

EXPLANATORY NOTE

EXPLANATORY NOTES TO BILL OF QUANTITIES FOR "AUGMENTATION OF POWER SUPPLY BY PROVISION OF COMPACT SUB STATION CAPACITY 2X500 KVA AT UTS SUBSTATION UNDER JURISDICTION OF DY.CEE/COLONY."

GENERAL

These explanatory notes are for guidance of field staff. Each works has its own particular requirements. Engineer In-charge will be responsible for successful execution of work as per technical specifications.

- (i) All Electrical works should comply with Indian Electricity Act 2003 and Indian Electricity Rules 1956.
- (ii) All Electrical installations work shall confirm to relevant safety code to practice, guide for safety procedures in electrical works shall be observed.
- (iii) All components used in installation shall be of appropriate ratings of voltage, current and frequency.
- (iv) All minor items viz. hardware items, nuts & bolts, screws foundation bolts, termination lugs for electrical connections clamps etc. as required and necessary for proper working of the equipment shall be deemed to have been included in the tender, whether such items are specifically mentioned in the tender documents or not.

Schedule item No. 1:-In this item price shall cover the cost of Supply, installation, testing and commissioning of 1 x 500 KVA 11/0.415 KV, 500 KVA dry type Transformer (OFTC) Compact Substation outdoor duty, plinth mounted type complete with HT Section Comprising of 1 No. 11KV 3-way RMU (3 Nos. VCB). LT section Incommer - ACB 800A FP Electrical Draw out type 50KA- 1 No, Incomer Change over switch 800 Amp, Bus Coupler- ACB 800A FP Electrical Draw out ACB 50KA - 1No, Outgoing - MCCB 400A-3 Nos., MCCB 250A FP Manual Fixed Type- 5 Nos, CSS enclosure should be duly type tested for internal Arc Test by CPRI (21 KA for 1Sec.) and as per CEE/NER Spec No.CEE/CSS/17/June -2017 with latest Amendment. **(with civil work as making foundation, proper fencing etc complete in all respect) shall be inspected at OEM's premises by the RITES.** Cost for the inspection shall be borne by the contractor. Both CSS and D.G. set should be mechanically & electrically interlocked and coupler so that load of one CSS can be shifted to other CSS in case of failure of one CSS and in case of failure of both CSS the load can be shifted to D.G. set. Interlocking should be capable to isolate anyone of VCB in case of third VCB is made ON by mistake.

Schedule item No. 2:-In this item price shall cover the cost of laying of one number LT/HT cable open/air with clamping arrangement as per site requirement complete in all respect concerning to IS: 1255:1983, including end terminations with Aluminium crimping socket/lugs testing and commissioning as required. **(L.T./H.T. cable will be supplied by the Railway)**

Schedule item No. 3:-In this item price shall cover the cost of laying of one number additional LT/HT cable open/air with clamping arrangement as per site requirement complete in all respect concerning to IS: 1255:1983, including end terminations with Aluminium crimping socket/lugs testing and commissioning as required. **(L.T./H.T. cable will be supplied by the Railway)**

Schedule item No. 4:- In this item price shall cover the cost of excavation of cable trench in all types of soil up to depth of one meter and width of 400 mm and refilling the trench complete in all respect.

Schedule item No. 5:- In this item price shall cover the cost of Laying of LT cable through Double walled corrugated (DWC) pipe/high density Polthelene pipe complete in all respect at a depth of not less than 1 mtr. the ground level as required complete in all respect concerning to IS: 1255:1983.

Schedule item No. 6:- In this item price shall cover the cost of supply of Double walled corrugated (DWC) pipe (Elex/Telerex/Optirex or similar) for under ground power/communication/signal/OFC/protection with IS: 14930 part-II mark on duly printed at every one meter interval it along with the socket/coupler and T joint with "IP 67" protection for coupling wherever required. The DWC pipe shall be rodent proof and fire resistant and size of outer Dia 120 mm.

Schedule item No. 7:- In this item price shall cover the cost of supply of Double walled corrugated (DWC) pipe (Elex/Telerex/Optirex or similar) for underground power/communication/signal/OFC/protection with IS: 14930 part-II mark on duly printed at every one meter interval it along with the socket/coupler and T joint with "IP 67" protection for coupling wherever required. The DWC pipe shall be rodent proof and fire resistant and size of outer Dia 160 mm.

Schedule item No. 8:- In this item price shall cover the cost of Supply of 1.5" high density Polthelene pipe with leak free, corrosion resistant, ductile etc and at a depth of not less than 1 mtr. the ground level as required complete in all respect as per concerning to IS: 1255:1983.

Schedule item No. 9:- In this item price shall cover the cost of supply and making outdoor end termination with heat shrinkable jointing kit conforming to IS:13573/1992 (latest version) complete with all accessories including aluminium lugs suitable for 3 core 120 sq. mm HT XLPE aluminium conductor cable of 11 KV (Earthed) grade complete in all respect as required.

Schedule item No. 10:- In this item price shall cover the cost of Supply & laying of ISI marked Galvanised Steel Tube (Plain ended). CLASS: Mediam, NOMINAL BORE SIZE 80 mm conforming to IS: 1239 PT-I, 2004 or latest as per site requirement.

Schedule item No. 11:- In this item price shall cover the cost of Supply,fixing & grouting of Cable route marker on stone as per attached Drg. No.DY.CEE/W/LJN/2011/01 complete in all respect.

Schedule item No. 12:- In this item price shall cover the cost of Supply and making Maintenance free earthing arrangement, Length of Electrode 3000 mm O shell dia 50 mm, O shell thickness 3.25 mm, Inner shell dia = 25 mm, Inner shell thickness 3.25 mm,Terminal size 30 x 10/12 x 12. Earthing will be as per CEE Specification No.CEE/ Maintenance free earthing/July 2009 including Amendement No.1 or Latest complete in all respect as per site requirement. (All material will be supplied by the Contractor).

**Dy.CEE/Colony
N.E. Railway, Gorakhpur**