

| BILL OF QUANTITY |          |                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                |                   |
|------------------|----------|---------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|-------------------|
| Name of Project  |          | 400/110kV Substation Thappagundu                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                |                   |
| Name of work :   |          | CONSTRUCTION OF RCC FOUNDATION FOR TOWERS, EQUIPMENT,LIGHTNING MAST, TRANSFORMER ETC. |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                |                   |
| Sl. No.          | Quantity | Unit                                                                                  | DESCRIPTION OF WORK                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Unit Rate (Rs) | Total Amount (Rs) |
| 1 a              | 8970     | m3                                                                                    | Earth work excavation in stiff clay, stiff black cotton, red earth,shales,murram gravel,stoney earth and earth mixed with small size boulders and hard gravelly soil and depositing on bank wih initial lead of 10m and lift of 2m etc., complete.                                                                                                                                                                                                                                                             |                |                   |
| b                | 7200     | m3                                                                                    | Earthwork excavation for foundation in soft disintegrated rock not requiring blasting with lead and lift etc., complete.                                                                                                                                                                                                                                                                                                                                                                                       |                |                   |
| c                | 900      | m3                                                                                    | Earthwork excavation for foundation in medium rock and dense medium rock not requiring blasting including all lead and lift etc complete.                                                                                                                                                                                                                                                                                                                                                                      |                |                   |
| d                | 900      | m3                                                                                    | Earthwork excavation for foundation in hard rock including blasting / hammer drilling with jack hammer using compressor ,all lead and lift etc. complete.                                                                                                                                                                                                                                                                                                                                                      |                |                   |
| 2                | 574      | m3                                                                                    | Plain cement concrete M 10 using 12 to 20mm (machine crushed) hard broken stone without form work including cost of all materials, labour, lead lift etc complete."                                                                                                                                                                                                                                                                                                                                            |                |                   |
| 3                |          |                                                                                       | RCC 1:1.5:3 for raft and pedestal etc.using 12 to 20mm down graded HBG metal including cost of materials,labour lead,lift form work etc.                                                                                                                                                                                                                                                                                                                                                                       |                |                   |
| a                | 3374     | m3                                                                                    | For raft                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                |                   |
| b                | 4356     | m3                                                                                    | For pedestals                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                |                   |
| 4 (a)            | 200      | MT                                                                                    | Supplying,fabricating and placing in position of steel reinforcement including cost of steel,binding wire,labour for cutting,bending and tying in position etc. complete. Reinforcement steel to be procured from SAIL, TISCO, IISCO, RINL, Jindal Steel only.                                                                                                                                                                                                                                                 |                |                   |
| (b)              | 735      | MT                                                                                    | Fabricating and placing in position of steel reinforcement including cost of binding wire,labour for cutting,bending and tying in position etc. complete. Reinforcement steel shall be supplied by BHEL free of cost as per norms indicated in conditions of contract. The rate quoted against this shall deemed to be inclusive of cost against all activities required including transportation of material from (SAIL, TISCO, IISCO, RINL, Jindal Steel or rerollers approved by main producers) stockyard. |                |                   |

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|----|-------|-----|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|
| 5  |       |     | Assembling of templates and fixing the foundaion bolts in position without any tilt until completion of concrete,checking the alignment for various structures including cost of template, labour,lead lifts etc complete                                                       |  |  |
| a  | 181   | Nos | For Towers and lightning mast                                                                                                                                                                                                                                                   |  |  |
| b  | 938   | Nos | For other equipments                                                                                                                                                                                                                                                            |  |  |
| 6  |       |     | Fabricating,galvanising & supplying of foundation bolts manufactured with EN 8 steel of various sizes as per drawing with 3 Nos GI nuts including welding a plate of size 100x100x12mm thick at the bottom of bolt including cost of materials, labour, lead lift etc. complete |  |  |
| a  | 576   | Nos | M 32-700mm long ( For TA column)                                                                                                                                                                                                                                                |  |  |
| b  | 416   | Nos | M 36-1200mm long (For TB column)                                                                                                                                                                                                                                                |  |  |
| c  | 160   | Nos | M 56-1400mm long (For TC column)                                                                                                                                                                                                                                                |  |  |
| d  | 864   | Nos | M56-1750mm long-lightning mast                                                                                                                                                                                                                                                  |  |  |
| e  | 864   | Nos | M32-900mm long                                                                                                                                                                                                                                                                  |  |  |
| f  | 160   | Nos | M36-1100mm long                                                                                                                                                                                                                                                                 |  |  |
| g  | 496   | Nos | M42 -1300 MM long                                                                                                                                                                                                                                                               |  |  |
| h  | 864   | Nos | M28-900mm long- Isolater                                                                                                                                                                                                                                                        |  |  |
| 7  |       |     | Fabricating,galvanising & supplying of foundation bolts manufactured with steel of various sizes as per drawing with 3 Nos GI nuts including welding a plate of size 100x100x12mm thick at the bottom of bolt including cost of materials,labour,lead lift etc., complete       |  |  |
| a  | 1748  | Nos | M 20- 600 mm long – CT,LAS,CVT,WT,support                                                                                                                                                                                                                                       |  |  |
| 8  | 9366  | m2  | Refilling the sides of plinth with excavated good earth, excavated from the pits for structures etc, and consolidation as per standards and specification etc., complete.                                                                                                       |  |  |
| 9  | 22016 | m2  | Removing and transport of excavated earth and dumping in low lying area within sub station premises including cost of labour, lead, lift, etc. complete                                                                                                                         |  |  |
| 10 | 36    | Nos | Providing necessary pocket holes in transformer plinth for accessories supports etc complete                                                                                                                                                                                    |  |  |
| 11 | 1312  | Kgs | Supply and fixing of rails in transformer plinth including cost of material and fixing charges etc complete                                                                                                                                                                     |  |  |
| 12 | 2     | Nos | supply and erection of 2 HP Monoblock pump for sump to drain out water including cost of suitable GI suction and delievery pipes, cover for motor, wiring, all labour, lead, and lift etc., complete.                                                                           |  |  |
| 13 | 200   | m3  | Filling with pebbles of size 60 mm to 40 mm in soak pit around transformer plinth including cost of all labour lead and lift etc. complete.                                                                                                                                     |  |  |
| 14 | 12000 | m2  | Plastering with CM 1:3 12 mm thick for wall sides including cost of all materials labour etc complete                                                                                                                                                                           |  |  |
| 15 | 12000 | m2  | Painting with 2 coats of approved colour cement paint over priming coat of white cement including cost ncluding cost of all materials, labour, lead, lift etc complete for exterior faces of walls.                                                                             |  |  |
|    |       |     | <b>Total Value</b>                                                                                                                                                                                                                                                              |  |  |