

TENDER

(NIT NO. TA/TCL/**02**/22-23)

FOR

**CONSTRUCTION OF CONTROL ROOM FOR
5MW_p SOLAR POWER PLANT IN TOWNSHIP
OF BHEL BHOPAL.**

PRICE BID

SECTION - VI



**TOWNSHIP CIVIL MAINTENANCE
BHARAT HEAVY ELECTRICALS LIMITED**

**(A Government of India Undertaking)
BHOPAL - 462 022 (M.P)**

PREAMBLE OF PRICE BID

1.0. This Price Bid consists of three Schedules:

1.1 Schedule A

Schedule A consists of two Annexures:

1) Annexure-I includes items based on GST Compliant DSR-2012 & Rate Analysis.

Bidders are requested to quote their rate in Percentage above/below/at Par for Annexure-I.

1.2 Schedule B

Schedule B gives the details of free issue materials given by BHEL.

1.3 Schedule C

Schedule C gives the details of Tools & Tackles provided by BHEL on Chargeable Basis.

2.0 The work to be carried out under the contract shall, except as otherwise provided in tender conditions, include all labour, materials, tools, plant, equipment, and transport which may be required in preparation of and for full & entire execution and completion of the Works. The descriptions given in the Schedule of Quantities shall, unless otherwise stated, be held to include waste on materials, carriage and cartage, carrying in return of empties, hoisting, setting, fitting and fixing in position and all other labours necessary in and for the full and entire execution and completion as aforesaid in accordance with good practice and recognized principles as laid down in Technical Specification & elsewhere in Tender Specification.

3.0 The price bid should not contain any condition. Conditional price Bids shall be summarily rejected.

4.0 The bidder should not leave any column blank in Price Schedules.

5.0 Price Quoted shall include all taxes, & duties except GST.

6.0 **Unless otherwise specified in the items involving cement or reinforcement steel, these items shall be issued free of cost by BHEL.**



TOWNSHIP CIVIL MAINT. & CONST. DIVISION

SCHEDULE 'A'

Annexure: I

Name of work : Construction of Control Room for 5 MWp Solar Power Plant in Township of BHEL Bhopal.

S.No	It. Code	Description of items	Qty.	Unit	Rate	Amount
1	1.1	Carriage of materials by mechanical transport including loading, unloading and stacking. Upto 1.0 km				
a)	1.1.1	Lime, moorum, bldg. rubbish	100.00	Cum	66.23	6,623.00
b)	1.1.2	Earth	200.00	Cum	82.78	16,556.00
2	2.6	Earth work in excavation by mechanical means (Hydraulic excavator)/ manual means over areas (exceeding 30 cm in depth, 1.5 m in width as well as 10 sqm on plan) including disposal of excavated earth, lead upto 50m and lift upto 1.5 m disposed earth to be levelled and neatly dressed.				
	2.6.1	All kind of soil	280.00	Cum	129.35	36,218.00
3	2.7	Earth work in excavation by mechanical means (Hydraulic excavator) / manual means over areas (exceeding 30 cm in depth, 1.5 m in width as well as 10 sqm on plan) including disposal of excavated earth, lead upto 50 m and lift upto 1.5 m, disposed earth to be levelled and neatly dressed.				
a)	2.7.1	Ordinary rock	40.00	Cum	197.75	7,910.00
b)	2.7.3	Hard rock (blasting prohibited)	15.00	Cum	490.10	7,351.50
4	2.8	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, lift upto 1.5 m, including getting out the excavated soil and disposal of surplus excavated soil as directed within lead of 50 m.				
	2.8.1	All kinds of soil.	20.00	Cum	130.80	2,616.00
5	2.10	Excavating trenches of required width for pipes, cables, etc. including excavation for sockets, and dressing of sides, ramming of bottoms, depth upto 1.5 m 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 : All kinds of soil.				
	2.10.1.2	Pipes, cables, etc. exceeding 80 mm dia but not exceeding 300 mm dia.	40.00	Metre	165.60	6,624.00
6	2.25	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 m and lift upto 1.5 m.	100.00	Cum	83.80	8,380.00

7	2.26	Extra for every additional lift of 1.5 m or part thereof in excavation /banking excavated or stacked materials.				
a)	2.26.1	All kinds of soil.	20.00	Cum	34.60	692.00
b)	2.26.2	Ordinary or hard rock.	16.00	Cum	62.00	992.00
8	2.27 RA	Supplying and filling in plinth with stone dust under floors including watering ramming consolidating and dressing complete	35.00	Cum	1,191.77	41,711.95
9	2.28	Surface dressing of the ground including removing vegetation and inequalities not exceeding 15 cm deep and disposal of rubbish, lead upto 50 m and lift upto 1.5 m.				
	2.28.1	All kinds of soil	1000.00	Sqm	9.35	9,350.00
10	4.1	Providing and laying in position cement concrete of specified grade excluding the cost of centring and shuttering - All work upto plinth level:				
a)	4.1.3 RA	1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size)	5.00	Cum	2576.38	12,881.90
b)	4.1.5 RA	1:3:6 (1 Cement : 3 coarse sand : 6 graded stone aggregate 20 mm nominal size).	37.00	Cum	2662.64	98,517.68
11	5.1	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 :				
	5.1.2 RA	1:1.5:3 (1 cement : 1.5 coarse sand : 3 graded stone aggregate 20 mm nominal size)	54.00	Cum	2696.15	1,45,592.10
12	5.2	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. up to floor five level, excluding cost of centering, shuttering, finishing and reinforcement :				
	5.2.2 RA	1:1.5:3 (1 cement : 1.5 coarse sand : 3 graded stone aggregate 20 mm nominal size)	35.00	Cum	3337.06	1,16,797.10
13	5.3 RA	Reinforced cement concrete work in beams, suspended floors, roofs having slope up to 15° landings, balconies, shelves, chajjas, lintels, bands, plain window sills, staircases and spiral stair cases up to floor five level excluding the cost of centering, shuttering, finishing and reinforcement with 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size).	20.00	Cum	3556.89	71,137.80
14	5.9	Centering and shuttering including strutting, propping etc. and removal of form for :				
(a)	5.9.1 RA	Foundations, footings, bases of columns, etc. for mass concrete	105.00	Sqm	155.49	16,326.45
(b)	5.9.2 RA	Walls (any thickness) including attached pilasters, buttresses, plinth and string courses etc.	20.00	Sqm	273.95	5,479.00
(c)	5.9.3 RA	Suspended floors, roofs, landings, balconies and access platform.	160.00	Sqm	301.28	48,204.80
(d)	5.9.5 RA	Lintels, beams, plinth beams, girders, bressumers and cantilevers	105.00	Sqm	251.23	26,379.15
(e)	5.9.6 RA	Columns, Pillars, Piers, Abutments, Posts and Struts	200.00	Sqm	349.52	69,904.00
(f)	5.9.7 RA	Stairs, (excluding landings) except spiral-staircases	12.00	Sqm	299.40	3,592.80

15	RA 5.22.6/ 5.22.6A	Steel Reinforcement for RCC work including straightening, cutting, bending, placing in position and binding all complete upto/above plinth level:TMT bars (excluding cost of steel bars)	7100.00	Kg	7.40	52,540.00
16	5.30' RA	Add for plaster drip course/ groove in plastered surface or moulding to R.C.C. projections.	300.00	Metre	22.23	6,669.00
17	6.2.2 RA	Brick work with Ghole bricks having compressive strength not less than 50 Kg/cm2 in foundation and plinth in : Cement mortar 1:6 (1 cement : 6 coarse sand).	4.00	Cum	4946.64	19,786.56
18	6.3.2 RA	Brick work with Ghole bricks having compressive strength not less than 50 Kg/cm2 in super structure above plinth level upto floor V level in all shapes and sizes in cement mortar 1:6 (1cement:6 Coarse sand) .	52.00	Cum	5495.88	2,85,785.76
19	6.13.2 RA	Half brick masonry with Ghole bricks having compressive strength not less than 50 Kg/cm2 in superstructure above plinth level up to floor V level. Cement mortar 1:4 (1 cement :4 coarse sand) .	50.00	Sqm	670.79	33,539.50
20	7.7	Coursed rubble masonry (second sort) with hard stone in foundation & plinth with :-				
	7.7.1 RA	Cement mortar 1:6(1 cement : 6 coarse sand)	15.00	Cum	2754.46	41,316.90
21	9.48	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.				
	9.48.2 RA	Fixed to openings /wooden frames with rawl plugs screws etc.	300.00	Kg	89.43	26,829.00
22	9.84 RA	Providing and fixing aluminium extruded section body tubular type universal hydraulic door closer (having brand logo with ISI, IS : 3564, embossed on the body, door weight upto 36 kg to 80 kg and door width from 701 mm to 1000 mm) with double speed adjustment with necessary accessories and screws etc. complete.	6.00	Each	836.01	5016.06
23	9.95 RA	Providing and fixing ISI marked aluminium butt hinges anodised (anodic coating not less than grade AC 10 as per IS : 1868) transparent or dyed to required colour or shade with necessary screws etc. complete:				
a)	9.95.1 RA	125x75x4 mm	18.00	Each	84.80	1526.40
b)	9.95.4 RA	100x63x4 mm	18.00	Each	71.08	1279.44
24	9.96	Providing and fixing aluminium sliding door bolts ISI marked anodised (anodic coating not less than grade AC 10 as per IS : 1868) transparent or dyed to required colour or shade with nuts and screws etc. complete :				
(a)	9.96.1 RA	300x16 mm	6.00	Each	175.36	1052.16
(b)	9.96.2 RA	250x16 mm	14.00	Each	145.86	2042.04
25	9.97	Providing and fixing aluminium tower bolts ISI marked anodised (anodic coating not less than grade AC 10 as per IS : 1868) transparent or dyed to required colour or shade with necessary screws etc. complete :				
a)	9.97.3 RA	200x10 mm	10.00	Each	60.89	608.90
b)	9.97.4 RA	150x10 mm	4.00	Each	50.47	201.88

26	9.101 RA	Providing and fixing aluminium hanging floor door stopper ISI marked anodised (anodic coating not less than grade AC 10 as per IS : 1868) transparent or dyed to required colour and shade with necessary screws etc. complete.				
	9.101.2 RA	Twin rubber stopper	16.00	Each	60.81	972.96
27	9.119 RA	Providing and fixing factory made P.V.C. door frame of size 50x47mm with a wall thickness of 5mm, made out of extruded 5mm rigid PVC foam sheet, mitred at corners and joined with 2 Nos. of 150mm long brackets of 15x15mm M.S. square tube, the vertical door frame profiles to be reinforced with 19x19mm M.S. square tube of 19 gauge, EPDM rubber gasket weather seal to be provided through out the frame. The door frame to be fixed to the wall using M.S. screws of 65/100mm size, complete as per manufacturers specification and direction of Engineer-in-Charge.	10.00	Metre	345.79	3457.90
28	9.120 RA	Providing and fixing factory made panel PVC door shutter consisting of frame made out of M.S. tubes of 19 gauge thickness and size of 19mm x 19mm for styles and 15x15mm for top & bottom rails. M.S. frame shall have a coat of steel primers of approved make and manufacture . M.S. frame covered with 5mm thick heat moulded PVC 'C' channel of size 30mm thickness, 70mm width out of which 50mm shall be flat and 20mm shall be tapered in 45 degree angle on both side forming styles; and 5mm thick, 95mm wide PVC sheet out of which 75mm shall be flat and 20mm shall be tapered in 45 degree on the inner side to form top and bottom rail and 115mm wide PVC sheet out of which 75mm shall be flat and 20mm shall be tapered on both sides to form lock rail. Top, bottom and lock rails shall be provided both side of the panel. 10mm (5mm x 2) thick, 20mm wide cross PVC sheet be provided as gap insert for top rail & bottom rail. paneling of 5mm thick both side PVC sheet to be fitted in the M.S. frame welded/ sealed to the styles & rails with 7mm (5mm+2mm) thick x 15mm wide PVC sheet beading on inner side, and joined together with solvent cement adhesive. An additional 5mm thick PVC strip of 20mm width is to be stuck on the interior side of the 'C' Channel using PVC solvent adhesive etc. complete as per direction of Engineer-in-charge. Manufacturer's specification & drawing.				
	9.120.1 RA	30 mm thick plain PVC door shutters.	4.00	Sqm	2133.99	8535.96
29	10.1 (RA)	Structural steel work in single section, fixed with or without connecting plate, including cutting, hoisting, fixing in position and applying a priming coat of approved steel primer all complete.(excluding the cost of steel)	200.00	Kg	8.04	1,608.00
30	10.3 RA	Providing and fixing in position collapsible steel shutters with vertical channels 20x10x2mm and braced with flat iron diagonals 20x5mm size, with top and bottom rail of T-iron 40x40x6mm, with 40mm dia steel pulleys, complete with bolts, nuts, locking arrangement, stoppers, handles, including applying a priming coat of approved steel primer.	4.00	Sqm	3,955.69	15,822.76

31	10.17 RA	Providing and fixing M.S. fan clamp type I or II of 16 mm dia M.S. bar, bent to shape with hooked ends in R.C.C. slabs or beams during laying, including painting the exposed portion of loop, all as per standard design complete.	6.00	Each	94.17	565.02
32	10.25.2 RA	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. In gratings, frames, guard bar, ladder, railings, brackets, gates and similar works	700.00	Kg	69.38	48,566.00
33	11.26.1 RA	Kota stone slab flooring over 20mm (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 (1cement : 4 coarse sand) 25mm thick	34.00	Sqm	834.41	28,369.94
34	11.27 RA	Kota stone slabs 20 mm thick in risers of steps, skirting, dado and pillars laid on 12mm (average) thick cementmortar 1:3 (1cement : 3 coarse sand) and jointed with grey cement slurry mixed with pigment to match the shade of the slabs, including rubbing and polishing complete.	14.00	Sqm	850.12	11,901.68
35	11.36 RA	Providing and fixing 1st quality ceramic glazed wall tiles conforming to IS:15622 (thickness to be specified by the manufacturer) of approved make in all colours, shades except burgundy, bottle green, black of any size as approved by Engineer-in-Charge in skirting, risers of steps and dados over 12 mm thick bed of Cement Mortar 1:3 (1 Cement :3 Coarse sand) and jointing with grey cement surry @ 3.3kg per sqm including pointing in white cement mixed with pigment of matching shade complete.	40.00	Sqm	588.98	23,559.20
36	11.37 RA	Providing and laying Ceramic glazed floor tiles 300x300 mm (thickness to be specified by the manufacturer) of 1st quality conforming to IS : 15622 of approved make in all colours, shades, except White, Ivory, Grey, Fume Red Brown laid on 20mm thick bed of Cement Mortar 1:4 (1 Cement : 4 Coarse sand) including pointing the joints with white cement and matching pigments etc., complete.	16.00	Sqm	600.89	9,614.24
37	11.41	Providing and laying vitrified floor tiles in different sizes (thickness to be specified by the manufacturer) with water absorption's less than 0.08% and conforming to IS : 15622 of approved make in all colours, shades, laid on 20 mm thick cement mortar 1:4 (1 cement : 4 coarse sand) including grouting the joints with white cement and matching pigments etc. complete.				
	11.41.2 RA	Size of Tile 600x600 mm	120.00	Sqm	1,105.38	1,32,645.60
38	11.42 RA	Deduct for not using 20mm thick cement mortar 1:4 (1 cement : 4 coarse sand) bedding in laying of floor tiles.	120.00	Sqm	-286.45	-34,374.00
39	11.43 RA	Fixing glazed/ Ceramic/ Vitrified floor tiles with cement based high polymer modified quick-set tile adhesive (Water based) conforming to IS: 15477, in average 3mm thickness.	120.00	Sqm	322.51	38,701.20

40	11.46	Providing and laying Vitrified tiles in different sizes (thickness to be specified by manufacturer) with water absorption less than 0.08 % and conforming to I.S. 15622, of approved make in all colours & shade in skirting, riser of steps, over 12 mm thick bed of cement mortar 1:3 (1 cement: 3 coarse sand), including grouting the joint with white cement & matching pigments etc. complete.				
	11.46.2 RA	Size of Tile 600x600 mm	50.00	Sqm	1119.62	55,981.00
41	12.21	Providing gola 75x75 mm in cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 stone aggregate 10mm and down gauge) including finishing with cement mortar 1:3 (1 cement : 3 fine sand) as per standard design :				
	12.21.1 RA	In 75x75mm deep chase	30.00	Metre	88.20	2,646.00
42	12.41	Providing and fixing on wall face unplasticised Rigid PVC rain water pipes conforming to IS : 13592 Type A including jointing with seal ring conforming to IS : 5382 leaving 10 mm gap for thermal expansion.(i)Single socketed pipes.				
(a)	12.41.1 RA	75 mm diameter	20.00	Metre	112.50	2,250.00
(b)	12.41.2 RA	110 mm diameter	40.00	Metre	183.33	7,333.20
43		Providing and fixing on wall face unplasticised - PVC moulded fittings/ accessories for unplasticised Rigid PVC rain water pipes conforming to IS : 13592 Type A including jointing with seal ring conforming to IS :5382 leaving 10 mm gap for thermal expansion.				
(a)	12.42.1	Coupler				
i)	12.42.1.1 RA	75mm	6.00	Each	85.82	514.92
ii)	12.42.1.2 RA	110mm	10.00	Each	113.86	1,138.60
(b)	12.42.3	Single tee with door				
i)	12.42.3.1 RA	75x75x75 mm	2.00	Each	178.88	357.76
ii)	12.42.3.2 RA	110x110x110 mm	5.00	Each	259.29	1,296.45
(c)	12.42.4	Single tee without door				
i)	12.42.4.1 RA	75x75x75 mm	2.00	Each	159.22	318.44
ii)	12.42.4.2 RA	110x110x110 mm	4.00	Each	208.16	832.64
(d)	12.42.5	Bend 87.5°				
i)	12.42.5.1 RA	75 mm bend	5.00	Each	91.72	458.60
ii)	12.42.5.2 RA	110 mm bend	5.00	Each	136.48	682.42
(e)	12.42.6	Shoe (Plain)				
i)	12.42.6.1 RA	75 mm Shoe	2.00	Each	134.85	269.70
ii)	12.42.6.2 RA	110 mm Shoe	5.00	Each	246.61	1,233.05

44	12.43	Providing and fixing unplasticised -PVC pipe clips of approved design to unplasticised - PVC rain water pipes by means of 50x50x50mm hardwood plugs, screwed with M.S. screws of required length including cutting brick work and fixing in cement mortar 1:4 (1 cement : 4 coarse sand) and making good the wall etc. complete.				
(a)	12.43.1 RA	75 mm	8.00	Each	120.40	963.20
(b)	12.43.2 RA	110 mm	20.00	Each	135.15	2,703.00
45	12.52	Providing and fixing tiled false ceiling of approved materials of size 595x595 mm in true horizontal level, suspended on inter locking metal grid of hot dipped galvanized steel sections (galvanized @ 120 grams per sqm, both side inclusive) consisting of main "T" runner with suitably spaced joints to get required length and of size 24x38 mm made from 0.30 mm thick (minimum) sheet, spaced at 1200 mm center to center and cross "T" of size 24x25 mm made of 0.30 mm thick (minimum) sheet, 1200 mm long spaced between main "T" at 600 mm center to center to form a grid of 1200x600 mm and secondary cross "T" of length 600 mm and size 24x25 mm made of 0.30 mm thick (minimum) sheet to be interlocked at middle of the 1200x600 mm panel to form grids of 600x600 mm and wall angle of size 24x24x0.3 mm and laying false ceiling tiles of approved texture in the grid including, required cutting/ making, opening for services like diffusers, grills, light fittings, fixtures, smoke detectors etc. Main "T" runners to be suspended from ceiling using GI slotted cleats of size 27 x 37 x 25 x1.6 mm fixed to ceiling with 12.5 mm dia and 50 mm long dash fasteners, 4 mm GI adjustable rods with galvanised butterfly level clips of size 85 x 30 x 0.8 mm spaced at 1200 mm center to center along main T, bottom exposed width of 24 mm of all T-sections shall be pre-painted with polyester paint, all complete for all heights as per specifications, drawings and as directed by Engineer-in-charge.				-
	12.52.1 RA	GI Metal Ceiling Lay in plain Tegular edge Global white color tiles of size 595x595 mm, and 0.5 mm thick with 8 mm drop; made of G I sheet having galvanizing of 100 gms/sqm (both sides inclusive) and electro statically polyester powder coated of thickness 60 microns (minimum), including factory painted after bending.	24.00	Sqm	1232.98	29,591.52
46	13.4	12 mm cement plaster of mix :				
	13.4.1 RA	1:4 (1 cement: 4 coarse sand)	530.00	Sqm	99.38	52671.40
47	13.5	15 mm cement plaster on rough side of single or half brick wall of mix :				
	13.5.2 RA	1:6 (1 cement: 6 coarse sand)	400.00	Sqm	114.32	45728.00
48	13.16.1 RA	6mm cement plaster of mix 1:3 (1cement :3 fine sand)	120.00	Sqm	79.42	9530.40
49	13.18 RA	Neat cement punning (excluding cost of cement)	100.00	Sqm	18.34	1834.00
50	13.26 RA	Providing and applying plaster of paris putty of 2 mm thickness over plastered surface to prepare the surface even and smooth complete.	720.00	Sqm	81.57	58730.40
51	13.42	Distempering with 1st quality acrylic distemper (ready mixed) of approved manufacturer, of required shade and colour complete, as per manufacturer's specification.				
	13.42.1 RA	Two or more coats on new work.	720.00	Sqm	35.83	25797.60

52	13.43	Applying one coat of water thinnable cement primer of approved brand and manufacture on wall surface :				
	13.43.1CS RA	Water thinnable cement primer.	720.00	Sqm	24.59	17704.80
53	13.46	Finishing walls with Acrylic Smooth exterior paint of required shade :				
	13.46.1 RA	New work (Two or more coat applied @ 1.67 ltr/10 sqm over and including priming coat of exterior primer applied @ 2.20 kg/ 10 sqm)	400.00	Sqm	60.04	24016.00
54	13.61	Painting with synthetic enamel paint of approved brand and manufacture to give an even shade :				
	13.61.1 RA	Two or more coats on new work.	40.00	Sqm	50.19	2007.60
55	15.2	Demolishing cement concrete manually/ by mechanical means including disposal of material within 50 metres lead as per direction of Engineer - in - charge.				
	15.2.1	Nominal concrete 1:3:6 or richer mix (i/c equivalent design mix).	10.00	Cum	671.05	6,710.50
56	15.7	Demolishing brick work manually/ by mechanical means including stacking of serviceable material and disposal of unserviceable material within 50 metres lead as per direction of Engineer-in-charge.				
	15.7.4	In cement mortar	8.00	Cum	566.60	4,532.80
57	15.9	Demolishing stone rubble masonry manually/ by mechanical means including stacking of serviceable material and disposal of unserviceable material within 50 metres lead as per direction of Engineer-in-charge				
	15.9.2	In cement mortar	10.00	Cum	676.05	6,760.50
58	16.3	Supplying and stacking at site.				
	16.3.9 RA	Good earth (hard/soft copra)	48.00	Cum	260.72	12,514.56
59	17.1	Providing and fixing water closet squatting pan (Indian type W.C. pan) with 100mm sand cast Iron P or S trap, 10 litre low level white P.V.C. flushing cistern, including flush pipe, with manually controlled device (handle lever) conforming to IS : 7231, with all fittings and fixtures complete including cutting and making good the walls and floors wherever required :				
	17.1.1 RA	White Vitreous china Orissa pattern W.C. pan of size 580x440mm with integral type foot rests.	1.00	Each	2521.13	2,521.13
60	17.2	Providing and fixing white vitreous china pedestal type water closet (European type W.C. pan) with seat and lid, 10 litre low level white P.V.C. flushing cistern, including flush pipe, with manually controlled device (handle lever), conforming to IS : 7231, with all fittings and fixtures complete including cutting and making good the walls and floors wherever required :				
	17.2.1 RA	W.C. pan with ISI marked white solid plastic seat and lid	1.00	Each	2523.62	2,523.62

61	17.4	Providing and fixing white vitreous china flat back or wall corner type lipped front urinal basin of 430x260x350 mm and 340x410x265 mm sizes respectively with automatic flushing cistern with standard flush pipe and C.P. brass spreaders with brass unions and G.I clamps complete, including painting of fittings and brackets, cutting and making good the walls and floors wherever required :				
	17.4.1 RA	One urinal basin with 5 litre white P.V.C. automatic flushing cistern	1.00	Each	2596.67	2,596.67
62	17.7	Providing and fixing wash basin with C.I. brackets, 15 mm C.P. brass pillar taps, 32 mm C.P. brass waste of standard pattern, including painting of fittings and brackets, cutting and making good the walls wherever require :				
	17.7.4 RA	White Vitreous China Flat back wash basin size 550x400 mm with single 15 mm C.P. brass pillar tap.	2.00	Each	1316.53	2,633.06
63	17.10	Providing and fixing Stainless Steel A ISI 304 (18/8) kitchen sink as per IS 13983 with C.I. brackets and stainless steel plug 40 mm including painting of fittings and brackets, cutting and making good the walls wherever required :				
	17.10.2	Kitchen sink without drain board				
	17.10.2.3 RA	470x420 mm bowl depth 178 mm.	1.00	Each	2514.15	2,514.15
64	17.31 RA	Providing and fixing 600x450 mm beveled edge mirror of superior glass (of approved quality) complete with 6 mm thick hard board ground fixed to wooden cleats with C.P. brass screws and washers complete.	2.00	Each	606.83	1,213.66
65	17.73	Providing and fixing PTMT towel rail complete with brackets fixed to wooden cleats with CP brass screws with concealed fitting arrangement of approved quality and colour.				
	17.73.1 RA	450MM long towel rail with total length of 495mm, 78mm wide and effective height of 88mm, weighing not less than 170gms.	1.00	Each	336.97	336.97
66	18.7	Providing and fixing Chlorinated Polyvinyl Chloride (CPVC) pipes, having thermal stability for hot & cold water supply including all CPVC plain & brass threaded fittings including fixing the pipe with clamps at 1.00 m spacing. This includes jointing of pipes & fittings with one step CPVC solvent cement and testing of joints complete as per direction of Engineer in Charge.				
	18.7.2 RA	Internal work - Exposed on wall --20 mm nominal outer dia .Pipes.	20.00	Metre	142.55	2,851.00
67	18.8	Providing and fixing Chlorinated Polyvinyl Chloride (CPVC) pipes, having thermal stability for hot & cold water supply including all CPVC plain & brass threaded fittings i/c fixing the pipe with clamps at 1.00 m spacing. This includes jointing of pipes & fittings with one step CPVC solvent cement and the cost of cutting chases and making good the same including testing of joints complete as per direction of Engineer in Charge.				
	18.8.1 RA	Concealed work, including cutting chases and making good the walls etc. 15 mm nominal outer dia .Pipes	40.00	Metre	198.20	7,928.00

68	18.54	Providing and fixing PTMT bib cock of approved quality and colour.				
	18.54.1 RA	15mm nominal bore, 86 mm long. Weighing not less than 88 gms.	5.00	Each	112.29	561.45
69	18.58	Providing and fixing PTMT grating of approved quality and colour.				
	18.58.1	Circular type.				
	18.58.1.1 RA	100 mm nominal dia.	4.00	Each	37.67	150.68
70	19.1	Providing, laying and jointing glazed stoneware pipes class SP-1 with stiff mixture of cement mortar in the proportion of 1:1 (1 cement : 1 fine sand) including testing of joints etc. complete :				
(a)	19.1.2 RA	150 mm diameter	30.00	Metre	192.60	5,778.00
(b)	19.1.3 RA	200 mm diameter	10.00	Metre	280.17	2,801.70
71	21.1	Providing and fixing aluminium work for doors, windows, ventilators and partitions with extruded built up standard tubular sections/appropriate Z sections and other sections of approved make conforming to IS: 733 and IS: 1285, fixing with dash fasteners of required dia and size, including necessary filling up the gaps at junctions, i.e. at top, bottom and sides with required EPDM rubber/ neoprene gasket etc. Aluminium sections shall be smooth, rust free, straight, mitred and jointed mechanically wherever required including cleat angle, Aluminium snap beading for glazing / paneling, C.P. brass / stainless steel screws, all complete as per architectural drawings and the directions of Engineer-in-charge. (Glazing, paneling and dash fasteners to be paid for separately)				
	21.1.1	For fixed portion.				
	21.1.1.2 RA	Powder coated aluminium (minimum thickness of powder coating 50 micron)	100.00	Kg	334.11	33,411.00
72	21.1.2	For shutters of doors, windows & ventilators including providing and fixing hinges/ pivots and making provision for fixing of fittings wherever required including the cost of EPDM rubber / neoprene gasket required.(Fittings shall be paid for separately)				
	21.1.2.2 RA	Powder coated aluminium (minimum thickness of powder coating 50 micron)	50.00	Kg	379.04	18,952.00
73	21.2	Providing and fixing 12 mm thick prelaminated particle board flat pressed three layer or graded wood particle board conforming to IS:12823 Grade I Type II in panelling fixed in aluminium doors, windows shutters and partition frames with C.P.brass/stainless steel screws, etc. complete as per architectural drawings and directions of Engineer-in-charge.				
	21.2.2 RA	Pre-laminated particle board with decorative lamination on both sides	40.00	Sqm	785.68	31,427.20
74	21.3	Providing and fixing glazing in aluminium door, window, ventilator shutters and partitions etc. with EPDM rubber/neoprene gasket etc. complete as per the architectural drawings and the directions of Engineer-in-Charge. (Cost of aluminium snap beading shall be paid in basic item):				
	21.3.1 RA	With float glass panes of 4.0 mm thickness	40.00	Sqm	637.82	25,512.80

[illegible]

SCHEDULE – “B”								
Name of work : Construction of Control Room for 5 MWp Solar Power Plant in Township of BHEL Bhopal.								
Issued free of cost at Gadia Store/ sub-division								
1	Cement							
2	Reinforcement							
Note: If the contractor fails to return to the department unconsumed portion of total quantities of respective free issue material after completion of work or as and when instructed by Engineer-incharge, recovery at twice the respective material cost of the item as procured/decided by BHEL shall be made from the contractor's bill(s).								
SCHEDULE – “C”								
1. Electricity charges @ Rs.66.00/- per M.T. of fabrication of structural steel.								
Signature of Contractor								