricated steel work for which RDSO's approved drawings are available, the weight of steel work as specified in RDSO's drawing shall be considered for payment. However, in case the unit sectional weight of any member indicated in RDSO's drawing is not in conformity with the unit sectional weight as per the latest IS specification, the weight of the fabricated steel work, shall be calculated on the basis of latest IS specification and the same will be considered for payment. For the non-standard fabricated steel work, the calculated weight to be considered for payment under this item shall be included in the relevant drawing based on latest IS sectional weight at the time of submitting the designs for approval of the Railways. All types of Drop arms with accessories, Pedestal Insulator outrigger (with mast/structure), feeder super (individual or on portal) mast, all types of chair fittings and Multiple Cantilever Cross arm (3121) will only be paid under this schedule. Other small parts steels, provided if any, are considered in the schedule of works other than item No. 3c.

**Note:** For the purpose of payment against items 3 (a), (b) & (c), weight for structures or fabricated steel work will be calculated according to the weight of black steel given in section books for the lengths of various members shown in the approved drawings. There will be no addition for increased weight due to galvanizing or painting or weld material or reduction for holes or skew cuts. If the weight of structure received by the contractor is less than the weights specified for the standard mast, payment shall be made for less weight only.

**7.0 SOR ITEM NO. 3(e) : SUPPLY & ERECTION OF A GUY ROD ASSEMBLY AS PER SPECIFICATION**

The price shall cover supply and erection of guy rod assembly of various lengths for traction masts, feeder line towers or supports complete with mast/structure guy rod anchor fittings, guy rod with anchor attachment, if any, with mast and part/s grouted in the anchor block. The price shall not include the cost of supply and erection of a dwarf or stub mast with anchor plates drilled and welded in position. For such location for anchorage, small parts steel work complete with bolts and nuts etc. If any, for attaching in the mast, guy rod fittings to the mast/ structure are also included in this schedule of work. No extra rates are payable for the small parts steel items used if any.

**COMPONENTS REQUIREMENT**

| Rly. Id No.                  | Description of component  | Qty. per unit                   |
|------------------------------|---|---------------------------------|
| 3332                         | Mast guy rod fitting (welded) complete with 4 short bolts, nuts, lock nuts and washers for attachment to mast/5.P.5. including appropriate fittings | 1 off                           |
| 5001/<br>5001-1<br>5001-3    | Anchor bolts (complete with nuts, lock nuts and split pins)   | 1 set                           |
| 5002                         | Guy rods stirrup  | 2 off                           |
| 5004 or<br>5005 or<br>5006-I | Guy rod with nut, washer and split pin  | 2 off                           |
| 5007-I                       | Anchor 'V' bolt   | 2 off                           |
| 5008                         | Anchor loop   | 2 off                           |
| 5220                         | Guy rod double strap assembly   | 1 off or<br>2 off (as required) |

**Note :**

- 1) In case the contractor desires to adopt a different design for guy rod assembly, the same shall be indicated by him in the Tender and the components required should be clearly listed under this item as deviation.
- 2) Supply and erection of guy rod assembly at Anti-creep Anchor and Portals will also be paid for under this item

**8.0 SOR ITEM NO: 4(a)i(a) : SUPPLY & ERECTION OF A SINGLE BRACKET ASSEMBLY AS PER SPECIFICATION**

The price shall cover on a flat rate basis 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 overlaps and at locations with reduced encumbrance or terminating wires. The price shall include the cost of supply of all components, galvanized steel tubes, 5 mm dropper wires including adapter, small parts steel work complete with bolts and nuts etc. if any. The price shall cover erection of all components including solid core insulators, dropper wires and small parts steel work excluding MCC i.e., 3121 in the case of multiple cantilever locations. This will include the anti-creep center arrangement at masts/ structures. The price shall include:

| <b>Rly Id No.</b>                                  | <b>Description of Components</b>   | <b>Qty per Unit</b>   |
|--|--|-----------------------|
| 3020   | Mast fitting for hook insulator with bolts, nuts, lock nuts and washers of 16 dia.   | 1set or as reqd.      |
| 2400   | Tubular Stay Arm assembly (including galvanized steel tube)  | 1set or as reqd.      |
| 2110/ 2130/ 2380                                   | Catenary suspension bracket assembly or hook bracket   | 1Off                  |
| 1160/2120  | Suspension clamp   | 1Off {as required}    |
| 2040 / 2080  | Bracket tube assembly complete with tube cap and sleeve where required {including galvanized steel tube}.                                    | 1 SET                 |
| 3070-1/2   | Mast Bracket fitting assembly including 2 off bolts, nuts, locknuts and washers of 16 dia for attachment to structure or to small part steel | 1 SET                 |
| 2150-1/ 2160-1                                     | Register arm hook assembly complete with bolts, nuts and lockouts  | 1 off                 |
| 6000-I   | Stay arm insulators  | 1 Each or as required |
| 6030-1   | Bracket insulators   | 1 Each or as required |
| 2420 / 2430  | Register arm assembly or raised register arm assembly {including galvanized steel tube}  | 1 set                 |
| 2270-4 or 5<br>2460 style 02 or<br>2470 style - 02 | Register arm dropper assembly including 5 mm dropper wire, complete with bolts, nuts etc.  | 1 set                 |
| 2390/2540/ 2520                                    | BFB steady arm or bent steady arm {where required}   | As required           |

|                          |   |             |
|--------------------------|---|-------------|
| 2360/ 2490-2             | 25mm steady arm drop bracket/ clamp                   | -d0-        |
| 3131 & 3076              | Adaptors& Backing angle                               | - do -      |
| 1220/ 1370/-1<br>{Mod-F} | Contact wire swivel clip or raised register arm clamp | 1off        |
| 2550-1/2                 | Anti-wind clamp                                       | As required |

- a) **Note:** If the area falls under polluted zone, long creepage insulator of 1050 mm to be used. If the contractor is willing to use composite insulator instead of Porcelain insulator of normal/long creepage, the same can be used without any extra cost with the prior approval of the Railways. Generally, the Stay Arm, Bracket tube & 9T insulators shall be of porcelain type, 1050 CD. Composite type of insulators shall be used on Railway's demand only. Prior approval from Railways to be taken regarding the type of insulators to be used in this contract.

Wherever cantilevers are supported in drop arms with track centre more than 4.72 m, drop arm cantilevers shall be with 2.35 m setting distance. The cantilevers provided on drop arm assemblies and individual mast shall invariably be provided with large bracket tube in 150 kmph wind zone areas and with standard bracket tubes in other wind zone areas with normal implantation. This is applicable to all types of bracket assemblies under item no. 4.

**9.0 SOR ITEM NO. 6(c): SUPPLY (EXCLUDING SUPPLY OF COPPER CONTACT WIRE) AND ERECTION OF CONTACT WIRE ONLY (REGULATED WITH BRIDLE WIRE) BY MANUAL AS PER SPECIFICATION**

The price shall cover erection of Tramway type OHE with catenary and contact wire. The price shall exclude termination, which will be paid for under item 8. The price shall include provision of bridle wires/catenary wire with clamps and two droppers including clips and Enamel number plates on traction masts/ structures. The price shall also include the supply of small part steel works complete with bolts and nuts for attachment of enamel number plates to masts/ structures. The hard drawn copper contact wire and bridle wire used shall conform to RDSO's latest specification. The Contractor shall supply all items except Copper Catenary & Contact wires.

**Special Note for items under SOR 6(a), b, c & d.**

1. All bolts and nuts below 14 mm dia on current carrying parts of composite OHE shall be of stainless steel.
2. The rate includes supply and erection of all materials for providing a false catenary together with contact wire, contact wire ending clamp, catenary wire ending clamp, double strap, jumper wire, PG clamps etc., under ROBs, FOBs as prescribed by Railways' Engineer.
3. All type of insulators shall be tested at site for Mechanical Proven test before erection.
4. Contact wires drawn out of continuous cast copper rods only shall be procured for all sizes.
5. Jumpers like PH, H, C and F jumpers in the IOL's/NS included under this schedule of work, shall be of 50 sq. mm flexible jumper wire.
6. Where proper bonding is not available, temporary bonding of mast/structures shall

be done by means of two nos. 8 SWG GI wire, before wiring is done.

7. The rate also includes supply and erection of 25 kV restricted clearance and power block working limit caution boards as required by the Railways. The rate includes supply and erection of fabricated/small parts steel required to erect the caution boards.

**Note for Measurements:**

1. For the purpose of measurement against SOR Items 6 (a), (b), (c) & (d), the length of overhead equipment which shall include terminating wires shall be measured from the centre lines of the traction masts/ structures at which the two ends of each tension length of overhead equipment are anchored.
2. The length shall be the difference between the actual chainages of the two traction masts/ structures with which the ends of each tension lengths are anchored or by the sum of the actual spans between the same two points, whichever is higher, is included in the "as erected" layout plans. For purpose of progress payment reference to layout plans as approved shall be made. The price under items 6 (a), 6(b), 6(c) and (d) does not cover the cost of supply and erection of insulator, if any, which shall be paid for under item 11.

In the case of splicing and extension of anchored OHE, the actual length of wire used at site from ending clamp/splice to the splice/ending clamp will be reckoned for measurement purpose under item No. 6.

**10.0 SOR ITEM NO. 8a(v): SUPPLY & ERECTION OF REGULATING EQUIPMENT (3 PULLEY TYPE) WITH COUNTER WEIGHT ASSEMBLY FOR CONVENTIONAL COMPOSITE OHE AS PER SPECIFICATION**

The price shall cover supply of three pulley type modified groove regulating equipment conforming to RDSO specification No. TI/SPC/OHE/ATD/0060/Rev.1 with A&C slip No. 1, SS wire rope, anti-falling rod of suitable length, counter weight and small part steel required for fixing with mast /structure for regulating equipment. Suitable forged clevis as approved by RDSO for fixing with mast/structures to be used. In case of old type of regulating equipment, the same is to be replaced by new type of regulating equipment consequent to any modifications/request by the Railways. The rate includes above also. The price shall cover supply and erection of all items given above including 665 kg of counter weight. The price shall also cover adjustment of the entire regulating equipment. The price shall not include supply and erection of termination which will be paid for under item no. 8 (b) The price shall also include for marking 15°, 35° and 45°deg temperature marking on the BWA mast and colour band including the half tension lengths as required by the purchaser for items under 8(a).

**11.0 SOR ITEM NO. 8(b) : SUPPLY & ERECTION OF MATERIAL FOR TERMINATING DOUBLE OVER HEAD EQUIPMENT CONDUCTOR AS PER SPECIFICATION**

The price shall cover supply of all materials necessary for the yoked termination of two overhead equipment conductors on a traction mast or structure including appropriate mast anchor fitting including attachment with mast/structure, Backing angle, cleaves – assembly three adjusters, ending clamps for catenary and contact wire anchor double strap assembly, equalizing/ compensating plate and fittings

including 9 tonne conventional porcelain insulator assembly in a FTA/RE location but excluding the termination wire if any. The price shall cover erection of all materials including the 9 tonne conventional porcelain insulator assembly. When anchoring of a OHE (Both catenary and contact wire) through large span wire (130 sq. mm) is done, supply and erection rate for termination will be paid under this schedule of work

**12-13 SUPPLY OF MATERIAL FOR TERMINATION OF COPPER CROSS FEEDER WITH GANTRIES INCLUDING CROSS FEEDER WIRE AS PER SPECIFICATION.**

The price shall cover the supply of all materials required for termination of copper cross feeder wire (37/2.25 mm HDDB) including appropriate mast anchor fitting (3231), 18 mm Single clevis (5040), 9-Tone adjuster (5020-2), Feeder ending clamp (1130), double clevis (3010) and other components as necessary excluding 9-Ton insulator (Cost of insulator will be paid in Schedule-1, Section-5), assembly. The price shall also cover the erection of all materials including 9-Ton insulator assembly and termination of cross feeder at either ends. Fittings/components required for termination of one cross feeder at both ends constitute one set.

**14.0 MODIFICATION TO EXISTING OHE AS PER SPECIFICATION.**

The price shall cover cost of dismantling of equipment including modification to Existing OHE, Terminations, tensioning devices, guy rod assemblies, bracket assemblies and associated small parts steel work (excluding components embedded in concrete in accordance with the latest ACTM Manual provisions relating to construction, maintenance and regulation of 25 kV AC traction OHE/TRD installations.

**15.0 SUPPLY AND ERECTION FOR CREATION OF NEW IOL (INSULATED OVERLAP) / UIOL (UNINSULATED OVERLAP) ON EXISTING ELECTRIFIED TRACK AS PER SPECIFICATION.**

The price shall cover to carry out all necessary works for provision of new overlap arrangements including modification and extension of existing OHE/TRD system to ensure safe and reliable operation of traction power supply and smooth current collection by pantograph.

The overlap arrangement shall be designed and erected strictly in accordance with provisions of the ACTM Manual and applicable RDSO drawings/specifications. The contractor shall ensure that overlap geometry, stagger, wire height, electrical clearances and span arrangements are maintained within permissible limits.

**16.0 SOR ITEM NO. 31(f) : SUPPLY AND ERECTION PORTION OF SPLICING AND EXTENSION OF AN ANCHOR OVERHEAD EQUIPMENT AS PER SPECIFICATION.**

The price shall cover splicing of terminated overhead equipment for extension and consequent adjustment of the affected equipment. The dismantled equipment shall be returned to the Railways' Engineer. The cost of dismantling of overhead equipment would be paid for under Item 31(d). The extended overhead equipment shall be deemed as starting from the centre line of the splice to the extended overhead equipment and shall be paid for under Item 6(a) or 6(b) or 6(c) as applicable. Half the rate only will be paid, if catenary or contact wire alone is spliced and extended. In case of splicing and extension of AC wire, half the rate shall be

paid and in such cases, the additional length of the AC wire shall be supplied by the Railways. The splicing of catenary wire with contact/insulated catenary wire using ending clamp/splice under the ROB will be paid under this item and half the rate shall be paid for each such splicing.

**17-18 SOR ITEM NO. 9(d): SUPPLY AND ERECTION OF ANTI CREEP WITH CADMIUM COPPER CATENARY/PURE COPPER CATENARY WIRE AS PER SPECIFICATION.**

The price shall cover the supply of all materials for anti-creep including adjusters, mast anchor fittings at its terminations on either side of structure, ending clamps including 9 tonne porcelain insulator, mast anchor fitting and backing angle as required. The price shall cover erection of all materials including pure/cadmium copper catenary wire, 9 tonne porcelain insulators assembly and small parts, steel work if any.

| <b>Rly Id No</b>             | <b>Description of components</b>   | <b>Qty per Unit</b>          |
|------------------------------|--|------------------------------|
|                              | Pure/Cadmium copper catenary wire (65 sq. mm)  | Will be supplied by Railways |
| 6020-1.1<br>6020-2<br>6020-3 | 9 tonne Porcelain/conventional insulator assembly<br>Polluted zone type for polluted area.             | 2 Nos                        |
| 1120                         | Catenary ending clamp (65)/ 1360   | As required                  |
| 5020                         | 9 tonne adjusters  | As required                  |
| 5030                         | Anchor double strap assembly   | As required                  |
| 5040                         | Clevis assembly  | 2 Off                        |
| 3231                         | Mast anchor fitting including suitable attachment for mast/structure with bolts nuts and backing angle | 2 Sets                       |
| 1170                         | Double suspension clamp  | 1Off                         |
| 5183                         | Double eye distance rod  | As required                  |

**Notes:**

1. No extra rate is admissible for double eye distance rod provided, if any.
2. As per site requirement, if the termination insulator is to be shifted in the same wire to any other place, no extra rate is admissible.
3. Wherever Portal structures are provided, the anti-creep wire shall be terminated on uprights crossing number of tracks as required, for which no extra payment is admissible.
4. Wherever anti-creep wire passes through underneath the over-line structures as desired by the Railways, contact wire shall be provided in lieu of anti-creep wire for suitable length. No extra payment is admissible for the above modification.
5. Where 65 sq.mm cadmium copper catenary wire is used for conventional /tramway OHE, the anti-creep wire shall also be of 65 sq.mm cadmium copper catenary wire. In case 95 sq.mm pure copper catenary wire is used for conventional /tramway OHE, the anti-creep wire shall be of 95 sq.mm pure copper catenary wire.

## **19.0 SUPPLY OF 9 TONNE CUT INSULATOR AS PER SPECIFICATION.**

ITEM No. 11(ax) : Supply of 9-Tonne Insulators for Item 11(a)(i) & 11(a)(ii) The price shall cover only supply of any of the following 9 tonne insulator assembly to be supplied at site for execution of work under items 11(a)(i) & 11(a)(ii) respectively. Erection cost of insulators are inclusive in items 11(a)(i) & 11(a)(ii) respectively.

## **20.0 ERECTION OF 9 TONNE CUT INSULATOR AS PER SPECIFICATION.**

Item No. 11(a)(i): Supply without insulator and Erection of a cut-in (9 Tonne) insulator. The price is applicable to the provision of the an additional 9 Tonne cut-in-insulator on a flat rate basis such as in a head-span, cross span or in span wire or an overhead equipment conductor at an insulated overlap, anti-creep not provided for in other Items. The price shall cover supply of all components required for the cut-in-insulators assembly, including appropriate terminal fittings for the conductor but excluding the cost of 9 tonne insulator assembly. This price shall cover erection of all components, including the 9 tonne insulator. This price shall also be applicable as an adjustment price for non-provision of insulators under Items 8(b)(i) to 8(b)(vi).

## **21.0 SOR ITEM NO. 16(a) : SUPPLY & ERECTION OF STRUCTURE BOND AS PER SPECIFICATION**

The price shall cover supply of all materials including mild steel flat of size 40 x 6 mm required to provide a structure bond connecting a traction mast or structure to the nearest non-track circuited rail, or (locations other than earth wire) earth electrode, including all fasteners at both ends. Bonding should have suitable insulation sleeve in an approved manner under track circuited rail. The price shall include shaping, drilling and painting of all materials including the bond. No extra charges admissible for drilling of holes on rails, if any, under this item. The painting shall be with one coat of red oxide and a second coat of black bituminous paint. The price shall also include provision of heat shrinkable PVC sleeve of minimum length of 40 cm for structure bond under track circuited rail. This would also cover connections to earthing terminals of equipments, like LT transformers, with structures and then to Rails as per relevant drawing. The rate will be per bond. The rate includes releasing of existing bond and handing over the same to the concerned OHE depot in charge

## **22.0 SOR ITEM NO. 16(b): SUPPLY & ERECTION OF LONGITUDINAL BOND AS PER SPECIFICATION**

The price shall cover the supply of all materials including mild steel flats of size 40 x 6 mm, fasteners etc. required to provide a longitudinal bond connecting 2 rails at the rail joint or at the locations specified by the Purchaser. The price shall include shaping, drilling and painting of the bond and erection of all components including the bond. No extra charges admissible for drilling of holes on rails, if any, under this item. The painting shall be with one coat of red oxide and a second coat of black bituminous paint. The rate will be per bond. In Feeding post area, longitudinal bonds shall be provided as per RDSO design. The rate includes releasing of existing bond and handing over the same to the concerned OHE depot in charge.

### **23.0 SOR ITEM NO. 16(c): SUPPLY & ERECTION OF TRANSVERSE & SPECIAL BOND AS PER SPECIFICATION**

The price shall cover supply of all materials including mild steel flats of size 40 x 6 mm, fasteners, insulation sleeve etc., required to provide transverse (polarity) bonds connecting rails of the same/adjacent tracks at the locations specified by the Purchaser. The price shall also cover the supply of all materials including mild steel flat to provide special bonds at a level crossings, bridge, foot over/road over bridge/protective screen etc., for which the location will be specified by the Purchaser. The price shall include shaping and drilling of the bond, painting and erection of all materials including the bond. No extra charges admissible for drilling of holes on rails, if any, under this item. The painting shall be with one coat of red oxide and a second coat of black bituminous paint. The rate will be paid per bond. The price shall also include provision of heat shrinkable PVC sleeve of minimum length of 40 cm, wherever it is required. The rate includes releasing of existing bond and handing over the same to the concerned OHE depot in charge.

#### **Note for item No. 16.**

1. The bolts used shall be of size dia 16 x 50/38mm with nut, flat and spring washers and shall be of ROSO approved make.
2. The bolts & nuts and all types of washers used shall be of materials, Galvanized steel.
3. The OHE traction bonds should be fixed to the rail and connected in such a way that they do not interfere with tamping tools during tamping. The traction bonds shall be connected to the rail at a distance of not more than 80 mm from the adjoining sleepers.
4. Drilling of holes, if required in the rails shall be done only with prior approval of SEIP. Way and drilling should be done in the presence of nominated P.Way Staff only.
5. All holes drilled to the rail shall be chamfered soon after drilling.
6. Relevant drawings showing the fixing arrangement of traction bonds to be followed strictly.
7. jointing of flats by welding is only permitted except in platforms, where it is inevitable.
8. If old structure bonds, cross bonds/polarity bonds, longitudinal bonds from the existing line is to be released, no extra payment shall be payable. The bonds so released is to be accounted properly and handed over to the Railways.

### **24.0 SUPPLY AND ERECTION OF UNDER BOOM ARRANGEMENT AS PER SPECIFICATION.**

- a. The price shall cover on a flat basis includes detailed site survey, verification of existing TRD/OHE arrangements, supply and fabrication of under boom members and fittings, erection of under boom arrangement on existing structures, fixing of brackets, registration assemblies and support fittings, modification of existing cantilever arrangements wherever required, and complete alignment, levelling, adjustment, testing and commissioning of the arrangement.
- b. The under boom arrangement shall be erected strictly in accordance with ACTM Manual provisions and approved Railway drawings and shall maintain required contact wire height, stagger, encumbrance, electrical clearances, registration accuracy and mechanical stability.
- c. The work under this contract shall carryout in accordance with the latest provisions of the ACTM Manual, approved TRD drawings, Railway Electrification standards and

instructions issued by Indian Railways and Research Designs and Standards Organisation (RDSO).

**25.0 SOR ITEM NO. 15(a) : SUPPLY & ERECTION OF COPPER JUMPER AS PER SPECIFICATION**

- a. The price shall cover on a flat rate basis the supply of all components and fittings required for providing a flexible/hard copper jumper connection, including parallel grooved clamps, bimetallic and aluminum-copper ALCU strips, wherever required, and terminal or tee clamps at either end including jumper wire of appropriate length.
- b. The price shall also cover the erection of the complete jumper assembly including jumper wire. The price shall not however be applicable for jumper connections already included under items 6(a), 13(a) and 10 but shall be applicable for any jumper connections in any combination between feeders, L. T. Transformers, dropout switches, Lightning arrestors for overhead equipments and outgoing busbars for switching stations / booster stations. Continuity jumper as Boom anchor anticreep will be payable under this item.
- c. The supply of all components and fittings and the erection of all the components and fittings including the catenary wire for providing double catenary contact wire in place of catenary under overline structures as per Drg. No. ETI/OHE/SK/446 and ETI/OHE/SK-529 respectively will also be payable under this item treating the double catenary as one jumper irrespective of its length. The jumpers provided for continuity of supply at Feeding Post/SSP/SP and along track feeder continuity shall be of 160 sq.mm jumper of suitable length as required at site.

**26.0 SUPPLY & ERECTION OF NUMBER PLATES, STENCILING ETC AS PER SPECIFICATION**

The price shall include the cost of supply and erection of retro-reflective number plate along with clamps, fasteners (Bolt, Nut, Locknut, Spring Washer, Lead Washer etc.) on OHE structures (Masts/Portals/Drop Arms etc) . The supply and erection of retro-reflective number plate shall conform to RDSO Drg No. ETI/OHE/P/7503 or latest, clamps shall be as (153) per RDSO drawing no. ETI-OHE-G-01702 & ETI-OHE-P-3330 or latest and specification no. ETI/OHE/33A (12/97) Rev.8 or latest.

**27-39 DISMANTLING OF FOLLOWING OHE ITEMS**

- a. The work shall include careful dismantling of the following 25 kV AC Traction Overhead Equipment (OHE) items from existing electrified section in accordance with the latest provisions of the ACTM Manual, approved TRD practices, Railway Electrification standards and instructions issued by Indian Railways and Research Designs and Standards Organization (RDSO):
  1. Single Bracket Assembly
  2. OHE Mast/Structure by cutting
  3. Guy Rod
  4. Overhead Equipment
  5. Regulating Equipment (Three Pulley Type) with Counterweight Assembly for Conventional/Composite OHE
  6. Anti-Creep with Cadmium Copper Catenary Wire
  7. Fabricated Steel Work (SPS)
  8. Under Boom Arrangement
  9. Section Insulator
  10. Double Pole Isolator

11. 9 Tonne Cut Insulator
  12. Feeder Wire
  13. Structure bond/ longitudinal bond/ transverse and special bond
- b. The dismantling work shall be carried out only after obtaining approved power block and traffic block from Railway/TRD authorities and after ensuring proper isolation, discharge and earthing of OHE as per prescribed ACTM safety procedures. The contractor shall take all necessary precautions to ensure safety of personnel and protection of adjacent live equipment, existing track installations, signaling and telecom assets during dismantling operations.
  - c. The dismantling operation shall include removal of complete assemblies with all associated fittings, clamps, fasteners, insulators, jumpers, droppers, anchor fittings, support arrangements and small part steelwork wherever applicable. OHE mast/structure dismantling shall include cutting at required level, removal of foundations if specified, and safe lowering without affecting nearby installations.
  - d. All released materials shall be carefully dismantled, lowered, cleaned, segregated and stacked properly without causing any damage and handed over to Railway authorities at the nominated depot/store as directed by the Engineer-in-Charge. Reusable released materials shall be preserved in good condition. Any damage caused due to contractor negligence shall be rectified or replaced by the contractor at no extra cost.
  - e. The contractor shall provide all labour, supervisors, cranes, gas cutting equipment, ladders, wire ropes, hydraulic tools, tools and tackles, transport arrangements, safety appliances and all other equipment necessary for safe and satisfactory execution of the work.
  - f. The dismantling of feeder wire, anti-creep assemblies, section insulators, isolators and regulating equipment shall be carried out carefully to avoid damage to reusable conductors and fittings. Necessary temporary supports and protective arrangements shall be provided wherever required during dismantling.
  - g. After completion of dismantling work, the contractor shall clear the site of all debris and make good the affected area to the satisfaction of the Engineer-in-Charge.

#### **40.0 SOR ITEM NO.32: EXTRA ON ERECTION CHARGES 100% UNDER POWER BLOCK AS PER SPECIFICATION**

The price under this item cover extra charges over and above erection rates of items of 'Schedule of Price', for erection of equipment in the vicinity of energized overhead equipment and feeders or erection of equipment which joins equipment already energized or on energized equipment which calls for a power block by switching off of traction power. The price payable under this item shall be 100% extra over the erection rates of the items referred to above provided such work is not called for on account of non-compliance with specifications, approved drawings and instructions given by the Railways from time to time.

The extra erection rate under this item will not be payable, if power block is given in an elementary section/sub-sector for a total duration of 4 hours or more in a day. The duration can be in one or more spells. In the case of works, which warrant power block in more than one line, the duration of power block will be reckoned as under.

The power block time will commence/ends from the time power block is availed on the first line and to the cancellation time of the line which ever cancelled later.

Where the prices under this item are applicable the contractor shall finalize the quantities of various items of work to be done under a power block, jointly with the Railways Engineer prior to taking the work in hand. This extra rate is inclusive of

provision of earth rods during power block hours for any type of works (earth rods will be owned by the Contractor conforming to RDSO specification No. ETI/OHE/51 (9/87) Correction slip No.1) under the clear guidance of authorized Railway Representative/ Engineer at site.

The Power Block time will commence/ end from the time Power Block is availed/ cancelled from TPC/ASM. The contractor shall arrange for adequate lighting with generator set/ Petromax lamps at work site when the work is carried out during nights.

- Note: 1. Wherever, the extra erection charges for work done under power blocks are applicable, the ETR2 Form‘ reference No. shall be mentioned in the Daily Progress Reports, which in turn will be recorded in the Measurement Book to improve the traceability of power block work and to authenticate the power block charges.
2. The requirement of power block shall be ascertained by the contractor in consultation with Railway Site in-charge and the power block requirement thus finalized shall be submitted at least 5 days in advance. If sufficient power block is arranged as per the pre-planned schedule, the contractor is not eligible for any extra payment on account of Power block. If contractor staff available for execution of work and the planned work could not be done due to the absence of sufficient power block, contractor is eligible for extra payment on account of power block. Further, the power block is made available as planned and if planned power block work could not be done due to the failure of contractor, no extra charges will be given for execution of the same work on a later stage by availing Power block. Power block requirement is a safety aspect which is to be ensured by Railway site in-charge. Railway site in-charge is empowered to take a decision as to whether power block is required or not irrespective of the availability of clearance actually available at site and any such decision shall be binding on the contractor. Hence the item 32-A, 32-B & 32-D will be operated only at the discretion of site in charge.

#### **41.0 CARRIAGE OF MATERIALS AS PER SPECIFICATION**

The price shall cover Leading, loading, transportation and unloading of OHE mast /Portal upright, boom of different lengths and weight, SPS from purchasers depot to locations as specified by the purchaser's engineer. The Tenderer shall quote the rate per Metric Tonne per Kilo meter for transporting of equipments supplied from Railways. The rate quoted will be applicable whether the materials transported are full load or part load of the vehicle. The distance in Km from the place where the transportation to be carried out to the place of unloading will be based on the rail route Km. The price shall cover for leading, loading of OHE masts / structures from Railway depots / Premises as prescribed by Railway Officials and unloading of materials at works spot at site or other depot or location as instructed by the purchaser. All necessary tools and tackles required for loading and unloading shall be arranged by the contractor. Necessary inter- state permit and other licence if any, shall be arranged by the Tenderer for the above transportation. New OHE mast / structure are to be transported from major / main depot to site and released / cut mast / structure are to be transported to respective depots or to stores under scrap as desired by the purchaser. No tools/crane etc., will be provided by the purchaser. The masts are 9.5 meter long and weighing approximately 500 kgs and the maximum length of portal upright/boom will be about 11 metres.

**42.0 SUPPLY & ERECTION OF 25 KV CAUTION BOARD OF SIZE: 300X225X2MM AS PER DRG. NO. ETI/OHE/P/7531 (HINDI/ENGLISH) - ENAMEL TYPE AS PER SPECIFICATION**

- a. Supply: The price shall cover supply of danger Board in Hindi and English to be mounted on OHE structure with necessary fasteners etc. as per the approved drawing of ETI/OHE/P/7531. The price shall also cover supply of fittings and fixtures for erection. All materials should be complying with relevant RDSO's Specification (which ever required as per latest Guide lines issued from Railway Board)
- b. Erection: The price shall cover erection of Danger Board with necessary fittings and fasteners as per the instruction of the ICF Site supervisor.

**43.0 SUPPLY & ERECTION OF NYLON MESH ON EXISTING OHE STRUCTURES AS PER SPECIFICATION**

- a. The price shall cover the supply of Nylon Mesh for the existing OHE structure. All materials for Nylon mesh should be complying with relevant RDSO's Specification (which ever required as per latest Guide lines issued from Railway Board).
- b. Erection: The price shall cover erection of nylon mesh with necessary hardware as per the instruction of ICF site Supervisor.

**III. ICF SCOPE OF SUPPLY:**

- a. Electrical energy required for works / activities such as welding, drilling, grinding will be supplied by this administration at chargeable basis.
- b. ICF will co-ordinate with the contractor in supplying air free of cost only if the contractor desires to use his air operated / concrete power breakers.
- c. ICF will co-ordinate for availing necessary power shut downs in case of requirement. The contractor shall approach ICF site supervisor with written request well in advance for getting the shutdown.

**IV. INSPECTION, TESTING AND COMMISSIONING OF THE INSTALLATIONS AFTER COMPLETION OF THE WORK:**

- a. Good engineering practices suggested by ICF site engineer shall be followed by the contractor while carrying out the erection work.
- b. The contractor shall get the work inspected during the execution by AEE/M or his authorized representative at every stage as indicated below:
- c. The contractor shall supply the sample qty. (both purchase and manufacture items) for each supply items for inspection and necessary approval by AEE/M before supplying the bulk qty.
- d. The contractor shall offer stage inspection for completion of each work and should get clearance for every stage before proceeding to the next stage.
- e. After completion of all wiring and installation the following tests are to be conducted before commissioning.
  - i. The insulation resistance value of the all wiring circuitry cables shall be measured and to be recorded.
  - ii. The earth resistance value of the individual earth pit shall be checked and to be recorded.
  - iii. The earth continuity up to the all Electrical installation shall be checked and to be recorded.

- iii. Any other checks and tests as instructed by ICF site engineer shall be conducted and to be recorded.

**V. COMPLETION TIME:** The contractor shall complete the entire work in all respects **AS MENTIONED IN NIT (Notice Inviting tender)** from the date of issue of Letter of Acceptance.

**Note:**

- a) *However, early completion of the entire work is mostly preferred. If any unavoidable delays cause in the part of ICF and its associated departments in later stages, extension of completion time will be given subject to the advanced approval obtaining from the competent authority by appropriate written request.*
- b) *If the work is not completed within the due date, the contract will be terminated by giving 7 days and 48 hours notice as per the General Conditions of Contract.*

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## ANNEXURE – B

*Note: The contract against this specification will be governed by the Indian Railway General Conditions of contract applicable to Works Contracts as amended and/ or corrected up to date, in addition to the special conditions set forth in this specification. Wherever these special conditions are at variance with the General Conditions of contract, the special conditions shall prevail. General Conditions of contract available may be accessed through the path*

[https://indianrailways.gov.in/railwayboard/view\\_section.jsp?lang=0&id=0,1,304,366,526,2624](https://indianrailways.gov.in/railwayboard/view_section.jsp?lang=0&id=0,1,304,366,526,2624)

### **I. COMMERCIAL TERMS AND CONDITIONS**

Although details presented in this Tender document have been compiled with all reasonable care, it is tenderer's responsibility to satisfy themselves that the information/documents are adequate and that there are no conflicts between various documents/stipulations. No dispute or claims will be entertained on this account. Offer proposal preparation is the responsibility of the tenderer and no relief or consideration can be given for errors and omissions.

#### **1.0 INSTRUCTIONS REGARDING QUOTING OF RATES:**

The tenderer has to quote the rate as collective uniform percentage 'ABOVE' or 'BELOW' or 'AT PAR' value of SCHEDULE OF RATES. The rates mentioned in the tender schedule shall be inclusive of all cost of procurement (if any associated items applicable to this contract), applicable Taxes & duties, handling transportation to site of works, storage, wastage etc.

1.1 The quantities mentioned in the Schedule of rates are tentative and subject to variation.

#### **2.0 PERFORMANCE GUARANTEE CERTIFICATE**

- a. The successful bidder shall have to submit a Performance Guarantee (PG) within 21 (Twenty one) days from the date of issue of Letter of Acceptance (LOA). Extension of time for submission of PG beyond 21 (Twenty one) days and upto 60 days from the date of issue of LOA may be given by the Authority who is competent to sign the contract agreement. However, a penal interest of 12% per annum shall be charged for the delay beyond 21(Twenty one) days, i.e. from 22<sup>nd</sup> day after the date of issue of LOA. Further, if the 60<sup>th</sup> day happens to be a declared holiday in the concerned office of the Railway, submission of PG can be accepted on the next working day.

In all other cases, if the Contractor fails to submit the requisite PG even after 60 days from the date of issue of LOA, the contract will be terminated. In case contract is terminated railway is entitled to forfeit Earnest Money Deposit and other dues payable against this contract. In case a tenderer has not submitted Earnest Money Deposit on the strength of their registration as a Startup recognized by Department of Industrial Policy and Promotion (DIPP) under Ministry of Commerce and Industry, DIPP shall be informed to this effect.

The failed Contractor shall be debarred from participating in re-tender for this work.

- b. The successful bidder shall submit the performance Guarantee (PG), amounting to 5% of the original contract value, along with an Additional Performance Guarantee as specified in para (h) below in any of the following forms:

- 1) A deposit of cash;
- 2) Irrevocable Bank Guarantee;
- 3) Insurance Surety Bond as per Annexure-XVII of IRGCC.

**Note:**

**In case of Extension of Date of Completion selected bidder needs to submit extended Insurance Surety Bond/Fresh Insurance Surety Bond/Fresh Performance Security, in any form as given above, before expiry of existing Insurance Surety Bond.**

- 4) Government securities including State Loan Bonds at 5% below the market value;
  - 5) Pay orders and Demand Drafts tendered by any Scheduled Commercial Bank of India.
  - 6) Guarantee bonds executed or Deposits Receipts tendered by any Scheduled Commercial Bank of India;
  - 7) Deposit in the Post Office Saving Bank;
  - 8) Deposit in the National Savings Certificates;
  - 9) Twelve years National Defense Certificates;
  - 10) Ten years Defense Deposits;
  - 11) National Defense Bonds and
  - 12) Unit Trust Certificates at 5% below market value or at the face value whichever is less. Also, FDR in favour of FA&CAO / ICF, (free from any encumbrance) would be accepted.
- (c) The Performance Guarantee shall be submitted by the successful bidder after the Letter of Acceptance (LOA) has been issued, but before signing of the contract agreement. This P.G. shall be initially valid upto the stipulated date of completion plus 60 days beyond that. In case, the time for completion of work gets extended, the Contractor shall get the validity of P.G. extended to cover such extended time for completion of work plus 60 days.
- (d) The value of PG to be submitted by the Contractor is based on original contract value and shall not change due to subsequent variation(s) in the original contract value.
- (e) The Performance Guarantee (PG) shall be released after physical completion of the work based on 'Completion Certificate' issued by the competent authority stating that the Contractor has completed the work in all respects satisfactorily.
- (f) Whenever the contract is rescinded, the Performance Guarantee already submitted for the contract shall be encashed.
- (g) The Engineer shall not make a claim under the Performance Guarantee except for amounts to which the President of India is entitled under the contract (not withstanding and/or without prejudice to any other provisions in the contract agreement) in the event of:
- (i) Failure by the Contractor to extend the validity of the Performance Guarantee as described herein above, in which event the Engineer may claim the full amount of the Performance Guarantee.
  - (ii) Failure by the Contractor to pay President of India any amount due, either as agreed by the Contractor or determined under any of the Clauses/Conditions of the Agreement, within 30 days of the service of notice to this effect by Engineer.
  - (iii) The Contract being determined or rescinded under clause 62 of IRGCC conditions.
- (h) If the tender is accepted on the quoted rates of bidder which is below the advertised tender value, an additional performance security shall be submitted by the bidder as tabulated below: -

| <b>Bid Quoted in % of the Advertised Cost</b> | <b>Additional Performance Guarantee (%)</b> |
|---|---|
| Below 0- 5 % (inclusive)                      | Nil   |
| Below 5%                                      | 5%  |

### 3.0. SECURITY DEPOSIT

3.1 The Security Deposit shall be 5% of the contract value. The Bid Security (EMD) submitted by the Contractor with his tender will be retained/encashed by the Railways as part of security for the due and faithful fulfillment of the contract by the Contractor. Provided further that, if Contractor submits the Cash or Term Deposit Receipt issued from a Scheduled commercial bank of India or irrevocable Bank Guarantee Bond from a Scheduled commercial bank of India, either towards the Full Security Depositor the Part Security Deposit equal to or more than Bid Security, the Railway shall return the Bid Security, to the Contractor.

Balance of Security Deposit may be deposited by the Contractor in cash or Term Deposit Receipt issued from Scheduled commercial bank of India or irrevocable Bank Guarantee bond issued from Scheduled commercial bank of India, or may be recovered at the rate of 6% of the bill amount till the full Security Deposit is recovered. Provided also that in case of defaulting Contractor, the Railway may retain any amount due for payment to the Contractor on the pending "on account bills" so that the amounts so retained (including amount guaranteed through Performance Guarantee) may not exceed 10% of the total value of the contract.

The Irrevocable Bank Guarantee submitted towards Security deposit shall be initially valid up to the stipulated date of Maintenance period plus 60 days and shall be extended from time to time, depending upon extension of contract granted in terms of Clause 17A and 17B of the Standard General Conditions of Contract.

*Note: Security Deposit deposited in cash by the Contractor or recovered from the running bills of a Contractor or submitted by contractor as Term Deposit Receipt(s) can be refunded/returned to the contractor, in lieu of irrevocable Bank Guarantee bond issued from scheduled commercial bank of India, to be submitted by him, for an amount equal to or more than the already available Security Deposit, provided however that, in a contract of value less than Rs. 50 Crore, such refund/ return of the already available Security Deposit is permitted up to two times and in a contract of value equal to or more than Rs. 50 Crore, such refund / return of the already available Security Deposit is permitted up to three times.*

#### 3.2 (i) Refund of Security Deposit:

Security Deposit mentioned in sub clause (3.1) above shall be returned to the Contractor after, the following:

- i. Final Payment of the Contract (as per clause 51.(1) of IRGCC ) and
- ii. Signature of Final Supplementary Agreement or Certification by Engineer that Railway has No Claim on Contractor and
- iii. Maintenance Certificate issued, on expiry of the maintenance period (as per clause 50.(1) of IRGCC), in case applicable.

3.2 (ii) **Forfeiture of Security Deposit:** Whenever the contract is rescinded as a whole under clause 62 (1) of IRGCC, the Security Deposit already with railways under the contract shall be forfeited. However, in case the contract is rescinded in part or parts under clause 62 (1) of IRGCC, the Security Deposit shall not be forfeited.

- 3.3 No interest shall be payable upon the Earnest Money and Security Deposit or amounts payable to the Contractor under the Contract, but Government Securities deposited in terms of Sub-Clause 16.(4)(b) of IRGCC ) this clause will be payable with interest accrued thereon.
- 4.0 **ACTIVITY CHART:** You shall submit the 'Activity Chart' detailing from starting of the work till completion, within 7 days from the date of issue of LOA. The layout plan / drawing of proposed Schematics, Guaranteed technical particulars (GTP), wiring, general electrical installation arrangement etc. shall be submitted to Dy. CEE/M or his representative for prior approval within 15 days from the date of issue of LOA.
- 5.0 **COMPLETION REPORT:** On completion of entire work, the contractor shall submit a completion certificate countersigned by the supervisor under whose direct inspection the work has been carried out.
- 6.0 **TERMS OF PAYMENT:** No advance payment will be made against this contract. However Contractor may claim for progressive payment for the Items specified in the schedule of Rates as follows:
- a. Supply of Materials for “**Supply Items**” - 80% of Schedule of Rates
  - b. Supply of Materials for “**Supply & Erection Items**” - 65% of Schedule of Rates
  - c. On completion of works to the extent completed for “**Individual schedule items**” for each bill – 100% of Schedule of Rates
  - d. The balance will be paid only on successful completion and commissioning of the respective works and after issue of completion report by SSE & SEE/M/F for that work.
- 7.0 **PAYMENT OF CONTRACTORS BILLS THROUGH ELECTRONIC FUND TRANSFER (EFT)**
- a. The tenderer should submit the consent in a mandate form of **Enclosure-1** for receipt of payment through NEFT and provide the details of bank A/c in line with RBI guidelines for the same. These details will include bank name, branch name & address, A/c type, bank A/c no. and bank and branch code as appearing on MICR cheque issued by bank. Further, the tenderer should also submit certificate from their bank certifying the correctness of all above mentioned information in the mandate form.
  - b. The Tenderer / contractor should indicate their NEFT (Electronic Fund Transfer) contractor code number (allotted, if any) for payment
- 8.0 **DEDUCTION OF INCOME TAX & WORKS CONTRACT TAX AT SOURCE:**
- a. Being a indivisible works contract, Sales Tax, Excise Duty etc., are not payable separately.
  - b. Income Tax and any other Government levies, shall be recovered at source at the rates prevailing at the time of passing the bill.
  - c. Present rate of **Income Tax** is 2%. Necessary certificate will be issued to the Contractor for Deduction of Income Tax at source.

## 9.0 GUARANTEE:

The materials supplied and the works carried out against this contract shall be guaranteed for **ONE YEAR** from the date of completion of the work. The materials becoming defective during the guarantee period shall be replaced free of cost and the defects arising out of the works shall be rectified free of charge without delay.

## 10.0 VARIATION IN EXTENT OF CONTRACT:

**10.1** Modification to Contract to be in Writing: In the event of any of the provisions of the contract required to be modified after the contract documents have been signed, the modifications shall be made in writing and signed by the Railway and the Contractor and no work shall proceed under such modifications until this has been done. Any verbal or written arrangement abandoning, modifying, extending, reducing or supplementing the contract or any of the terms thereof shall be deemed conditional and shall not be binding on the Railway unless and until the same is incorporated in a formal instrument and signed by the Railway and the Contractor, and till then the Railway shall have the right to repudiate such arrangements.

10.2(1) Powers of Modification to Contract: The Engineer on behalf of the Railway shall be entitled by order in writing to enlarge or extend, diminish or reduce the works or make any alterations in their design, character position, site, quantities, dimensions or in the method of their execution or in the combination and use of materials for the execution thereof or to order any additional work to be done or any works not to be done and the Contractor will not be entitled, to any compensation for any increase/reduction in the quantities of work but will be paid only for the actual amount of work done and for approved materials supplied against a specific order.

- 10.2(2)(i) Unless otherwise specified in the special conditions of the contract, the accepted variation in quantity of each individual item of the contract would be upto 25% of the quantity originally contracted, except in case of foundation work (in which no variation limit shall apply). However, the rates for the increased quantities shall be as per sub- para (iii) below.
- (ii) The Contractor shall be bound to carry out the work at the agreed rates and shall not be entitled to any claim or any compensation whatsoever upto the limit of 25% variation in quantity of individual item of works.
  - (iii) In case an increase in quantity of an individual item by more than 25% of the agreement quantity is considered unavoidable, the same shall be executed at the following rates.
    - a). Quantities operated in excess of 125% but upto 140% of the agreement quantity of the concerned item, shall be paid at 98% of the rate awarded for that item in that particular tender;
    - b). Quantities operated in excess of 140% but upto 150% of the agreement quantity of the concerned item shall be paid at 96% of the rate awarded for that item in that particular tender;
    - c). Variation in quantities of individual items beyond 150% will be avoided and would be permitted only in exceptional unavoidable circumstances and shall be paid at 96% of the rate awarded for that item in that particular tender.
    - d) Variation to quantities of minor value items:.

The limit for varying quantities for minor value items shall be 100% (as against 25% prescribed for other items). A minor value item for this purpose is defined as an item whose original agreement value is less than 1% of the total original agreement value

- i). Quantities operated upto and including 100% of the agreement quantity of the concerned minor value item, shall be paid at the rate awarded for that item in that particular tender.
- ii) Quantities operated in excess of 100% but upto 200% of the agreement quantity of the concerned minor value item, shall be paid at 98% of the rate awarded for that item in that particular tender.
- iii) Variation in Quantities of individual minor value items beyond 200% will be avoided and would be permitted only in exceptional unavoidable circumstances and shall be paid at 96% of the rate awarded for that item in that particular tender.

## **11.0 INDEMNITY BOND**

### **i) PART PAYMENT**

- a. An Indemnity Bond to Indemnify this Administration against loss or damage of all the materials for which part payment is effected shall have to be executed by contractor in the manner specified by this Administration.
- b. When as the said contractor is entitled for PART PAYMENT for items in Schedule of Rate as per payment clause 5.0 of Annex-B as per conditions of contract on executing an Indemnity Bond against loss or damage for all the material for which part payment has been arranged.
- c. The said contractor hereby agreed to hold the materials for which part payment is payable as per condition of the agreement, entrusted to him and his possession in trust for the ICF Administration as their property until such time as the works entrusted to him are completed and handed over back to the representatives of the ICF Administration as per the terms of the Agreement.
- d. The said contractor further agrees to hold the ICF – Administration harm less and free from all liabilities for all losses, damages, etc., arising from any cause, whatsoever to the material while in his possession, and further under takes to indemnify and reimburse the ICF Administration to the extent of loss or damage caused to the materials or any loss or any claims to the ICF – Administration in respect of the said material while in possession of the contractor.

### **ii) GST**

Contractor hereby agrees to indemnify and hold harmless the Indian Railways from and against any and all losses, including loss on account of Input Tax Credit and all losses incurred by the Indian Railways relating to or arising out of or in connection with any actual or threatened claim, legal action, proceedings, prosecution or inquiry by or against the Indian Railways arising out, directly or indirectly, of failure by the contractor to comply with the provisions of GST and related laws, or based upon or arising from any failure by the Contractor

## **12.0 EXTENSION OF TIME WITH LIQUIDATED DAMAGE (LD) FOR DELAY DUE TO CONTRACTOR (17-B of IRGCC):**

- a. With liquidated Damage (LD): The time for the execution of the work or part of the works specified in the contract documents shall be deemed to be the essence of the contract and the works must be completed not later than the date(s) as specified in the contract. If the Contractor fails to complete the works within the time as specified in the contract for the reasons other than the reasons specified in Clause 17 and 17-A of IRGCC, the Railway may, if satisfied that the works can be completed by the Contractor within reasonable short time thereafter, allow the Contractor for further extension of time (Proforma at Annexure-VII) as the Engineer may decide. On such extension the Railway will be entitled without prejudice to any other right and remedy available on that behalf, to recover from the Contractor as agreed damages and not by way of penalty for each week or part of the week, a sum calculated at the rate of Liquidated Damages as decided by Engineer, between 0.05% to 0.30 % of contract value of the works for each week or part of the week.
- b. For the purpose of this Clause, the contract value of the works shall be taken as value of work as per contract agreement including any supplementary work order/contract agreement issued. Provided also, that the total amount of liquidated damages under this condition shall not exceed 5% of the contract value or of the total value of the item or groups of items of work for which a separate distinct completion period is specified in the contract.
- c. Provided further, that if the Railway is not satisfied that the works can be completed by the Contractor and in the event of failure on the part of the contractor to complete the work within further extension of time allowed as aforesaid, the Railway shall be entitled without prejudice to any other right or remedy available in that behalf, to appropriate the contractor's Security Deposit and rescind the contract under Clause 62 of these Conditions, whether or not actual damage is caused by such default.

## **II. INSTRUCTIONS TO CONTRACTORS**

### **1.0. PROGRAMME OF WORK**

- a. Immediately on issue of letter of acceptance of this tender, the contractor should submit a programme of work showing the activities work wise for completing the whole work within the stipulated period of completion, in consultation with the Dy. CEE/M. If so desired by the Dy. CEE/M., the contractor shall submit further programme from time to time taking into consideration the latest progress achieved till then.
- b. This is to reiterate that the Railway reserves the right of terminating the contract at any stage of review of the progress under (a) above, if the above agreed programme (s) are not adhered to within the margin of 10 % as envisaged in Clause 62 (I) (viii) of the General Conditions of Contract.
- c. Non submission of the programme as envisaged in (a) above shall entitle Railway to terminate the contract under clause 62 of the General Conditions of Contract.
- d. The Contractor shall start the work within 15 days from the date of issue of letter of Acceptance.
- e. It is the responsibility of the contractor to get all his doubts clarified about all the points mentioned in this specification. If required he may visit the site duly fixing a prior appointment with Dy. CEE/M

## **2.0. EMPLOYMENT OF QUALIFIED SUPERVISOR FOR THE EXECUTION OF WORK:**

2.1 In terms of provisions of new Clause 26A.1 to the General Conditions of Contract (GCC), contractor shall also employ following Qualified Engineers during execution of the allotted work:

- a). One Qualified Graduate Engineer when cost of work to be executed is Rs.200 lakh and above, and
- b). One Qualified Diploma Holder Engineer when cost of work to be executed is more than Rs. 25 lakh, but less than Rs. 200 lakh.

2.2 Further, in case the contractor fails to employ the Qualified Engineer, as aforesaid in clause 2.1 above, he, in terms of provisions of Clause 26A.2 to the General Conditions of Contract, shall be liable to pay an amount of Rs. 40,000 and Rs. 25,000 for each month or part thereof for the default period for the provisions, as contained in Para 2.1(a) and 2.1(b) above respectively.

## **3.0 CONTRACT LABOUR**

The contractors attention is drawn to Clause 55A of the General conditions of contract regarding provision of contract labour (Regulation and abolition Act 1970) and the contractor shall comply with the provision in all respects to the extent applicable under this contract and shall face consequences at his risk and responsibilities for any lapses on his part.

**4.0 SHRMIK KALYAN PORTAL:** The following instructions given for Updating of “ShramikKalyan Portal” vide clause 55-C of IRGCC for all the tenders irrespective of tender value:

- (i) Contractor is to abide by the provisions of Payment of Wages act & Minimum Wages act in terms of clause 54 and 55 of Indian Railways General Condition of Contract. In order to ensure the same, an application has been developed and hosted on website ‘[www.shramikkalyan.indianrailways.gov.in](http://www.shramikkalyan.indianrailways.gov.in)’. Contractor shall register his firm/company etc. and upload requisite details of labour and their payment in this portal. These details shall be available in public domain. The Registration/ updation of Portal shall be done as under:
  - (a) Contractor shall apply for onetime registration of his company/firm etc. in the Shramikkalyan portal with requisite details subsequent to issue of Letter of Acceptance. Engineer shall approve the contractor’s registration in the portal within 7 days of receipt of such request.
  - (b) Contractor once approved by any Engineer, can create password with login ID (PAN No.) for subsequent use of portal for all LoAs issued in his favour.
  - (c) The contractor once registered on the portal, shall provide details of his Letter of Acceptances (LoA) / Contract Agreements on shramikkalyan portal within 15 days of issue of any LoA for approval of concerned engineer. Engineer shall update (if required) and approve the details of LoA filled by contractor within 7 days of receipt of such request.
  - (d) After approval of LoA by Engineer, contractor shall fill the salient details of contract labours engaged in the contract and ensure updating of each wage payment to them on shramikkalyan portal on monthly basis.
  - (e) It shall be mandatory upon the contractor to ensure correct and prompt uploading of all salient details of engaged contractual labour & payments made thereof after each wage period.
- (ii) While processing payment of any ‘On Account bill’ or ‘Final bill’ or release of ‘Advances’ or ‘Performance Guarantee / Security deposit’, contractor shall submit a certificate to the Engineer or Engineer’s representatives that “I have uploaded the

correct details of contract labours engaged in connection with this contract and payments made to them during the wage period in Railway's Shramikkalyan portal at 'www.shramikkalyan.indianrailways.gov.in' till \_\_\_\_ Month, \_\_\_\_ Year."

#### **5.0 ISSUE OF I.D CARD FOR CONTRACT LABOUR:**

Contractor has to engage only Police verified Pvt. Labour / Pvt Employee. If any new person (other than already verified) to be engaged by contractor he has to submit proof of police verification application for issuing a "Temporary permission" like present permit system. However contractor has to arrange PV report within permissible period i.e. one month for person from Tamilnadu and three months for persons from other states.

#### **6.0 Provisions of "The Building and Other Construction Workers (Regulation of Employment and Conditions of Service) Act, 1996" and "The Building and Other Construction Workers' Welfare Cess Act, 1996":**

*(vide clause 55-D of IRGCC)* The tenderers, for carrying out any construction work, shall get themselves registered with the Registering Officer under Section-7 of the Building and Other Construction Workers Act, 1996 and rules made thereto by the concerned State Govt., and submit certificate of Registration issued from the Registering Officer of the concerned State Govt. (Labour Dept.). The Cess shall be deducted from contractor's bills as per provisions of the Act.

#### **7.0 ENTRY PERMITS**

- a. The contractor shall obtain revised Entry Permit and following work Permits as required, introduced with effect from 15.6.09, vide CWE/Shell/ICF Procedure Order No. 03 dt.6.6.2009.

##### **Revised Entry Permit**

**Permit to work** at Height to avoid fall of person or tools (Only to approach to the work area at height above 2 M)

**Hot work permit** for Welding Gas Cutting, use of open flames Etc.,

**Excavation Permit.**

- b. The above permits shall be available with the contractor or his supervisor of the work site and shall be produced on demand by the site supervisor and any other authority of this Administration.

#### **8.0 INSTRUCTIONS FOR EXECUTION OF WORK**

- a. The Contractor shall ensure that their work shall not affect the regular coach production of the factory.
- b. The Contractor shall make his own transport arrangements for drawing any materials from construction Stores to site, and for moving the items if any from site to Construction stores situated inside Shell Factory.
- c. The Contractor shall be solely responsible for the orderly conduct of his authorized persons as well as labourers within ICF premises and at work place.
- d. The contractor shall be responsible to see that the work executed by him does not in any way infringe or damage the existing structures or other works in the area. The contractor is liable to take responsibility and rectify for the damage if any caused to the ICF property during the execution of their work.
- e. **The contractor shall be responsible for any damage to all materials in his custody till the work is completed and finally handed over to this administration.**

- f. Safety accessories like helmets, belts, safety boots, Hand Gloves, Goggles and other safety items shall be used by the contractor while executing the work.
- g. All the tools and plants such as welding sets, crimping tools, ladders, safety equipments and other electrical tools required for this work shall be arranged by the contractor at their own expense including the cost of conveyance to adhere to the target date of completion. The administration will not be responsible for inadequacy of tools and plants brought by the contractor and no claim on this ground is admissible.
- h. Departmental supply of materials shall be transported by the contractor at his own expense. Necessary fabricating, cutting, welding, bending of structural steel to required size shall be done by the contractor at his expense.
- i. Railway administration shall not be responsible for safety of the staff of the contractor and hence the personnel shall not be liable for any compensation arising out of accidents while executing the work.
- j. Power shut down required by the contractor, shall be intimated to the SSE concerned in writing at least one week in advance and plan for executing the work. This administration is not responsible for delay in the execution of the work due to the delay in taking power shut down.
- k. The contractor shall clear the work spot free from all unwanted materials like debris, scrap etc., when the work is completed in all respects.

### **III. SAFETY NORMS & EMS REQUIREMENTS**

#### **1.0 SAFETY NORMS TO BE FOLLOWED BY THE CONTRACTOR**

##### **Safety clause as per CWE/Shell's letter No.MS.231/ACC/10 dt.23.02.2000.**

- a. The contractor should take all precautionary measures in order to ensure the protection of his own personnel moving about or working on the railway premises, and should conform to the rules and regulations of the Railway.
- b. The Contractor should abide by all railway regulations in force from time to time and ensure that the same are followed by his representatives, agents or sub-contractors or workmen.
- c. The contractor should ensure that unauthorized, careless or inadvertent operation of installed equipment which may result in accident to staff and / or damage to equipment does not occur.
- d. The Contractor should indemnify and keep the purchaser indemnified and harmless against all actions, suits, claims, demands costs charges or expenses arising in connection with any accident, death or injury, sustained by any person or persons within the railway premises and any loss or damage to railway property sustained due to the acts or omissions of the contractor irrespective of whether such liability arises under the workmen's compensation act or the fatal accidents act or any other statute in force from time to time.

#### **2.0 EMS REQUIREMENTS**

- a. The contractor shall ensure that all his workmen wear PPEs commensurate with the severity of work.
- b. The contractor shall ensure industrial safety methods in executing his work at ICF.
- c. The contractor shall ensure that all wastes generated by his activities / work are moved to the respective dump sites or taken for re-cycling at ICF.
- d. The contractor has to give prior information whether any hazardous chemical is used in his work and if so, the operational control to be exercised.
- e. The contractor has to ensure that all his material handling equipments / transport vehicles are emission tested.

- f. The contractor has to ensure that his activities are in tune with the ICF EMS Policy (to be incorporated as part of Contract)
- g. The contractors' staff must be aware of contents of MSDS in respect of chemicals / materials (if any).
- h. The contractors' staff shall be competent to operate emergency appliances like fire extinguishers.
- i. The contractors' staff shall be competent in the areas wherein the contract is awarded eg. to operate ETPs at ICF by evaluating through skill matrix by concerned official

### **3.0 SAFETY, HEALTH AND ENVIRONMENTAL INSTRUCTIONS (REF: CWE's Letter No. Safety Cell/RCW/02 dt.30.06.2008.)**

#### **3.1 SAFETY & HEALTH**

1. The Factories Act – 1948 and Tamil Nadu Factories Rules - 1950 & Contract Labour (Regulation & Abolition) Act, 1970 are to be followed.
2. Adequate and appropriate tools shall be issued.
3. All instrument used for the work is to be complied with Indian Electricity rules.
4. The instruments are used to be conformed to Indian Standards.
5. Staffs under your control should wear the personal protective equipments as per working condition to prevent injuries.
6. Suitable ladders/scaffoldings are to be used for climb up and working at height.
7. Ensure adequate lighting at work place.
8. Contractor should follow the terms and conditions/instructions of ICF from time to time.
9. Activities other than the specified activities as per the contract clauses, which are assigned to you, are not permitted at our premises.
10. Ensure the Suitable guards are provided to the hand operating machine.
11. Suitable lifting machineries and tackles are to be used to handle the materials.
12. Any loss incurred to ICF because of your activities shall be charged on your account.
13. The equipments & materials stored at our premises are on your own risk.
14. Before start of work, proper shut down (if necessary) is to be undertaken for safety.
15. Before start of any work, appropriate Work Permits shall be obtained.
16. Off cuts and wastes generated during the course of your work, must be suitably disposed identified areas.
17. The renewal of permit will be issued only on the basis of performance of compliance of the said rules, regulations, conditions and safety norms.
18. The contractor shall engage qualified supervisors at the work site whenever men are engaged for work.
19. First aid box with adequate medicine are to be provided in the work area.
20. In case of any accident to the contract staff, the contractor should inform to the CSO/Shell & CSO/Fur. through department concerned within one hour.
21. Disobeying or not following the conditions / precautions / procedures shall result in penalty. In serious cases, stoppage of work or cancellation of permits may be done. Stopping of the work are empowered by the Safety Officer, Chief Safety Officer, Factory manager and Occupier.
22. For accidents involving to your staff inside Shell & Fur factory, necessary compensation to the dependents of the staff and legal expenditure cost shall be borne on your account.
23. The display board containing the details of nature of work, maximum number of staff working per shift, period of work, site in charge name and phone number and main office phone numbers is to be placed at prominent place.
24. If total staff engaged by you on any day of the contract period is 20 or more, you have to register with Central Labour Commissioner at Shastri Bhavan and obtain license.
25. Staffs under your control are to be insured during the work period.

26. Registers in Form XIII, XVI, XIX, and XVII as per contract labour act shall be maintained.
27. Employment card in Form XIV should be issued to all work men by the contractor.
28. The payment of wages shall be made as per Minimum wages Act, and shall be witnessed by ICF nominated Supervisors.
29. Usage of LPG cylinder in the factories (both Shell & Fur) is prohibited for industrial activities. Industrial LPG cylinders shall only be allowed if accompanied by a certificate from gas companies about the end use for which it is issued.

### **3.2 ENVIRONMENT**

- a. ICF is an ISO 14001/2004 certified Factory. All activities shall be carried out as per the Environment Protection Act & Rules.
- b. Handling, storage & use of any chemicals and Haz. waste shall be carried out as per conditions laid down by TNPCB (Tamil Nadu Pollution control Board). Any clarification shall be made with contract executing officer & Safety Cell.
- c. Spillage of Hazardous materials, chemicals and oil shall be strictly avoided; in case of any leakage /spillage, it should be cleaned immediately.
- d. Any waste materials should not be burnt inside the Factory.
- e. Any open fire or smoke noticed by the contractor or his men, should be informed immediately to the Fire Fighting crew through telephone numbers FIRE Fighting CREW: 46565 (Railway phone) Firefighting Contractor: 9841098419, 9841269727 (cell).

### **3.3 PENALTY FOR NON COMPLIANCE OF SAFETY, HEALTH AND ENVIRONMENTAL INSTRUCTIONS**

- a. In case any Unsafe conditions noticed that could have led to grievous injury to the contract labour, a minimum penalty of Rs 5,000/- per person shall be imposed by ICF administration to the contractor. However, if multiple violation of Safety instructions are noticed, the amount could be higher
- b. Recurrence on third occasion for the same contract would result in penalty of Rs.50,000/-(Fifty thousands) and termination of contract.

**\*\*\* End of Document \*\*\***