

**BILL OF QUANTITIES CUM PRICE SCHEDULE****Name of Project** :765kV/400kV AGRA UPPTCL (NEW) SUBSTATION**Name of Work** : PILING WORK

| S.No. | Description of Item                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Unit | Quantity | Unit Rate (Rs) | Amount (Rs) |
|-------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|----------|----------------|-------------|
| 1     | Boring, providing and installing bored cast-in-situ reinforced cement concrete piles of Design Mlx Grade M-25 ( Minimum cement content of 400Kg/cu.m.) of specified diameter & length below the pile cap, to carry a safe working load not less then specified, excluding the cost of steel reinforcement but including the cost of boring, with bentonite solution and temporary casing of appropriate length for setting out and removal of same and the length of the pile to be embedded in the pile cap etc. all complete , including removal of excavated earth with all lifts and leads ( Length of pile for payment shall be measured upto bottom of pile cap.). The item shall include routine test on 1.5% of total piles. |      |          |                |             |
| i)    | 450 mm dia piles                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | RM   | 3650     | 2154.40        | 7863560.00  |
| ii)   | 600 mm dia piles                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | RM   | 5950     | 3310.9         | 19699855.00 |
| 2     | Initial Vertical load testing of single pile in accordance with IS 2911 (Part IV) including installation of loading platform and preparation of pile head or construction of test cap and dismantling of test cap after test etc. complete as per specification & the direction of Engineer in-charge.                                                                                                                                                                                                                                                                                                                                                                                                                               |      |          |                |             |
| i)    | 450 mm dia piles                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Nos. | 2        | 38561.8        | 77123.60    |
| ii)   | 600 mm dia piles                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Nos. | 2        | 46808.45       | 93616.90    |
| 3     | Initial Lateral load testing of single pile in accordance with IS Code of practice IS : 2911 (Part IV) for determining safe allowable lateral load on pile :                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |      |          |                |             |
| i)    | 450 mm dia piles                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Nos. | 2        | 17422.5        | 34845.00    |
| ii)   | 600 mm dia piles                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Nos. | 2        | 27295.2        | 54590.40    |
| 4     | Initial Uplift load testing (Pull out test) of single pile in accordance with IS Code of practice IS : 2911 (Part IV) for determining safe allowable Uplift load on pile :                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |      |          |                |             |
| i)    | 450 mm dia piles                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Nos. | 2        | 17422.5        | 34845.00    |
| ii)   | 600 mm dia piles                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Nos. | 2        | 27295.2        | 54590.40    |
| 5     | Integrity testing of Pile using Low Strain/Sonic Integrity Test/Sonic Echo Test method in accordance with IS 14893 including surface preparation of pile top by removing soil, mud, dust & chipping lean concrete lumps etc. and use of computerised equipment and high skill trained personal for conducting the test & submission of results, all complete as per direction of Engineer-in-charge                                                                                                                                                                                                                                                                                                                                  | Nos. | 20       | 696.9          | 13938.00    |

| S.No. | Description of Item                                                                                                                                                                                                                                                                                                       | Unit | Quantity | Unit Rate (Rs) | Amount (Rs)       |
|-------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|----------|----------------|-------------------|
| 6     | Steel reinforcement -Cold twisted bars /TMT/HCR                                                                                                                                                                                                                                                                           |      |          |                |                   |
| (a)   | Including supply (To be procured from SAIL/RINL/TISCO/IISCO) and straightning, cutting, bending, binding (i/c cost of binding wire), placing in position, etc., all labour & material, complete.                                                                                                                          | kg   | 20000    | 62.25          | 1245000.00        |
| (b)   | Excluding supply but including transporting from SAIL stockyard to site, straightening, cutting, bending, binding, (i/c cost of binding wire), placing in position, etc., all complete as per specification and directions of Engineer-in-Charge. (Reinforcement shall be supplied by BHEL as per conditions of contract) | kg   | 250000   | 10.50          | 2625000.00        |
|       |                                                                                                                                                                                                                                                                                                                           |      |          | Total =        | <b>31796964.3</b> |

**NOTE:**

- 1** Reinforcement steel shall be supplied by BHEL free of cost as per norms indicated in conditions of contract. The rate quoted against Item no.: 6(b) above shall be deemed to be inclusive of cost against all activities required including transportation of material from SAIL stockyard to site.