

MUNICIPAL CORPORATION OF BHILAI

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वार्ड क्र. 51 श.वी.ना. सिंह नगर में स्थित मंगल भवन (बी.पी.ओ. सेंटर) में प्रकाश व्यवस्था एवं अन्य उपकरणों के संचालन हेतु सब-स्टेशन निर्माण कार्य।

(As Per PWD Electrical SOR 01.06.2020)

SN	PARTICULARS OF ITEMS	QTY.	UNIT
1	Fabrication, supply, installation, testing and commissioning of cubicle type compartmentalized wall/ floor mounted power cum control panel board of specified size and following depth made out of not less than 2 mm thick CRCA MS powder coated sheet with suitable size compartments for bus bars, switchgears and necessary cutouts for voltmeters, ammeters etc as per specifications including powder coating painting but without busbars, switchgears and other accessories etc complete as per specification.		
	Upto 300 mm deep	5.00	sqm
2	Supply, installation, testing and commissioning of 4 pole (3 phase + neutral) copper (electric grade) bus bars in existing cubicle type compartmentalized wall/ floor mounted panel board along with suitable size and shape insulators, necessary bolts and nuts etc complete as per specification.		
	500 amp (60x5mm)	2.60	Metre
3	Providing and fixing following rating and breaking capacity MCCB in existing cubicle panel board including drilling holes in cubicle panel, making connections, etc. as per specification, IS/ IEC: 60947-2 and Ics = 100 % Icu.		
	3 pole MCCB, 400A, Adjustable Thermal - Magnetic Release, 35KA	1	Each
4	Providing and fixing metal clad, TP&N 415/500 volts, By Pass Switch Unit with sheet steel enclosure including drilling holes on the board, connections, earthing the body, testing and commissioning etc. as per specification.		
	400 amps	1	Each
5	Providing and fixing following rating current transformer in existing cubical panel including, connections, testing and commissioning etc. as per specification.		
	500/5 amps	4	Each
6	Providing and fixing panel mounting 230 volt LED type indicating lamp in existing cubical panel including, connections, testing and commissioning etc. as per specification.	9	Each
7	Providing and fixing panel mounting digital type ammeter of size 100x100 (NS) in existing cubical panel including, connections, testing and commissioning etc. as per specification	1	Each
8	Providing and fixing panel mounting 0-500 volt voltmeter of size 100x100 (NS) in existing cubical panel including, connections, testing and commissioning etc. as per specification.		
	Digital type	1	Each
9	Providing and fixing 25 mm X 5 mm copper strip in 40 mm dia G.I. pipe from earth electrode at 0.5 Metre depth below ground level including excavation and refilling the trench etc. as per specification.	42.00	Metre
10	Supplying and laying 25 mm X 6 mm G.I. strip at 0.50 metre below ground as strip earth electrode, including soldering, excavation and refilling the trench etc. as per specification.	100.00	Metre
11	Providing maintenance free earthing with following size GI pipe including making bore pit of minimum 150mm dia, providing and laying approved make Earthing Electrode of Pipe-in-Pipe technology as per IS 3043(R 2016) -1987 made of corrosion free G.I. Pipes having outer pipe of 80mm dia and inner pipe of 50mm dia and filling with specified qty highly conductive compound around pipe and above that with soft soil in bore pit complete and providing masonry enclosure with cover plate having locking arrangement and watering pipe etc. as per specification:		
	With 3 metre long GI Pipes and 50 kg back filling compound.	6	Each

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12	Supplying and laying HDPE pipe of 4kg/Sqcm in ground below road, path etc at a depth not less than 40 cm and upto 90 cm including excavation, dismantling of road if required and refilling the trench with excavated material, ramming and making the surface good etc. as per specification.	50.00	Metre
	200 mm outer dia		
13	Supplying and laying following sizes one number FRLS PVC insulated/XLPE, PVC sheathed, steel armoured, aluminium conductor power cable of 1.1 KV grade direct in ground at a depth not less than 40 cm and upto 90 cm including excavation, sand cushioning, protective covering and refilling the trench etc as per specification, IS: 1554 (1988, Part 1) / IS: 7098 (1988, Part 1).	55.00	Metre
	3.5 x 240 sq. mm.		
14	Supply of "H" beam steel pole as per IS specifications in standard length for over head line work:		
	"H" beam steel pole 200x200x8x12 mm standard weight 52 kg /metre	15.00	metre
	"H" beam steel pole 152x152x7x12 mm standard weight 37.1 kg /metre	22.00	metre
15	Supply of hot dipped galvanized (in single dip to minimum 75 micron) octagonal pole made of 3mm thick steel grade E-350 sheet having window and flush cover with locking arrangement at suitable height from base for cable termination block, pole suitably reinforced with welded steel section at window cut section to make the strength of pole unaffected, with following minimum specifications with 4 way terminal connector including 3mm thick anchor plate, 4 nos 20mm dia foundation bolts of EN8 grade, and as per IS 2062 & BS EN: 10025. (designed for wind speed upto 180km/hr, IS: 875 Part 3)		
	7 metre high, dia 130mm at bottom and 90mm at top, base plate size 220x220x12mm, foundation bolts 700mm long	1	Each
16	Erection of STEEL TUBULAR or "H" BEAM/ ISMB pole in cement concrete 1:3:6 (1 cement : 3 coarse sand : 6 graded stone aggregate 40 mm nominal size) foundation and cement concrete collar of size 0.4 metre dia and 0.50 metre height from ground level including excavation and refilling etc. as per specification of length:		
	7 metre to 10 metre	1	Each
	11 metre to 12 metre	3	Each
17	Erection of GI octagonal/ tubular/conical pole on existing cement concrete foundation having grouted bolts and nuts, aligning in true vertical position as per specification.		
	7 metre high	1	Each
18	Supplying and erection of angle/channel iron cross arms/ bracket/ other fitting of approved size and shape including drilling of holes for insulator pins, bolts and nuts etc as per specification.	1500.00	kg
19	Supplying and erection of 11 KV gang operated air break switch on existing two pole structure with insulators and all other accessories complete including locking arrangement as per specification.	1	Set
20	Supplying and erection of 11 KV D.O. fuse unit on existing two pole structure with insulators and all other accessories complete including locking arrangement as per specification.	1	Set
21	Supplying and erection of three piece nonlinear resistor type lightning arrester suitable for 3 wire, 11 KV overhead lines with rated voltage 9 KV (rms) with a nominal discharge current rating of 5 KA and complete with galvanised clamping arrangement, G.I. bolts, nuts, washers etc. as per specification.	1	Set
	Supplying and erection of G.I wire of size 8 SWG to 4 SWG including binding etc. as per specification.	40.00	kg
22	Supply and erection standard ACSR (aluminium conductor steel reinforced) conforming to IS 398-1961 of approved make at existing insulator at height upto 14m from ground level including stringing, binding with insulator, jointing wherever required, jumpering, tearing off connection etc complete etc. as per specification including clearing off obstacle if any:		
	Dog 6/4.72(AL), 7/1.57(S) mm dia with calculated aluminium area 105 sq.mm, weight 394 kg/ km (248 amps)	0.50	Km
23	Supplying and erection DANGER BOARD made MS sheet duly painted and maked as per IE rules and specification.	4	Each
24	Supply and erection of following Polymer Insulator with G.I. Bolt, Nuts and Straps etc. as per specification.		

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	11 KV Pin Insulator with Pin	6	Each
25	Supplying and installation of outdoor type Transformer ONAN type with copper winding having following continuous KVA rating, 11 /0.415 KV, 3 Phase 50 Hz Vector group DYn-11, (Online tap changer) tapings in steps of $\pm 2.5\%$, $\pm 5\%$, -7.5% with oil conservator, silica gel breather having connecting terminals on HV side suitable for bare conductor/HT cable connection, cable end box on medium voltage side suitable for 1.1 KV single / $3\frac{1}{2}$ core cable(upto 300 sq mm)/bus ducting arrangement and confirming to IS:1180 Part-2 Level 3, on existing double pole structure or Brick /CC/RCC platform with all fittings, accessories, filled with filtered transformer oil including testing and commissioning etc. complete as per specification		
	500 KVA	1	Each
26	Supplying and erecting chain link mesh fencing for electric sub-station switch yard of 2.5 m approx. height from ground level using angle iron size 50 X 50 X 6 mm erected in C.C. foundation 15 X 15 X 40 cm deep at every 2 metre fitted with flat iron support of size 25 X 6 mm on top, bottom and mid way and chain link mesh 50 x 50 mm aparture and 4 mm dia G.I. hard wire securing and screwing with 2mm dia G.I. wire, G.I. staples, G.I.U-nails or steel pins to the angle iron at every distance of 30 cms, by iron studs complete duly painted with one coats of red oxide and two coats of approved colour paint. (Area of fencing i.e. height x length is to be measured)	50.00	sqm
27	Supplying and erecting MS gate of approx. size 3.0 m (W) x 2.0 m (H) in two laps for electric sub-station switch yard fencing frame made of angle iron size 50 X 50 X 6 mm on top bottom and sides fitted with flat iron support of size 25 X 6 mm on mid way horizontally and square bar of size 8 mm at every 100mm vertically including 3 sets of heavy duty MS hinges and aldrops complete duly painted with one coats of red oxide and two coats of approved colour paint.	8.00	sqm
28	Earth work in hard rock (blasting prohibited) with wedging and chiseling with all lead and 1.5 metre lift, dressing, stacking excavated strata including refilling with excavated soil in trench / pit to ground level complete as per specification	14.00	cum
29	Providing brick masonry work in cement mortar 1:4 (1 cement : 4 coarse sand) with well burnt clay modular bricks having compressive strength not less than 25kg/sqmm at all levels including scaffolding curing etc complete.	14.00	cum
30	Providing and laying Cast-in-situ cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20mm including mixing with mechanical mixer, compacting with vibrator, finishing and currying etc. complete but excluding form work.	14.00	cum
31	Supplying of following disc/ pin insulator		
	11 KV disc insulator with hardware fitting	6	Set
32	Supplying of following 230/250 volts LED Post Top Lantern (lamp).		
	70 Watt	4	Each

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