

ANNEXURE-II

BILL OF QUANTITY-CUM-PRICE SCHEDULE

Name of Project: 132kv switchyard at **Manipur.**

Name of Work : Civil works in switchyard.

S.No.	Description of Item	Quantity	Unit	Unit Rate(Rs)	Amount(Rs)
1	Earthwork in excavation over areas (exceeding 30cm in depth 1.5m in width as well as 10sqm on plan) including dewatering as necessary of rain water/subsoil seepage water and disposal of excavated earth upto 100m and lift upto 3.5m, disposed earth to be levelled and neatly dressed.				
(a)	All kinds of soil.	800	cum	101.85	81480
(b)	Ordinary rock.	20	cum	152.6	3052
2	Earthwork in excavation in foundation trenches or drains (not exceeding 1.5m in width as well as 10sqm on plan) including dewatering as necessary of rain water/subsoil seepage water and dressing of sides and ramming of bottoms, lift upto 3.5m, including getting out the excavated soil and disposal of surplus excavated soil as directed, within a lead of 100m.				
(a)	All kinds of soil.	600	cum	103.40	62040.00
(b)	Ordinary rock.	15	cum	162.65	1551.00
3	Filling available excavated earth (including rock) in trenches, plinth, sides of foundations, etc., in layers not exceeding 20cm in depth, consolidating each deposited layer by ramming and watering, lead upto 100m and lift upto 3.5m.	610	cum	45.70	27877.00
4	Excavating trenches of required width for pipes, cables, etc including excavation for sockets, and dressing of sides, ramming of bottoms, depth upto 3.0 m including getting out the excavated soil, and then returning the soil as required, in layers not exceeding 20cm in depth including consolidating each deposited layer by ramming,watering etc.and disposing of surplus excavated soil as directed within a lead of 100m.				
(a)	All kinds of soil				
4.1	Pipes, cables etc, not exceeding 80mm dia.	50	meter	70.45	3522.50
4.2	Pipes, cables etc. exceeding 80mm dia. but not exceeding 300 mm dia.	50	meter	115.05	5752.50
4.3	Pipes, cables etc. exceeding 300mm dia but not exceeding 600mm	5	meter	179.65	898.25

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5	Carriage & disposal of surplus excavated earth/rock beyond initial lead by mechanical means not necessarily all the times on pucca roads, including loading, unloading, dressing of excavated material, etc., complete as per specifications -.				
(a)	Lead upto 1 km.	826	cum	49.42	40820.92
6	Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering - All work upto plinth level.				
(a)	1:2:4 (1 cement : 2coarse sand : 4 graded stone aggregate 20mm nominal size	5	cum	3257.45	16287.25
(b)	1:3:6 (1 cement : 3 coarse sand : 6 graded stone aggregate 40mm nominal size	5	cum	2791.05	13955.25
(c)	1:4:8(1 cement : 4 coarse sand : 8 graded stone aggregate 40mm nominal size)	95	cum	2449.00	232655.00
7	Providing and laying in position machine batched, machine mixed and machine vibrated design mix cement concrete of specified grade for RCC structural elements excluding the cost of centering, shuttering, finishing and reinforcement including admixtures in recommended proportions (as per IS 9103) to accelerate, retrard setting of concrete, improve workability without impairing strength and durability. -as per direction of Engineer incharge. M25 gradeRCC by using 410 kg. of cement per cum of concrete. All work up to floor V level..				
(a)	All works (rafts, columns ,walls & plinth beams) upto level V.	419	cum	4147.40	1737760.60
8	Centering and shuttering including strutting, propping, etc., and removal of form for:				
(a)	Foundations, footings, bases of columns, etc., for mass concrete.	376	sqm	119.25	44838.00
(b)	Columns, Pillars, Piers, Abutments, Posts and Struts	463	sqm	238.40	110379.20
(c)	RCC walls at all levels (any thickness).	700	sqm	180.40	126280.00
8	Steel reinforcement -Cold twisted bars /TMT				
(a)	Including supply and bending, binding (i/c cost of binding wire), placing in position, etc., all labour & material, complete.	4000	kg	42.70	170800.00
(b)	Excluding supply but including bending, binding (i/c cost of binding wire), placing in position, etc., all labour & material, complete. (See Note No:1)	36000	kg	6.50	234000.00
9	Applying priming coat				

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(a)	With ready mixed red oxide zinc chromate primer of approved brand and manufacture on steel galvanised iron/ steel works.	5	sqm	12.65	63.25
10	Painting with synthetic enamel paint of approved brand and manufacture to give an even shade :				
	Two or more coats on new work	30	sqm	32.25	967.50
11	Structural steelwork welded in built up sections like edge protection angles/insert plates with lugs & framed work including providing, cutting, hoisting, fixing in position/ embedding in concrete and applying a priming coat of approved steel primer all complete.	3512	kg	46.35	162781.20
12	Steelwork welded in built up sections/framed work including providing ,cutting, hoisting, fixing in position and applying a priming coat of approved steel primer using structural steel etc., as required.				
	In gratings, ladders, railings,rails,mono rail , gates(pipe also) and similar works.	4000	kg	51.20	204800.00
13	Providing & fixing in position precast cement concrete trench covers, etc., at various elevations in all kinds of work including moulding, formwork, mixing, laying out, compacting and curing, storing, transportation, erection without damage, setting in position with cement and sand mortar, grouting etc all as per specs, drawings and directions of Engr-in-Charge but excluding the cost of reinforcement, inserts, edge angles, etc, and of following grade:				
	M25	45	cum	6000.00	270000.00
14	Providing and fixing (all dia & length) foundation bolts in position with help of proper templates including supply of templates ,nuts and washers all complete as per specs, drawings & directions of Engr-in-Charge	1080	kg	62.75	67770.00
15	Extra over Item above for providing galvanised bolts (Mass of zinc coating = 610gms/sqm), nuts & washer	1080	kg	8.00	8640.00
16	Fixing (all dia & length) foundation bolts in position with help of proper templates(template to be supplied by contractor) all complete as per specs, drawings & directions of Engr-in-Charge.Bolts to be provided by BHEL free of cost.	100	kg	7.00	700.00

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S.No.	Description of Item	Quantity	Unit	Unit Rate(Rs)	Amount(Rs)
17	Supplying and filling in plinth with Jamuna/local sand under floors including watering, ramming, consolidating and dressing complete.	22	cum	301.50	6633.00
18	Providing and laying non-pressure NP3 class (light duty) RCC pipes with collars jointed with stiff mixture of cement mortar in the proportion of 1:2 (1 cement: 2 fine sand) including testing of joints etc., complete.				
(a)	250mm dia. RCC pipe	20	RM	400.00	8000.00
(b)	300mm dia. RCC pipe	10	RM	600.00	6000.00
(c)	450mm dia. RCC pipe	5	RM	800.00	4000.00
19	Providing and placing in position suitable PVC water stops conforming to IS 12200 of Deep-Jyoti or equivalent for construction/expansion joints between two RCC members and fixed to the reinforcement with binding wire before pouring concrete etc. complete.				
	Serrated with central bulb(225mm wide,8-11mm thick)	25	meter	386.75	9668.75
20	Providing and laying stone aggregate in switch yard areas in 100mm thick layer using 40 mm aggregates size .Before laying the stone aggregates , the yard surface shall be treated with antiweed treatment all complete as per direction of Engineer in Charge. (The rate shall be inclusive of all materials ,labour,loading,unloading and surface preparation etc. required for aggregate laying and antiweed treatment).	4340	sqm	75.00	325500.00
21	Providing and fixing 3.0meter high GI chain link fencing including all allied activities, all complete as per approved drawing and direction of Engineer -in -charge .(Rates shall be inclusive of all items like angles,pipes, chainlink fence, barbed wire, toe wall ,PCC, etc all complete as per approved drawing) and as per customer's specification.	184	RM	2800.00	515200.00
22	Filling of approved materials i/c cost of materials, labour and equipment for handling, transportation, placing and compacting as required to the required density and to the required elevations as per specification, drawings and directions of Engineer-in-Charge.				
	Broken/crushed/non crushed stone of size 40 to 60mm for placing over transformer grating.	10	cum	800.00	8000.00

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S.No.	Description of Item	Quantity	Unit	Unit Rate(Rs)	Amount(Rs)
23	Grouting of block outs, pockets, foundations, bolts holes and underside of base plates with ready mixed grout or grout consisting of 2 parts by weight of sand, 1 part by weight of cement including approved plasticizer, non-shrink admixture, in the required proportion as recommended by manufacturer/Engineer, including placing, curing, cleaning, surface preparation, testing, etc. complete with labour, materials, equipment, handling, testing, etc. all complete as per specifications, drawings and instructions of the Engineer.	10	cum	10000.00	100000.00
24	Demolishing R.C.C work manually/ by mechanical means including stacking of steel bars and disposal/removal of unserviceable material from the pit withing 100 meter lead as per direction of Enineer-In charge.	500	Cum	537.55	268775
25	Demolishing brick work manually/by mechanical means including stacking of serviceable material and disposal/removal of unserviceable material from the pit within 100 mtr lead as per direction of Engineer -in charge.				
	In cement mortar	67	Cum	310.75	20820.25
26	Making pocket holes in existing RCC block of specified size by dimanting/ breaking of RCC block manually/ by mechanical means including stacking of steel bars and disposal/removal of unserviceable material from the pit withing 100 meter lead as per direction of Enineer-In charge.	25	Cum	3000	75000
				Sub-Total:	4977268.42
NOTE 1 Reinforcement steel shall be supplied by BHEL <u>free of cost</u> as per norms indicated in conditions of contract. The rate quoted against Item No: 8(b) above shall be deemed to be inclusive of cost against all activities required including transportation of material from nearest SAIL stockyard.					