

BILL OF QUANTITY- CUM - RATE SCHEDULE

Name of Project

: 400kV Substation Extension at Udumalpet.

Name of Work

: Civil Works of Yard

S.NO	Description of Item	Unit	Quantity	Unit Rate (Rs)	Amount (Rs)
1	Carriage of surplus excavated earth beyond initial lead of 50m by mechanical transport not necessarily all the time on pucca roads, for the following additional leads including loading, unloading, dressing of excavated material etc. completed as per specifications lead upto 1.0 km.				
(a)	Earth	cum	1775	34.77	61716.75
2	Earth work in excavation over areas (Exceeding 30 cms in depth, 1.5 m in width as well as 10 sq mtrs on the plan) including disposal of the excavated earth, lead upto 100 m and lift upto 3.5 m, disposed earth to be levelled and neatly dressed:				
(a)	All kinds of soil	cum	5000	91.50	457500.00
3	Earthwork in excavation in foundation trenches or drains (not exceeding 1.5m in width or 10 sqm on plan) including 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 50m.				
(a)	All kinds of soil	cum	1000	93.55	93550.00
4	Filling available excavated earth (excluding rock) in trenches, plinth, sides of foundations etc in layers not exceeding 20cm in depth : consolidating each deposited layer by ramming and watering, for all lifts and all leads	cum	4225	30.25	127806.25
5	Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering all work upto plinth level.				
(a)	1:4:8 (1 Cement : 4 coarse sand: 8 graded stone aggregate 40mm nominal size)	cum	120	1404.70	168564.00
6	Providing and laying in position specified grade of reinforced cement concrete excluding the cost of centring, shuttering, finishing and reinforcement - all work upto plinth level (rafts, columns, walls & plinth beams) .				
(a)	1:1.5:3 (1 cement : 1.5 coarse sand : 3 graded stone aggregate 20 mm nominal size)	cum	655	2116.2	1386111.00
7	Providing & fixing in position precast cement concrete trench covers, coping, roof units, fascia, RCC grills, 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:				
(a)	1:1.5:3	cum	20	3100.00	62000.00

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8	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.	cum	3	2800.00	8400.00
9	Centring and shuttering including strutting, propping etc and removal of form for :				
(a)	Foundations, footings, bases of columns etc for mass concrete	sqm	700	61.10	42770.00
(b)	Walls (any thickness) including attached pilasters, buttresses plinth and string courses etc.	sqm	700	106.40	74480.00
(c)	Columns, pillarspiers, Abutments, Posts and Struts	sqm	1200	135.80	162960.00
10	Reinforcement of RCC work including straightening, cutting, bending, placing in position and binding all complete.				
(a)	Cold twisted/ TMT bars	Kg	34000	21.85	742900.00
11	Brick work with F.P.S bricks of class designation 75 in foundation and plinth in				
(a)	Cement mortar 1:6 (1 cement : 6 coarse sand)	cum	50	1384.50	69225.00
12	12mm cement plaster finished with a floating coat of neat cement of mix 1:4 (1 cement : 4 fine sand)	sqm	250	62.10	15525.00
13	Providing and fixing (all dia & length) GI foundation bolts in position with help of proper templates including nuts and washers all complete as per specs, drawings & directions of Engr-in-Charge. (Mass of zinc coating = 610gms/sqm)	kg	8000	45.15	361200.00
14	Fixing (all dia & length) foundation bolts in position with help of proper templates including nuts and washers all complete as per drawings & directions of Engr-in-Charge. (Bolts to be supplied by BHEL)	kg	500	3.00	1500.00
15	Structural steelwork welded in built up sections like monorails, channel/beam supports for roofing & trfr/reactor gratings, 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.	kg	12000	24.30	291600.00
16	Preparation of subgrade by excavating earth to an average of 22.5cm depth, dressing to camber and consolidating with road roller including making good the undulations etc., and disposal of surplus earth lead upto 50m.	sqm	1875	21.50	40312.50
17	Consolidation of subgrade with power road roller of 8 to 12 tonne capacity including making good the undulations etc. with earth or quarry spoils etc. and rerolling the subgrade.	sqm	1875	0.65	1218.75

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18	Extra for compaction of earthwork in embankment under optimum moisture conditions to give at least 95% of the maximum dry density (Proctor density)	sqm	1875	2.90	5437.50
19	Supplying and stacking of graded stone aggregate at site of size range				
(a)	63mm to 45mm	cum	300	389.65	116895.00
(b)	53mm to 22.4mm	cum	300	432.55	129765.00
20	Laying WBM with specified stone aggregate stone screening and blinding material including screening, sorting, spreading to template and consolidation with power road roller of 8 to 10 tonne capacity etc., complete (payment for stone aggregate, screenings, kankar, moorum and red bajri etc., to be made separately)				
(a)	Base course with stone aggregate 63mm to 45mm including stone screening 13.2mm size.	cum	300	122.00	36600.00
(b)	Base course with stone aggregate 53mm to 22.4mm including stone screening 11.2mm size.	cum	300	122.00	36600.00
21	Supplying and stacking of stone screenings/chippings at site				
(a)	13.2mm nominal size (Type A)	cum	30	470.95	14128.50
(b)	11.2mm nominal size (Type B)	cum	30	465.10	13953.00
22	2.5 cm premix carpet surfacing with 3 cum of stone chippings 10mm nominal size per 100sqm and bitumen emulsion (Min. 65% bitumen content) of approved quality using 96 kg per cum of chippings including a tack coat of 1 kg bitumen emulsion per sqm of road surface including consolidation with road roller of 6 to 9 tonne capacity etc., complete.	sqm	1875	59.50	111562.50
23	Providing and laying seal coat of premixed fine aggregate (passing 2.36 mm and retained on 180 micron sieve) with bitumen using 128 kg of bitumen of grade 80/100 bitumen per cum of fine aggregate and 0.60 cum of fine aggregate per 100 sqm of road surface including rolling and finishing with road roller all complete.	sqm	1875	19.30	36187.50
24	Providing and installing PVC sealing strip at all elevations including the cost of all labour, materials, equipment, cutting, bending, placing, jointing, splicing, anchors etc. complete as per drawings				
(a)	225 mm wide with a central bulb and at least 20 bibs and a thickness of 8 mm.	RM	20	300.00	6000.00
25	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)	300mm dia. RCC pipe	RM	20	300.00	6000.00

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26	Providing & fixing chain link fencing including all allied activities, all complete as per PGCIL specification (Clause 8.0, Technical Specification Section: Civil Works C/ENGG/SPEC/CIVIL Rev No:06), drawing and directions of Engineer-in-charge. (Rate shall be inclusive of all items like chainlink fence, galvanised tubular posts, flats, PCC. painting etc.)	RM	250	1400.00	350000.00
27	Dismantling of existing fence and reerecting the same at new location all complete as per drawing & directions of Engineer-in-charge.	RM	250	300.00	75000.00
28	Providing & fixing gate including all allied activities, all complete as per PGCIL specification (Clause 8.0, Technical Specification Section: Civil Works C/ENGG/SPEC/CIVIL Rev No:06), drawing and directions of Engineer-in-charge. (Rate shall be inclusive of all items like pipes, rollers, painting, RCC, etc.)	No	1	40000.00	40000.00
29	Providing antiweed treatment and stone spreading including all allied activities all complete as per PGCIL specification except PCC 1:5:10 (Clause 4.0, Technical Specification Section: Civil Works C/ENGG/SPEC/CIVIL Rev No:06) and directions of Engineer-in-charge.(Rate shall be inclusive of all items like deweeding, preparation of subgrade, cement slurry of mix 1:6 and 100mm uncrushed/crushed/broken stone, etc.)	sqm	14250	65.00	926250.00
30	Providing and laying Plain Cement Concrete 1:5:10 (1 cement : 5 sand : 10 brick aggregate) as per specification.	sqm	360	1000.00	360000.00
31	Removal & respreading of stone(gravel) after cleaning & washing all complete as per directions of Engineer-in-charge.	sqm	850	10.00	8500.00
				TOTAL:	6442218.25

Note: For item of works which are required for successful completion of work but not covered in above BOQ items, but are covered under DSR-2002, the quoted figure at serial no "a" of price schedule format shall be applicable and binding to the bidder .