

SCHEDULE OF WORK (CIVIL WORK) (MINOR COMPONENT)

Name of work :- C/o 33 kV Sub-station for dedicated line from 132kV GSS Jakhrana to CISF, MPRTC, Behror (Raj.).

Item No.	Description of Sub-Head and Item of Work	Quantity		Rate (Rs.)	Unit	Amount (Rs.)
1	EARTH WORK					
1.1	Earth work in excavation by mechanical means (Hydraulic excavator) / manual means in foundation trenches or drains (not exceeding 1.5 m in width or 10 sqm on plan), including dressing of sides and ramming of bottoms, for all lift, including getting out the excavated soil and disposal of surplus excavated soil as directed, within a lead of 50 m.					
1.1.1	All kinds of soil.	54.00	cum	250.91	cum	13549.00
d	Excavating trenches by mechanical / manual means of required width for pipes, cables, etc including excavation for sockets, and dressing of sides, ramming of bottoms, for all depth, including getting out the excavated soil, and then returning the soil as required, in layers not exceeding 20 cm in depth, including consolidating each deposited layer by ramming, watering, etc. and disposing of surplus excavated soil as directed, within a lead of 50 m:					
1.2.1	All kinds of soil					
1.2.1.1	Pipes, cables etc. exceeding 80 mm dia. but not exceeding 300 mm dia	45.00	metre	339.45	metre	15275.00
1.3	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, lead up to 50 and for all lif.	38.00	cum	188.94	cum	7180.00
1.4	Supplying and filling in plinth with sand under floors, including watering, ramming, consolidating and dressing complete.	28.00	cum	2047.19	cum	57321.00
	Sub-Total					93325.00
2	CEMENT CONCRETE (CAST IN SITU)					
2.1	Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering - All work up to plinth level :					
2.1.1	1:2:4 (1 cement : 2 coarse sand (zone-III) derived from natural sources : 4 graded stone aggregate 20 mm nominal size derived from natural sources)	12.00	cum	7594.49	cum	91134.00
2.1.2	1:5:10 (1 cement : 5 coarse sand (zone-III) derived from natural sources : 10 graded stone aggregate 40 mm nominal size derived from natural sources)	8.00	cum	6283.61	cum	50269.00
	Sub-Total					141403.00
3	REINFORCED CEMENT CONCRETE					
3.1	Providing and laying in position specified grade of reinforced cement concrete, excluding the cost of centering, shuttering, finishing and reinforcement - All work up to plinth level :					

Item No.	Description of Sub-Head and Item of Work	Quantity		Rate (Rs.)	Unit	Amount (Rs.)
3.1.1	1:1.5:3(1 cement: 1.5 coarse sand (zone-III) derived from natural sources : 3 graded stone aggregate 20 mm nominal size derived from natural sources)	16.00	cum	8719.66	cum	139515.00

Item No.	Description of Sub-Head and Item of Work	Quantity		Rate (Rs.)	Unit	Amount (Rs.)
3.2	Reinforced cement concrete work in walls (any thickness), including attached pilasters, buttresses, plinth and string courses, fillets, columns, pillars, piers, abutments, posts and struts etc. above plinth level up to floor five level, excluding cost of centering, shuttering, finishing and reinforcement:					
3.2.1	1:1.5:3 (1 cement : 1.5 coarse sand(zone-III) derived from natural sources : 3 graded stone aggregate 20 mm nominal size derived from natural sources)	24.00	cum	10461.71	cum	251081.00
3.3	Reinforced cement concrete work in beams, suspended floors, roofs having slope up to 15 degree landings, balconies, shelves, chajjas, lintels, bands, plain window sills, staircases and spiral stair cases above plinth level up to floor five level, excluding the cost of centering, shuttering, finishing and reinforcement with 1:1.5:3 (1 cement : 1.5 coarse sand (zone-III) derived from natural sources : 3 graded stone aggregate 20 mm nominal size derived from natural sources).	11.00	cum	11090.74	cum	121998.00
3.4	Centering and shuttering including strutting, propping etc. and removal of form for					
3.4.1	Foundations, footings, bases of columns, etc. for mass concrete	59.00	sqm	378.01	sqm	22303.00
3.4.2	Suspended floors, roofs, landings, balconies and access platform	61.00	sqm	893.82	sqm	54523.00
3.4.3	Lintels, beams, plinth beams, girders, bressumers and cantilevers	97.00	sqm	709.86	sqm	68856.00
3.4.4	Columns, Pillars, Piers, Abutments, Posts and Struts	126.00	sqm	926.64	sqm	116757.00
3.4.5	Edges of slabs and breaks in floors and walls					
3.4.5.1	Under 20 cm wide	40.00	metre	201.03	metre	8041.00
3.5	Extra for additional height in centering, shuttering where ever required with adequate bracing, propping etc., including cost of de-shuttering and decentering at all levels, over a height of 3.5 m, for every additional height of 1 metre or part thereof (Plan area to be measured).					
3.5.1	Suspended floors, roofs, landings, beams and balconies (Plan area to be measured)	61.00	sqm	370.44	sqm	22597.00
3.6	Steel reinforcement for R.C.C. work including straightening, cutting, bending, placing in position and binding all complete upto plinth level.					
3.6.1	Thermo-Mechanically Treated bars of grade Fe-550D or more.	1920.00	kg	103.96	kg	199603.00
3.7	Steel reinforcement for R.C.C. work including straightening, cutting, bending, placing in position and binding all complete above plinth level.					
3.7.1	Thermo-Mechanically Treated bars of grade Fe-550D or more.	3360.00	kg	103.96	kg	349306.00
	Sub-Total					1354580.00
4	MASONRY WORK					
4.1	Brick work with common burnt clay F.P.S. (non modular) bricks of class designation 7.5 in foundation and plinth in:					
4.1.1	Cement mortar 1:6(1 cement :6 coarse sand)	17.00	cum	6875.14	cum	116877.00

Item No.	Description of Sub-Head and Item of Work	Quantity		Rate (Rs.)	Unit	Amount (Rs.)
4.2	Brick work with common burnt clay F.P.S. (non modular) bricks of class designation 7.5 in superstructure above plinth level up to floor V level in all shapes and sizes in :					
4.2.1	Cement mortar 1:6(1 cement : 6 coarse sand)	27.00	cum	8777.69	cum	236998.00
	Sub-Total					353875.00
5	WOOD AND P. V. C. WORK					
5.1	Providing and fixing M.S. grills of required pattern in frames of windows etc. with M.S. flats, square or round bars etc. including priming coat with approved steel primer all complete.					
5.1.1	Fixed to steel windows by welding	73.00	kg	211.20	kg	15418.00
5.2	Providing and fixing oxidised M.S. casement stays (straight peg type) with necessary screws etc. complete (Copper oxidised as per IS 1378)					
5.2.1	300 mm weighing not less than 330 grams	4.00	nos.	64.97	each	260.00
	Sub-Total					15678.00
6	STEEL WORK					
6.1	Supplying and fixing rolling shutters of approved make, made of required size M.S. laths, interlocked together through their entire length and jointed together at the end by end locks, mounted on specially designed pipe shaft with brackets, side guides and arrangements for inside and outside locking with push and pull operation complete, including the cost of providing and fixing necessary 27.5 cm long wire springs manufactured from high tensile steel wire of adequate strength conforming to IS: 4454 - part 1 and M.S. top cover of required thickness for rolling shutters.					
6.1.1	80x1.25 mm M.S. laths with 1.25 mm thick top cover	68.00	sqm	3521.50	sqm	239462.00
6.2	Providing and fixing ball bearing for rolling shutters.	3.00	nos.	474.60	each	1424.00
6.3	Providing and fixing factory made ISI marked steel glazed doors, windows and ventilators, side /top /centre hung, with beading and all members such as F7D,F4B, K11 B and K12 B etc. complete of standard rolled steel sections, joints mitred and flash butt welded and sash bars tenoned and riveted, including providing and fixing of hinges, pivots, priming coat of approved steel primer, but excluding the cost of other fittings,glass panes complete all as per approved design, (sectional weight of only steel members shall be measured for payment).					
6.3.1	Fixing with 15x3 mm lugs 10 cm long embedded in cement concrete block 15x10x10 cm of C.C. 1:3:6 (1 Cement : 3 coarse sand : 6 graded stone aggregate 20 mm nominal size)	109.00	kg	126.32	kg	13769.00

Item No.	Description of Sub-Head and Item of Work	Quantity		Rate (Rs.)	Unit	Amount (Rs.)
6.4	Steel work welded in built up sections/ framed work, including cutting, hoisting, fixing in position and applying a priming coat of approved steel primer using structural steel etc. as required.					
6.4.1	In stringers, treads, landings etc. of stair cases, including use of chequered plate wherever required, all complete	1404.00	kg	119.14	kg	167273.00
6.4.2	In gratings, frames, guard bar, ladder, railings, brackets, gates and similar works	827.00	kg	166.38	kg	137596.00
6.5	Providing & fixing fly proof wire gauze to windows, clerestory windows & doors with M.S. Flat 15x3 mm and nuts & bolts complete.					
6.5.1	Stainless steel (grade 304) wire gauze of 0.5 mm dia wire and 1.4 mm aperture on both sides	3.00	sqm	1092.68	sqm	3278.00
6.6	Providing & fixing glass panes with putty and glazing clips in steel doors, windows, clerestory windows, all complete with:					
6.6.1	5.5 mm thick glass panes	4.00	sqm	1340.04	sqm	5360.00
	Sub-Total					568162.00
7	FLOORING					
7.1	Kota stone slab flooring over 20 mm (average) thick base laid over and jointed with grey cement slurry mixed with pigment to match the shade of the slab, including rubbing and polishing complete with base of cement mortar 1 : 4 (1 cement : 4 coarse sand) :					
7.1.1	25 mm thick	33.00	sqm	1878.02	sqm	61975.00
	Sub-Total					61975.00
8	ROOFING					
8.1	Providing and fixing to the inlet mouth of rain water pipe cast iron grating 15 cm diameter and weighing not less than 440 grams.	6.00	nos.	52.73	each	316.00
	Sub-Total					316.00
9	FINISHING					
9.1	12 mm cement plaster of mix:					
9.1.1	1:6(1 cement: 6 fine sand)	168.00	sqm	321.33	sqm	53983.00
9.2	15 mm cement plaster on the rough side of single or half brick wall of mix:					
9.2.1	1:6 (1 cement: 6 fine sand)	168.00	sqm	369.19	sqm	62024.00
9.3	6 mm cement plaster of mix:					
9.3.1	1:3(1 cement :3 fine sand)	61.00	sqm	289.62	sqm	17667.00
9.4	Finishing walls with Acrylic Smooth exterior paint of required shade:					
9.4.1	New work (Two or more coat applied @ 1.67 ltr/10 sqm over and including priming coat of exterior primer applied @ 0.90 litre/10 sqm)	160.00	sqm	154.81	sqm	24770.00

Item No.	Description of Sub-Head and Item of Work	Quantity		Rate (Rs.)	Unit	Amount (Rs.)
9.5	Painting with synthetic enamel paint of approved brand and manufacture of required colour to give an even shade:					
9.5.1	Two or more coats on new work over an under coat of suitable shade with ordinary paint of approved brand and manufacture	149.00	sqm	218.09	sqm	32495.00
9.6	Providing and applying white cement based putty of average thickness 1 mm, of approved brand and manufacturer, over the plastered wall surface to prepare the surface even and smooth complete.	299.00	sqm	150.43	sqm	44979.00
9.7	Wall painting with acrylic emulsion paint, having VOC (Volatile Organic Compound) content less than 50 grams/ litre, of approved brand and manufacture, including applying additional coats wherever required, to achieve even shade and colour.					
9.7.1	Two coats	139.00	sqm	132.50	sqm	18418.00
	Sub-Total					254336.00
10	ROAD WORK					
10.1	Providing and fixing G.I. chain link fabric fencing of required width in mesh size 25x25 mm made of G.I. wire of dia 3 mm including strengthening with 2 mm dia wire or nuts, bolts and washers as required complete as per the direction of Engineer-in-charge.	200.00	sqm	1107.82	sqm	221564.00
	Sub-Total					221564.00
11	SANITARY INSTALLATIONS					
11.1	Providing and fixing soil, waste and vent pipes :					
11.1.1	100 mm dia					
11.1.1.1	Hubless centrifugally cast (spun) iron pipes epoxy coated inside & outside IS:15905	37.00	metre	1127.15	metre	41705.00
11.2	Providing and fixing M.S. holder-bat clamps of approved design to Sand Cast iron/cast iron (spun) pipe embedded in and including cement concrete blocks 10x10x10 cm of 1:2:4 mix (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size), including cost of cutting holes and making good the walls etc. :					
11.2.1	For 100 mm dia pipe	12.00	nos.	349.77	each	4197.00
11.3	Providing and fixing plain bend of required degree.					
11.3.1	100 mm dia					
11.3.1.1	Hubless centrifugally cast (spun) iron pipes epoxy coated inside & outside IS:15905	10.00	nos.	354.73	each	3547.00
11.4	Providing and fixing shielded coupling for Hubless centrifugally cast iron pipe					
11.4.1	100 mm dia					
11.4.1.1	SS 304 grade coupling with EPDM rubber gasket	15.00	nos.	416.47	each	6247.00
	Sub-Total					55696.00

Item No.	Description of Sub-Head and Item of Work	Quantity		Rate (Rs.)	Unit	Amount (Rs.)
12	DRAINAGE					
12.1	Providing and laying non-pressure NP2 class (light duty) R.C.C. 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 :					
12.1.1	300 mm dia. R.C.C. pipe	45.00	metre	958.45	metre	43130.00
12.2	Constructing brick masonry road gully chamber 50x45x60 cm with bricks in cement mortar 1:4 (1 cement : 4 coarse sand) including 500x450 mm pre-cast R.C.C. horizontal grating with frame complete as per standard design :					
12.2.1	With common burnt clay F.P.S. (non modular) bricks of class designation 7.5	4.00	nos.	5743.13	each	22973.00
	Sub-Total					66103.00
13	WATER PROOFING					
13.1	Providing and laying integral cement based water proofing treatment including preparation of surface as required for treatment of roofs, balconies, terraces etc consisting of following operations: (a) Applying a slurry coat of neat cement using 2.75 kg/sqm of cement admixed with water proofing compound conforming to IS. 2645 and approved by Engineer-in-charge over the RCC slab including adjoining walls upto 300 mm height including cleaning the surface before treatment. (b) Laying brick bats with mortar using broken bricks/brick bats 25 mm to 115 mm size with 50% of cement mortar 1:5 (1 cement : 5 coarse sand) admixed with water proofing compound conforming to IS : 2645 and approved by Engineer-in-charge over 20 mm thick layer of cement mortar of mix 1:5 (1 cement :5 coarse sand) admixed with water proofing compound conforming to IS : 2645 and approved by Engineer-in-charge to required slope and treating similarly the adjoining walls upto 300 mm height including rounding of junctions of walls and slabs. (c) After two days of proper curing applying a second coat of cement slurry using 2.75 kg/ sqm of cement admixed with water proofing compound conforming to IS : 2645 and approved by Engineer-in-charge. (d) Finishing the surface with 20 mm thick jointless cement mortar of mix 1:4 (1 cement :4 coarse sand) admixed with water proofing compound conforming to IS : 2645 and approved by Engineer-in-charge including laying glass fibre cloth of approved quality in top layer of plaster and finally finishing the surface with trowel with neat cement slurry and making pattern of 300x300 mm square 3 mm deep. (e) The whole terrace so finished shall be flooded with water for a minimum period of two weeks for curing and for final test. "All above operations to be done in order and as directed and specified by the Engineer-in-Charge":					
13.1.1	With average thickness of 120 mm and minimum thickness at khurra as 65 mm.	63.00	sqm	1623.88	sqm	102304.00
	Sub-Total					102304.00
	Total					3289317.00