

**DELHI METRO RAIL CORPORATION****KOCHI METRO PROJECT**

**NAME OF WORK :- SHIFTING/RAISING/CONVERTING TO UNDER GROUND CABLE OF EHT LINES  
CROSSING KOCHI METRO ROUTE FOR MAINTAINING STATUTORY CLEARANCE. -**

**PACKAGE 5 -**

**FOR CROSSING LOCATIONS NEAR CHAINAGE 5282,5492,5605, AND 8006**

**(CONTRACT NO: KE-5)**

**TENDER SCHEDULE (REVISED)**

Sl No.	Description	Unit	Quantity	Rate Rs.	Amount
<b>SCHEDULE A -SUPPLY OF MATERIALS</b>					
1	Supply at site of Tower Parts including earthing set, Bolt and nut, Name plate, phase plate, Danger Board, anti-climbing devices etc.	MT	119.70	52866	6328060.20
2	Supply at site of ACSR DOG Conductor	Km	3.60	44266	159357.60
3	Supply at site of ACSR WOLF Conductor	Km	10.84	70790	767363.60
4	Supply at site of $7/9$ SWG GI, earth wire	Km	2.42	25600	61952.00
<b>TOTAL OF SCHEDULE A</b>					<b>7316733.40</b>
<b>SCHEDULE B -LINE CONSTRUCTION</b>					
1	Erection of tower super structure above ground level including erection of normal and special hill side extension members where ever necessary, providing tower accessories like phase, danger and number plates, bird guards, anti-climbing devices etc. complete	MT	104.15	4089	425869.35
2	Dismantling existing tower super structure including extensions and stacking the structures as per directions	MT	45.39	2044	92777.16
3	Dismantling existing earth wire from the tower including transportation, loading, unloading and stacking the conductor as per directions	Km	3.35	2679	8974.65

4	Dismantling existing six line ACSR DOG conductor from the tower including transportation, loading, unloading and stacking the conductor as per directions	Km	0.80	17829	14263.20
5	Dismantling existing six line ACSR WOLF conductor from the tower including transportation, loading, unloading and stacking the conductor as per directions	Km	2.55	19072	48633.60
6	Construction of bored cast-in-situ DMC piles(direct mud circulation piles) of 600mm dia and 1000 mm dia, to the required depth in soil, soft rock and hard rock as instructed by the departmental officers at site but not less than 10 m in length from the existing ground level and moulded in reinforced cement concrete (M30) confirming to IS 456/1978 using 20mm hard blue granite broken stone and portland slag cement using heavy machinery tools and plants and other connected accessories required for DMC pile including all charges for making drain, removing mud to a distance of 150m jointing the reinforcement cage by welding before lowering, Construction of bentonite tank of size 7.5x4x1.5m and dividing it into two portions one for making solution of bentonite having relative density between 1.034 and 1.10 at all times and another for collecting bored mud mixed with bentonite during boring and allowing circulation of bentonite solution to help to bring bored mud outside, making elevated platform for concreting, including all labour charges, mobilization charges shifting all machineries to next locations as directed by the departmental officers at site.				
6a	(i) 600 mm dia piles	m	720.00	3286	2365920.00
6b	(ii) 1000 mm dia piles	m	240.00	6089	1461360.00
7	Conducting standard penetration test at site after reaching the required depth of boring by DMC method for all the piles in the tower locations	each locations	8.00	2254	18032.00
8	Providing reinforcement cages for piles using Tor steel(TMT Fe 415) as shown in drawing bent tied and welded firmly, duly providing laps, as per the directions of departmental officers at site including cost of reinforcement binding wire welding and transportation to the locations and all other incidental expenses . No payment for lap.	Qntl	212.00	6862	1454744.00

9	Providing pile cap using Reinforced Cement concrete (M35) using 20mm broken stone including watering , curing and cost of form working but excluding cost of reinforcement including earth work excavation in all classes of soil and depositing with lead up to 50 m and lift up to 1.5m including breaking clods, watering, ramming and sectioning of spoil bank etc. complete, Chipping and removing top of the RCC piles to lines and levels carefully, without damaging the remaining portions and removing the debris up to a distance of 150m, Cement concrete 1:4:8 mixture with 40mm hard blue granite broken stone for levelling course 10 cm thick in accordance with the specification including the cost of cement at site of work, all hire and labour for form work, watering, curing etc, complete	cub m	126.00	9378	1181628.00
10	Surveying for marking and pegging of tower locations at site as per the approved tower schedule, <b>stub setting</b> in correct alignment using template of all types of 66/110/220 kV DC towers in concrete foundation/ rock foundation including excavation, concreting and back filling and including grouting, anchoring etc. in the case of rock foundation and removing the stub setting template after the expiry of the predetermined time etc, complete, including Back filling of pits after stub setting with original excavated soil including consolidation and watering as per directions of the officers at site.	each location	8.00	4907	39256.00
11	Providing grade beam using Reinforced Cement concrete (M35) using 20mm broken stone including watering, curing and cost of form working etc. but excluding cost of reinforcement	cub m	41.00	7494	307254.00
12	Reinforced Cement Concrete M35 using 20mm broken stone including all charges for consolidation, watering, curing etc. complete but excluding cost of reinforcement for chimney	cub m	10.50	8052	84546.00
13	Reinforcement (Tor steel TMT FE 415) for R.C.C work bent, tied and placed in position including cost of all materials and labour for pilecap, chimney and grade beam.	Qntl	168.00	5568	935424.00

14	Providing pipe Earthing including charges for Excavation of earth pit of size 3 . 6 x 0.3 x 0.3 m including over excavation on account of sloping the banks and necessary hire for planks for filling of charcoal, Earthing of tower by means of a 50 mm dia, 3m long pipe and a double run 7/9 SWG galvanized steel wire or G.I tape including cost of charcoal , cost of pipes, steel wire or copper tape with connecting lugs, nuts, etc.	each	18.00	3571	64278.00
15	<b>Paving out, stringing and tensioning</b> as per standard of <b>six line 'ACSR DOG'</b> conductors including attaching insulator strings with arcing horns or rings on to the tower cross arms, clamping the conductor to the insulator strings using suspension clamps with armour rods and tension clamps, jumpering the conductors at tension points, jointing the conductors and pilot wire where ever necessary , installation of vibration dampers, hire charges of tractor and stringing tools, all hire and labour for protective trestle work, providing suitable back stays at the time of stringing , including supply of disc insulators, Double/Single Tension clamps, vibration dampers, midspan joints, repair sleeves,suspension clamps, etc as required, complete.	Km	0.80	40098	32078.40
16	<b>Paving out, stringing and tensioning</b> as per standard of <b>six line 'ACSR WOLF'</b> conductors including attaching insulator strings with arcing horns or rings on to the tower cross arms, clamping the conductor to the insulator strings using suspension clamps with armour rods and tension clamps, jumpering the conductors at tension points, jointing the conductors and pilot wire where ever necessary , installation of vibration dampers, hire charges of tractor and stringing tools, all hire and labour for protective trestle work, providing suitable back stays at the time of stringing , including supply of disc insulators, Double/Single Tension clamps, vibration dampers, midspan joints, repair sleeves,suspension clamps, etc as required, complete.	Km	2.55	305746	779652.30

17	Paving out stringing tensioning and tensioning as per standards of one 7/9 stranded steel earth wire including fixing the conductors on to the tower top using tension clamps and suspension clamps, jumpering the conductor's at tension points, jointing the conductor where ever necessary, erection of earth bonds, hire charges of tractor and stringing tools, all hire and labour for protective trestles, providing suitable back stays at the time of stringing, including supply all materials like tension clamp for earth with copper bond, etc. complete	Km	3.35	6043	20244.05
<b>TOTAL OF SCHEDULE B</b>					9334935

<b>SCHEDULE C -CIVIL WORKS</b>					
1	Earth work excavation in Hard soil and depositing with lead up to 50 m and lift up to 1.5 m including breaking clods, watering, ramming and sectioning of spoil bank etc. complete.	cub m	130.00	217	28210.00
2	Earth work excavation in Hard soil and depositing with lead up to 50 m and lift above 1.5 m up to 3.0 m including breaking clods, watering, ramming and sectioning of spoil bank etc. complete.	cub m	65.00	231	15015.00
3	Earth work excavation in ordinary rock and depositing with lead up to 50 m and lift above 1.5 m up to 3.0 m including breaking clods, watering, ramming and sectioning of spoil bank etc. complete.	cub m	65.00	341	22165.00
4	Earth work excavation in ordinary rock and depositing with lead up to 50 m and lift above 3m up to 4.5m including breaking clods, watering, ramming and sectioning of spoil bank etc. complete.	m3	44.00	434	19096.00
5	Cement concrete 1:4:8 mixture with 40mm hard blue granite broken stone for levelling course in accordance with the specification including the cost of cement and conveyance charges of cement to site of work, all hire and labour for form work, watering, curing etc, complete	m3	13.50	3284	44334.00
6	Cement concrete 1:21/4:33/4 mixture with 20mm hard blue granite broken stone for Tower Foot concreting in accordance with the specification including the cost of cement and conveyance charges of cement to site of work, all hire and labour for form work, watering, curing etc, complete	m3	26.50	5209	138038.50
7	Cement concrete 1:21/4:33/4 mixture with 20mm hard blue granite broken stone fortower foot concreting Stage 1 and 2 for 220 kV Tower in accordance with the specification including the cost of cement and conveyance charges of cement to site of work, all hire and labour for form work, watering, curing etc, complete	m3	7.00	5996	41972.00
8	Cement concrete 1:21/4:33/4 mixture with 20mm hard blue granite broken stone for encasing the stub 220 kV Tower in accordance with the specification including the cost of cement and conveyance charges of cement to site of work, all hire and labour for form work, watering, curing etc, complete	Cu m	4.00	5996	23984.00
<b>TOTAL FOR SCHEDULE C</b>					332814.50
<b>TOTAL FOR PART I</b>					<b>16984483</b>

