

BHARAT HEAVY ELECTRICALS LIMITED
RAMACHNADRAPURAM UNIT, HYDERABAD
(Township Administration)

Name of Work:- Rate contract for carrying out Routine Annual Civil Maintenance works like Masonry, Flooring, Plumbing, Fabrication, Carpentry, Painting, and Horticulture works.etc. in Township for year 2020-2021.

BHEL Item No	Description	Qty.	Unit	LPR Rate	Amount
EARTH WORK					
1	Earth work in excavation by mechanical means (hydraulic excavator) manual means over areas (exceeding 30cm in depth. 1.5m in width as well as 10 sqm on plan) including disposal of excavated earth lead upto 50m and lift upto 1.5m, disposal earth to be levelled and neatly dressed				
1.1	All kinds of soil	2500	cum	81.65	204125.00
2	Earth work in excavation by mechanical means (hydraulic excavator) manua means over areas (exceeding 30cm in depth. 1.5m in width as well as 10 sqm on plan) including disposal of excavated earth lead upto 50m and lift upto 1.5m, disposal earth to be levelled and neatly dressed				
2.1	Ordinary rock	1	cum	124.82	124.82
2.2	Hard rock (blasting prohibited)	1	cum	309.35	309.35
3	Filling available excavated earth (excluding rock) in trenches, plinth sides of founding each deposited layers not exceeding 20cm in depth consolidating each deposited layer by ramming and watering, lead upto 50m and lift up to 1.5.	100	cum	52.90	5290.00
4	Surface dressing of the ground including removing vegetation and inequalities not exceeding 15cm deep and disposal of rubbish lead upto 50m and lift upto 1.5m				
4.1	All kinds of soil	1	One Sqm	590.31	590.31
7	Feling trees of the girth (measured at a height of 1m above ground level) including cutting of trunks and branches removing the roots and stacking of serviceable material and disposal of unserviceable material				
7.1	Beyond 30cm girth upto and including 60cm girth	200	each	93.54	18708.00
7.2	Beyond 60cm girth upto and including 120cm girth	100	each	413.40	41340.00
7.3	Beyond 120cm girth upto and including 240cm girth	100	each	1910.16	191016.00
7.4	Above 240cm girth	50	each	3832.12	191606.00
8	Earth work excavation in slushy soils including removing the sewage water and scum from the pit of broken sewer lines,man holes, chambers etc., to enable building new ones (sewage gangman are to be engaged if necessary) etc., complete all as directed by Engineer-in-charge.(while excavating care should be taken about cables and shall intimate to Electrical Department/ Telephones Department to take care of the cables).	100	One Cum	135.00	13500.00
9	Providng lawn turfing with carpet grass of approved variety and levelling the surfaces after turfing including th watering the area for 30 days etc complete as directed by Engg In charge.	100	Sqm	99.98	9998.00
10	Supply of Cattle manure of good quality as directed by Engineer in charge etc.	1	Cum	201.98	201.98
CEMENT MORTAR WORKS					
11	Cement mortar 1:1(1 cement 1 fine sand)	1	cum	9.50	9.50
12	Cement mortar 1:2(1 cement 2 fine sand)	1	cum	270.37	270.37
13	Cement mortar 1:3(1 cement 3 fine sand)	1	cum	401.36	401.36
14	Cement mortar 1:4(1 cement 4 fine sand)	1	cum	461.22	461.22
15	Cement mortar 1:5(1 cement 5 fine sand)	1	cum	493.45	493.45
16	Cement mortar 1:6(1 cement 6 fine sand)	1	cum	521.10	521.10
17	Cement mortar 1.2 (1 cement 2 coarse sand)	1	cum	543.80	543.80
18	Cement mortar 1.3 (1 cement 3 coarse sand)	1	cum	709.33	709.33
19	Cement mortar 1.4 (1 cement 4 coarse sand)	1	cum	769.18	769.18
20	Cement mortar 1:5 (1 cement 5 coarse sand)	1	cum	801.42	801.42
21	Cement mortar 1.6 (1 cement 6 coarse sand)	1	cum	829.06	829.06
22	Cement mortar 1:2(1 cement 2 stone dust)	1	cum	432.72	432.72
23	Cement mortar 1:2(1 cement 2 marble dust)	1	cum	475.44	475.44
24	Cement mortar 1:5(1 cement 5marble dust)	1	cum	724.43	724.43
CEMENT CONCRETE WORKS					

BHEL Item No	Description	Qty.	Unit	LPR Rate	Amount
25	Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering- All work upto plinth level				
25.1	1:1 1/2:3(1 cement 1 $\frac{1}{2}$ coarse sand :3 graded stone aggregate 20mm nominal size)	1	cum	1586.50	1586.50
25.2	1:2:4 (1cement 2:coares sand 4 grade stone aggregate 20mm nominal size)	1	cum	1630.99	1630.99
25.3	1:2:4 (1cement 2:coares sand 4 grade stone aggregate 40mm nominal size)	1	cum	1564.53	1564.53
25.4	1:3:6 (1cement 3:coares sand 6 grade stone aggregate 20mm nominal size)	1	cum	1685.69	1685.69
25.5	1:4:8 (1cement 4:coares sand 8 grade stone aggregate 40mm nominal size)	1	cum	1600.84	1600.84
25.6	1:4:8 (1 cement : 4 fine sand : 8 graded stone aggregate 40 mm nominal size)	1	cum	1442.55	1442.55
25.7	1:5:10 (1 cement : 5 coarse sand : 10 graded stone aggregate 40 mm nominal size)	1	cum	1598.56	1598.56
26	Providing and laying cement concrete in retaining walls return walls (any thickness) including attached pilasters, columns piers abutments pillars posts struts buttresses string or lacing courses parapets coping bed blocks anchor blocks plain window sillis fillets etc. upto floor five level excluding the cost of centering shuttering and finishing.				
26.1	1:1 $\frac{1}{2}$:3 (1 cement:1 $\frac{1}{2}$ coarse sand:3 graded stone aggregate 20 mm nominal size)	1	cum	2065.16	2065.16
27	Centering and shuttering including strutting, propping etc. and removal of form work for :				
27.1	Foundations, footings, bases for columns	1	sqm	105.34	105.34
28	Providing and fixing at or near ground level precast cement concrete in kerbs, edgings etc. as per approved pattern and setting in position with cement mortar 1:3 (1cement 3 coarese sand) including the cost of required centering shuttering and finishing smooth with 6 mm thick cement plaster 1:3 (1 cement :3 fine sand) on exposed surfaces complete				
28.1	1:2:4(1cement :2 coarse sand :4 graded stone aggriate 20mm nominal size)	1	cum	1706.87	1706.87
REINFORCED CEMENT CONCRETE WORKS					
29	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				
29.1	1:1.5:3(1cement 1.5 coarse sand 3 grade stone aggriate 20mm nominal size)	1	cum	1706.36	1706.36
29.2	1:2:4(1cement 2 coarse sand 4 grade stone aggriate 20mm nominal size)	27	cum	1750.83	47272.41
30	Reinforced cement concrete work in walls (any thickness) including attached pilasters buttresses plinth and string course fillets columns pillars piers abutments posts and struts etc. up to floor five level excluding cost of centering shuttering finishing and reinforcement				
30.1	1:1.5:3(1cement 1.5 coarse sand 3 grade stone aggriate 20mm nominal size)	2	cum	2110.89	4221.78
30.2	1:2:4(1cement 2 coarse sand 4 grade stone aggriate 20mm nominal size)	10	cum	2155.35	21553.50
31	Reinforced cement concrete work in beams, suspended floors, roofs having slope upto 15° landings, balconies, shelves, chajjas, intels, bands, plain window sills, staircases and spiral strair cases upto floor five level excluding the cost of centering shuttering finishing and reinforcement with 1:2:4(1cement 2 coarse sand 4 grade stone aggriate 20mm nominal size)	1	cum	2249.87	2249.87
32	Centering and shuttering including strutting propping etc. and removal of form work for :				
32.1	Foundations , Footings, bases for columns	100	sqm	105.34	10534.00
32.2	walls (any thickess) including attached pilasters, butteresses plinth and string courses etc.	1	sqm	263.36	263.36
32.3	Suspended floors roofs, landing balconies and acceess platform	8	sqm	196.43	1571.44
32.4	Shelves (cast in situ)	1	sqm	196.43	196.43
32.5	Lintels, beams, plinth beams, girders, bressumerns and cantilevers.	1	sqm	165.53	165.53
32.6	Columns piers, abutments, pillars, posts and struts.	400	sqm	230.76	92304.00

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32.7	Stairs, (excluding landing) except spiral staircases	1	sqm	205.96	205.96
32.8	Small lintels not exceeding 1.5m clear span, moulding as in cornices, window sills, string courses, bands, coping bed plates, anchor blocks and the like	1	sqm	105.34	105.34
33	Providing precast cement concrete jali 1:2:4(1cement 2 coarse sand 4 graded stone aggregate 6mm nominal size) reinforced with 1.6mm dia mild steel wire including centering and shuttering roughening cleaning fixing in cement mortar 1:3 (1cement 3 fine sand)etc. complete excludign plastering of the jambs sills and soffits.				
33.1	50mm thick	1	sqm	364.90	364.90
33.2	40mm thick	1	sqm	318.92	318.92
33.2	25mm thick	1	sqm	286.74	286.74
ENCASING ROLLED STEEL SECTION					
34	Encasing rolled steel section, in beams and columns with cement concrete 1:2:4(1cement 2 coarse sand 4 graded stone aggregate 12.5mm nominal size) including centering and shuttering complete but excluding cost of reinforcement.	1	cum	3268.25	3268.25
35	Reinforcement for RCC work including straightening, cutting bending placing in position and binding all complete.				
35.1	Cold twisted bars	50	kg	4.65	232.50
35.2	Hot rolled deformed bars	50	kg	4.65	232.50
36	Providing and filling in position blown bitumen in expansion joints.	1	per cm depth per cm width per 100m	316.74	316.74
37.1	Providing and laying in position machine batched machine mixed and machine vibrated design mix cement concrete of specified grade for reinforced cement concrete work including pumping of concrete to site of laying but excluding the cost of centering shuttering finishing and reinforcement. including admixtures in recommended proportions as per IS 9103 to accelerate retard setting of concrete improve workability without impairing strength and durability as per direction of Engineer -in Charge. M-25 grade reinforced cement concrete by using 410kg of cement per cum of concrete. all work up to floor V level with readymix concrete.	1	cum	3606.02	3606.02
38	Add or deduct for providing richer or leaner mixes respectively at all floor levels.				
38.1	Providing M-30 grade concrete by using 420kg of cement per cum of concrete instead of M-25 grade B.M.C/ R.M.C	1	cum	39.77	39.77
38.2	Providing M-35 grade concrete by using 428kg of cement per cum of concrete instead of M-25 grade B.M.C/R.M.C.	1	cum	79.59	79.59
38.3	Providing M-40 grade concrete by using 435kg of cement per cum of concrete instead of M-40 grade B.M.C/R.M.C.	1	cum	117.70	117.70
BRICK MASONRY					
39	Brick work with FPS bricks of class designation 75 in foundation and plinth in:				
39.1	cement mortar 1:4(1cement :4 coarse sand)	51	cum	1811.46	92384.46
39.2	cement mortar 1:6(1cement :6 coarse sand)	10	cum	1809.60	18096.00
40	Brick work FPS brick of class designation 75 in superstructure above plinth level up to floor V level in all shapes and sizes in				
40.1	cement mortar 1:4(1cement :4 coarse sand)	1	cum	2164.67	2164.67
40.2	cement mortar 1:6(1cement :6 coarse sand)	3	cum	2162.80	6488.40
41	Half brick masonry with FPS brick of class designation 75 in superstructure above plinth level upto floor V level.				
41.1	cement mortar 1:3(1cement :3 coarse sand)	10	sqm	199.93	1999.30
41.2	cement mortar 1:4(1cement :4 coarse sand)	10	sqm	199.70	1997.00
STONE MASONRY					
42	Coursed rubble masonry (second sort) with hard stone in foundation and plinth with				
42.1	cement mortar 1:6(1cement 6 coarses sand)	10	cum	1727.14	17271.40

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43	Stone work (machine cut edges Veneer work) for wall lining upto 10 m height, backing filled with a grout of 12 mm thick cement mortar 1:3 (1 Cement : 3 coarse sand) and jointed with Cement mortar 1:2 (1 cement : 2 stone dust), including rubbing and polishing complete. (To be secured to the backing and the sides by means of cramps and pins which shall be paid for separately).				
43.1	Kota stone slabs exposed face dressed and rubbed.				
43.2	25 mm thick	1	sqm	684.42	684.42
44	Stone tile work for wall lining upto 10 m height with special adhesive over 12 mm thick bed of cement mortar 1:3 (1 cement : 3 coarse sand), including pointing in white cement with an admixture of pigment to match				
44.1	8mm thick (mirror polished and machine cut edge)				
44.2	Granite stone of any colour and shade	1	sqm	864.28	864.28
WOOD/ PVC WORKS					
45	Providing wood work in frames of doors windows, clerestory windows and other frames, wrought framed and fixed in position				
45.1	Second class teak wood	1	cum	52032.20	52032.20
46	Providing and fixing panelled or panelled and glazed shutters for doors, windows and clerestory windows including ISI marked black enamelled M.S butt hinges with necessary screws excluding panelling which will be paid for separately.				
46.1	Second class teak wood				
46.2	35mm thick shutters	1	sqm	1481.48	1481.48
46.3	30mm thick shutters	1	sqm	1317.54	1317.54
47	Providing and fixing 35mm thick factory made laminated veneer lumber door shutter conforming to IS 14616 and TDS 15:2001(part B) including ISI marked black enameled M.S butt hinges with necessary screws as per directions of engineer in charge and panelling with panels of				
47.1	12mm thick plain grade-1, medium density flat pressed three layer particle board FPT-1 or grade wood particle board FPT-1 IS :3087 marked bonded with BWP type synthetic resin adhesive as per IS :848	1	sqm	1394.92	1394.92
47.2	12mm thick pre laminated particle board (decorative lamination on both sides) grade- 1, medium density flat pressed three layer particle board FPT-1 or graded wood particle board FPT-1, conforming to IS 3087 bonded with BWP type synthetic resin adhesive as per IS 848 and prelaminated conforming to IS 12823 grade 1 type II marked	1	sqm	1500.17	1500.17
48	Providing and fixing panelling or panelling and glezing in panelled or panelled and glazed shutters for doors windows and clerestory windows (Area of opening for panel inserts excluding portion inside grooves or rebates to be measured) panelling for panelled or panelled and glazed shutters 25mm to 40mm thick				
48.1	Second class teak wood	1	sqm	1186.62	1186.62
49	Providing and fixing glazed shutters for doors windows and clerestory windows using 4mm thick float glass panes including black enamelled ISI marked MS butt hinges with necessary screws.				
49.1	Second class teak wood				
49.2	30mm thick	1	sqm	1601.95	1601.95
50	Providing and fixing 25mm thick shutters for cup board etc.				
50.1	Panelled or Panelled and glazed shutters				
50.2	Second class teak wood including ISI marked anodised aluminium butt hings with necessary screws	1	sqm	1493.37	1493.37
50.3	Glazed shutters				
50.4	Second class teak wood including ISI marked anodised aluminium butt hings with necessary screws	1	sqm	1500.16	1500.16

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51	Providing and fixing pre-laminated flat pressed 3 layer (medium density) particle board or grded wood particle board IS 3087 marked with one side decorative and other side balancing lamination grade I, type II exterior grade IS 12823 marked in shelves with screws and fitting wherever required edges to be painted with polyurethane prime fitting to be separately)				
51.1	18mm thick	1	sqm	667.34	667.34
51.2	25mm thick	1	sqm	720.56	720.56
52	Providing and fixing ISI marked flush door shutters conforming to IS 2202 (part I) decorative type core of block board construction with frame of 1st class hard wood and well matched teak 3 ply veneering with vertical grains or cross band and face veneers on both faces of shutters				
52.1	30mm thick including ISI marked stainless steel butt hinges with necessary screws	1	sqm	1203.70	1203.70
52.2	25mm thick (for cupboard) including ISI marked nickel plated bright finished MS piano hinges IS 3818 marked with necessary screws	1	sqm	1085.71	1085.71
52.3	Providing and fixing 2nd class teak wood plain lining tongued and grooved on and including wooden plugs complete with necessary screws and priming coat on unexposed surface - 12 mm thick	1	sqm	913.20	913.20
53	Supply, fabrication and fixing of Ornamental M.S. grills for staircase door frames with shutters of approved quality and design including fixing of MS hold fasts in Cement concrete, cost of all materials etc., complete as directed by the Engineer-in-charge.	100	kg	41.03	4103.00
54	Providing and fixing MS grills of required pattern in frames of windows etc. with MS flats, square or round bars etc. all complete				
54.1	Fixed to steel windows by welding	1	kg	33.09	33.09
54.2	Fixed to opening / wooden frames with rawl plugs screws etc	100	kg	37.80	3780.00
55	Providing and fixing ISI marked MS pressed butt hinges bright finished with necessary screws etc. complete				
55.1	125x65x2.12mm	1	each	17.21	17.21
55.2	100x58x1.90mm	1	each	13.16	13.16
55.3	75x47x3.10	1	each	10.53	10.53
55.4	50x37x1.50mm	1	each	5.57	5.57
56	Providing and fixing IS 1341 marked MS heavy weight butt hinges with necessary screws etc. complete				
56.1	125x90x4.00mm	1	each	30.56	30.56
56.2	100x75x3.50mm	1	each	18.74	18.74
56.3	75x60x3.10mm	1	each	12.13	12.13
56.4	50x40x2.50mm	1	each	7.32	7.32
57	Providing and fixing factory made UPVC door frame made of UPVC extruded section having an overall dimensions as below (tolerance - +1mm) with wall thickness 2.0mm -+ 0.2mm, corners of the door frame to be mitred and welded of plastic, galvanized brackets and stainless steel screws . the hinges side vertical of the frames reinforced by galvanized stainless steel hinges fixed to the frame complete as per manufactures specification and direction of engineer in charge				
57.1	Extruded section profile size 48x40mm	51	mtr	114.62	5845.62
57.2	Extruded Section Profile size 42x50mm	6	mtr	109.62	657.72
58	Providing and fixing to existing door frames				

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58.1	24mm thick factory made PVC door shutters made of styles and rails of a UPVC hollow section of size 59x24mm and wall thickness 2mm +- 0.2mm with inbuilt edging on both sides. The styles and rails mitred and joined at the corners by means of MS galvanised / plastic brackets of size 75x220 mm having wall thicknells 1.0mm and stainless steel screws. the styles of the shutter reinforced by inserting galvanised MS tube of size 20x20mm and 1mm +- 0.1mm wall thickness. the lock rail made up of H section a UPVC hollow section of size 100x24 mm and 2 mm +- 0.2mm wall thickness fixed to the shutter styles by means of plastic/ galvanised MS U cleats. the shutter frame filled with a UPVC multi chambered single panel of size not less than 620 mm having over all thickness of 20mm and 1mm +- 0.1mm wall thickness. the panels filled vertically and tie bar at two places by inserting horizontally 6mm galvanised MS rod and fastened with nuts and washers, complete as per manufacturer's specification and washers complete as per manufacturer's specification and direction of engineer in charge. (for W.C and bathroom door shutter)	43	sqm	1495.74	64316.82
58.2	30mm thick factory made polyvinyl chloride (PVC) door shutter made of styles and rails of a UPVC hollow section of size 60x30mm and wall thickness 2mm +- 0.2mm with inbuilt decorative moulding edging on one side. The styles and rails mitred and joined at the corners by means of MS galvanised/ plastic brackets of size 75x220mm having wall thickness 1.0mm and stainless steel screws. the styles of the shutter reinforced by inserting galvanised MS tube of size 25x20mm and 1mm +- 0.1mm wall thickness. the lock rail made up of H section a UPVC hollow section of size 100x30mm and 2mm +- 0.2mm wall thickness fixed to the shutter styles by means of plastic galvanised MS U cleats. the shutter styles by means of plastic / galvanised MS U cleats. the shutter frame filled with a UPVC multi chambered single panel of size not less than 620mm having over all thickness of 20mm and 1mm +- 0.1mm wall thickness. the panels filled vertically and tie bar at two places by inserting horizontally 6mm galvanised MS rod and fastened with nuts and washers, complete as per manufacturer's specification and direction of engineer in charge	10	sqm	1565.98	15659.80
58.3	25mm thick PVC flush door shutters made out of a one piece multi chamber extruded PVC section of the size of 762 mm x 25mm or less as per requirement with an average wall thickness of 1mm +- 0.3mm. PVC foam end cap of size 23x10mm are provided on both vertical edges to ensure the overall thickness of 25mm. an MS tube having dimensions 19mmx19mm is inserted along the hinges side of the door. core of the door shutter should be filled with high density polyurethane foam. the top and bottom edges of the shutter are covered with an end cap of the size 25mm x 11mm. door shutter shall be reinforced with special polymeric reinforcements as per manufacturer specification and direction of Engineer in charge to take up necessary hardware and fixtures. stickers indicating the locations of hardware will be pasted at appropriate places	5	sqm	1513.36	7566.80
59	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 foamsheet mitred at corners and joined with 2 Nos. of 150mm long brackets of 15x15mm M.S. square tube, the vertical door profiles to be reinforced with 19x19mm M.S. square tube of 19 gauge, EPDM rubber gasket weatherseal 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.	5	mtr	244.96	1224.80

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60	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 19 mm x 19 mm for styles and 15x15 mm for top & bottom rails. M.S. frame shall have a coat of steel primers of approved make and manufacture . M.S. frame covered with 5 mm thick heat moulded PVC 'C' channel of size 30 mm thickness, 70 mm width out of which 50 mm shall be flat and 20 mm shall be tapered in 45 degree angle on both side forming styles and 5 mm thick, 95 mm wide PVC sheet out of which 75 mm shall be flat and 20 mm shall be tapered in 45 degree on the inner side to form top and bottom rail and 115 mm wide PVC sheet out of which 75 mm shall be flat and 20 mm shall be tapered on both sides to form lock rail. Top, bottom and lock rails shall be provided both side of the panel. 10 mm (5 mm x 2) thick, 20 mm wide cross PVC sheet be provided as gap insert for top rail & bottom rail, paneling of 5 mm thick both side PVC sheet to be fitted in the M.S. frame welded/ sealed to the styles & rails with 7 mm (5 mm+2 mm) thick x 15 mm wide PVC sheet beading on inner side, and joined together with solvent cement adhesive. An additional 5 mm thick PVC strip of 20 mm 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.				
60.1	30 mm thick plain PVC door shutters	1	sqm	1512.79	1512.79
60.2	30 mm thick pre laminated PVC door shutters	1	sqm	1789.91	1789.91
61	Supplying and fixing of medium Indian teakwood window shutters 30 mm thick fully glazed with 3 mm thick glass of approved quality including cost and fixing of MS fixtures, fittings and furniture of superior quality etc., complete as directed by the Engineer-in-charge.	1	One Sqm	1595.92	1595.92
62	Supplying and fixing of medium Indian teak wood window shutters 30 mm thick fully panelled including fixing of M.S. fixtures, fittings and furniture of superior quality etc., complete as directed by the Engineer-in-charge.	1	One Sqm	1527.70	1527.70
63	Supplying and fixing of medium Indian teak wood window shutters 30 mm thick partly panelled and partly glazed with 3 mm thick glass of approved quality including cost and fixing of MS fixtures, fittings and furniture of superior quality etc., complete as directed by the Engineer-in-charge.	10	One Sqm	1405.93	14059.30
64	Supply and fixing well seasoned medium Indian teak wood window / ventilator frames made out of scantling of size 75x75 mm including fixing of M.S hold fasts 16 mm dia MS rounds spaced at not more than 10.5cm centre to centre, cost of all materials etc., complete as directed by the Engineer-in-charge. (This includes dismantling the existing frames, brick work, P.C.C etc., and making good to a neat finish etc., complete wherever necessary).	10	One Sqm	1424.93	14249.30
65	Supply and fixing well seasoned medium Indian teak wood ventilator shutter 30 mm thick fully glazed top/side hung type, glazing with 3mm thick glass of approved quality.	10	One Sqm	1424.93	14249.30
66	Supplying and fixing weldmesh door partly panelled and partly weldmesh double leaf shutters 30 mm thick using medium Indian teakwood and weldmesh of size 75x25 mm, 10x8 guage including supplying and fixing of M.S. fixtures, fittings and furniture of superior quality etc., complete as directed by the Engineer-in-charge.	5	One Sqm	1405.93	7029.65
67	Supply and fixing weldmesh door double leaf shutter 30 mm thick using best Indian teakwood and weldmesh of size 75 x 25mm, 10 x 8 guage including supplying and fixing of MS fixtures, fittings and furniture of superior quality etc., complete as directed by Engineer-in-charge.	10	One Sqm	1263.44	12634.40
68	Supplying and fixing of weldmesh of size 75x25mm, 10x8 guage with 75 x 25 mm seasoned medium Indian teakwood reapers to the existing windows including 2 coats of painting with synthetic enamel paint of approved shade and brand over a coat of primer, making holes wherever necessary for operating the fixtures, furniture, cost of all materials etc., complete.	6	One Sqm	647.70	3886.20

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69	Supplying and fixing of M.S flymesh of an approved quality to the existing door and window shutters with necessary wooden beeding wherever necessary, including removing the existing flymesh, cost of all materials etc. complete	10	One Sqm	319.53	3195.30
70	Supplying and fixing of medium Indian teak wood door shutters 30 mm thick partly panelled and partly flymesh of approved quality including cost and fixing of M.S. fixtures, fittings and furniture of superior quality etc. complete	1	One Sqm	1638.23	1638.23
71	Supplying and fixing of medium Indian teak wood door shutters 30 mm thick with fully flymesh of approved quality including cost and fixing of M.S. fixtures, fittings and furniture of superior quality etc. complete	1	One Sqm	1414.57	1414.57
72	Supplying and fixing of best approved quality aluminium sheeting 24 gauge to the faces and edge of door shutters including fixing with best quality GI screws and cup washers, cost of all materials etc., complete as directed by the Engineer-in-charge. (The measurement shall be made for both sides of door only).	1	One Sqm	188.26	188.26
73	Supplying of medium Indian teak wood planks of 19 mm thick in various sizes as directed upto a length of 2.40 M.	1	One Sqm	1183.99	1183.99
74	Supplying and fixing of seasoned medium Indian teakwood reapers of size 50 x 25 mm horizontally on the wall surface by providing wooden pegs and fixing with MS screws etc., complete.	1	One Rmt	50.52	50.52
75	Supplying and fixing in position medium Indian teakwood cupboard shutters having frame of size 75 x 25 mm scantling and fixing 3 mm thick plywood sheets on both sides including cost of MS hinges, Nickle coated latches and oxidised aluminium fixtures and furniture of approved quality etc., complete as directed by the Engineer-in-charge.	1	One Sqm	928.24	928.24
76	Supply and fixing commercial Plywood sheets 4 mm thick plain lining with necessary screws, priming coat on exposed surface etc complete all as directed by Engineer-in-charge.	1	One Sqm	294.48	294.48
77	Repairs to the existing doors, windows , ventilators and cup boards including frame, shutters, fittings, weldmesh, T.W beadings etc., all as directed by the Engineer-in-charge.	10	One Sqm	127.42	1274.20
78	Conveying from the stores of wooden / PVC - single / double leaf door shutters and fixing in position at places as directed with all required fittings etc (Door will be free issue from BHEL store)	1	One Sqm	114.52	114.52
79	Supplying and fixing laminated sheet of thickness not less than 1 mm of required design, brand, quality and size all as directed by the Engineer-in-charge.	1	One Sqm	248.71	248.71
80	Supplying and fixing M.S aldrop powder coated of 16 mm dia 300 mm long heavy type with plate folded hooks required nuts and bolts as directed by the Engineer-in-charge.	1	Each	126.10	126.10
81	Supplying and fixing M.S aldrop powder coated of 12 mm dia 200 mm long heavy type with required nuts and bolts as directed by the Engineer-in-charge.	1	Each	80.24	80.24
82	Supplying and fixing of PVC netlon mesh of approved colour to the existing windows/Doors mesh shutters/Frames with male and female posting arragements etc. complete as directed by the Engineer-in-charge.	1	One Sqm	167.79	167.79
83	Labour charges for removing of existing old flymesh etc. complete as directed by the Engineer-in-charge.	1	One Sqm	25.25	25.25
84	Supply and fixing of 100 mm vertical blinds including imported spare parts and Indian fabric including cost of materials, fixtures and fittings etc., complete as directed by the Engineer-in-charge.	5	One Sqm	835.83	4179.15
85	Providing and fixing Milkwhite acrylic sheet with 4mm thick & lettering with engraving & embossing.	1	One Sqm	777.24	777.24

BHEL Item No	Description	Qty.	Unit	LPR Rate	Amount
86	Providing & fixing anodised aluminium work for doors, windows, ventilators & partitions with extruded built up standard tubular & other sections of approved make conforming to IS : 733 & IS : 1285, anodised transparent or dyed to required shade according to IS : 1868. (Minimum anodic coating of grade AC 15), fixed with rawl plugs & screws or with fixing clips, or with expansion hold fasteners including necessary filling up of gaps at junctions, at top, bottom and sides with required PVC/Neoprene felt etc., Aluminium sections shall be smooth, rust free, straight, mitred & joined mechanically wherever required including cleat angle. Aluminium snap beading for glazing/panelling, C.P. brass / stainless steel screws, all complete as per architectural drawings & the directions of Engineer-in-charge (glazing and panelling to be paid for separately). for all types of works	1	kg	221.02	221.02
87	Supplying and fixing 12 mm thick Novapan / Duratoff or equivalent exterior grade phenol bended weather resistant melamine faced prelaminated particle board (PTX) for partition frame work door shutters, louvers with lipping etc., with teakwood reaper including cost of all materials, labour etc., complete.	1	sqm	384.92	384.92
88	Supply and fixing of plain glass panes / pin headed / ground glass panes frosted of 4 MM thick of required sizes with proper wooden beedings/glass putty required for fixing to the existing broken glass panes along with the beading/glass putty, cost of all materials and labour etc complete all as directed	10	sqm	370.48	3704.80
89	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): <u>With float glass panes of 5.50 mm thickness</u>	2	sqm	551.34	1102.68
90	Providing and fixing flat pressed 3 layer particle board medium density exterior grade (Grade-I) or graded wood particle board IS : 3087 marked to frame, backing or studding with screws etc. complete (Frames, Backing or studding to be paid separately)				
90.1	12 mm thick	1	sqm	297.04	297.04
90.2	18 mm thick	10	sqm	345.88	3458.80
STEEL WORK*					
91	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	10	kg	5.09	50.90
92	Structural steel work riveted bolted or welded in built up sections, strusses and framed work, hoisting fixing in position and applying a priming coat of approved steel primer all complete	10	kg	8.26	82.60
93	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 dia steel pulleys complete with bolts nuts locking arrangement stoppers handles including applying a priming coat of approved steel primer	1	sqm	1537.56	1537.56
94	Providing and fixing 1mm thick MS sheet sliding shutters with frame and diagonal braces of 40x40x6 mm angle iron 3mm MS gusset plates at the juction and corners 25mm dial pully 40x40x6mm angle and T- iron guide at the top and bottom respectively including applying a priming coat of approved steel primer	1	sqm	641.58	641.58
95	Providing and fixing 1mm thick MS sheet door with frame of 40x40x6mm angle iron and 3mm gusset plates at the junctios and corners all necessary fitting complete including applying a priming coat of approved steel primer				
95.1	Using MS angles 40x40x6mm for diagonal braces	1	sqm	678.21	678.21
95.2	Using flat 30x6mm for diagonal braces and central cross piece	1	sqm	679.86	679.86

BHEL Item No	Description	Qty.	Unit	LPR Rate	Amount
96	Supplying and fixing rolling shutters of approved make made of required size MS 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 arrangement for inside and outside locking with push and pull operation complete including the cost of providing and fixing necessary 27.5cm long wire spring grade No. 2 and MS top cover of required thickness for rolling shutters				
96.1	80x1.25mm MS laths with 1.25mm thick top cover	1	sqm	1118.79	1118.79
96.2	80x1.20mm MS laths with 1.20mm thick top cover	1	sqm	963.28	963.28
96.3	80x0.90mm MS laths with 0.90mm thick top cover	1	sqm	898.95	898.95
97	Providing and fixing mechanical device chain and crank operation for operating rolling shutters	1	each	260.90	260.90
98	Extra for providing mechanical device chain and crank operation for operating rolling shutters				
98.1	Exceeding 10.00 sqm and upto 16.80 sqm in the area	1	sqm	379.56	379.56
98.2	Exceeding 16.80 sqm in area	1	sqm	400.62	400.62
99	Extra for providing grilled rolling shutters manufactured out of 8mm dia MS bar instead of laths as per design approved by engineer in charge (area of grill to be measured)	1	sqm	157.86	157.86
100	providing and fixing MS fan clamp type I or II of 16 mm dia MS bar bent to shape with hooked ends in RCC slabs, beams during laying including painting the exposed portion of of loop all as per standard design complete	1	each	15.10	15.10
101	Providing and fixing circular / Hexagonal cast iron or MS sheet box for ceiling fan clamp of internal dia 140mm, 73mm height, top lid of 1.5mm thick MS sheet with its top surface hacked for proper bonding top lid shall be screws into the cast iron/ MS sheet box by means of 3.3 mm dia. round headed screws , one lock at the corners . clamp shall be made of 12mm dia MS bar bent to shape as per standard drawing	1	each	47.48	47.48
102	Providing and fixing MS round holding down bolts with nuts and washer plates complete	1	kg	41.15	41.15
103	Providing and fixing bolts including nuts and washers complete	1	kg	37.59	37.59
104	Providing and fixing MS rivets of sizes in positio.	1	kg	55.41	55.41
105	Welding by gas or electric plant including transportation of plant at site etc. complete	1	cm	1.34	1.34
106	Steel work welded in built up sections/ frames work including cutting hoisting fixing in position and applying a priming coat of approved steel primer using structural steel etc. as required.				
106.1	In stringers treads landing etc, of stair cases including use of chequered plate wherever required all complete	1	kg	47.66	47.66
106.2	In gratings frames guard bar ladder railing brackets gates and similar works	1	kg	47.66	47.66
107	Providing and fixing hand rail of approved size by welding etc. to steel ladder railing balcony railling and staircase railing including applying a priming coat of approved steel primer				
107.1	M.S tube	1	kg	52.77	52.77
107.2	GI pipes	1	kg	56.51	56.51
108	Fabrication & erection of Structural steel sections including angles, channels, beams, rods or any other structural steel section forming an integral part and erecting the same as directed.(Raw steel will be issued by BHEL free of cost at stores)	10	kgs	11.11	111.10
109	Labour charges only--Repair of Entrance Gates & Grill gates etc., including tack welding, providing aldrop/ tower bolt, repairing /replacing hinges as per site condition.	10	Each	86.18	861.80
110	Labour charges for fixing grill doors with all necessary works like fixing hold fast into wall for necessary anchoring and making fit to the wall ..complete as directed by Engineer In charge.	1	Kg	2.53	2.53
111	Repairing of Car garage shutters with M.S. Rounds / Channels / Pipes / Sheet of 3.00 x 2.50 M approx.	1	Pair	450.23	450.23
112	Manufacturing and fixing the garage shutters of size 3.00 x 2.50 M appx. (With M.S. Angels, M.S. Pipes, M.S. sheet which will be supplied free of cost).	1	Pair	1882.78	1882.78

BHEL Item No	Description	Qty.	Unit	LPR Rate	Amount
113	Labour Charges - Fabricating and fixing of MS grill gates / door shutters of single leaf / double leaves, window or door frames / ornamental grills, tubular / structural trusses, columns gates etc, in position and shall be of approved quality and design including cost of fittings, fixtures and furniture, redoxide primer coat etc., complete as directed. (Raw steel will be issued by BHEL free of cost at stores)	1	kg	16.41	16.41
114	Site welding 6 mm fillet / tack including cost of required materials at all the places as directed.	1	rmt	86.36	86.36
115	Repairing including making locking arrangements to steel door shutters, sliding doors/ rolling shutters, M.S. gates such as hinges, aldrops, tower bolts or any suitable arrangements including gas cutting, welding etc complete as directed by the Engineer-in-charge	2	Each Shutter / gate	176.73	353.46
116	Repairing the existing M.S. grill gates / door shutters of single leaf / double leaves, window or door frames M.S. Ornamental grills, M.S tubular gates in position including welding, cost of all fittings, fixtures like peg stays, handles, pivot handles, pivot hinges etc. for windows, towerbolts, aldrops, hinges, looking hooks etc for doors, complete as directed by Engineer -in-charge.	2	each	86.18	172.36
117	Supply and fixing of Magic eyes of approved design including cost of all materials etc complete all as directed by engineer-in-charge.	1	each	55.09	55.09
FLOORING/TILE WORK					
118	Cement concrete flooring 1:2:4 (1 cement 2 coarse sand 4 graded stone aggregate) finished with a floating coat of neat cement including cement slurry but excluding the cost of nosing of steps etc. complete.				
118.1	40mm thick with 20mm nominal size stone aggregate	10	sqm	112.64	1126.40
119	Cement plaster skirting (upto 30cm height) with cement mortar 1:3 (1 cement 3 coarse sand) finished with a floating coat of neat cement				
119.1	18mm thick	1	sqm	110.76	110.76
120	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 12mm thick bed of cement including pigment of matching shade etc. complete as per drawing specification and direction of engineer in charge	10	sqm	400.27	4002.70
121	Providing and laying ceramic glazed floor tiles 300x300mm (thickness to be specified by the manufacturer) of 1 st quality conforming IS 15622 of approved make in colours such as white Ivory grey fume red brown laid on 20mm thick cement mortar 1:4(1 cement 4 coarse sand) including pointing the joints with white cement and matching pigment etc. complete	10	sqm	423.55	4235.50
122	Providing and laying ceramic glazed floor tiles 300x300mm (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, gume red brown laid on 20mm thick bed of cement mortar 1:4(1 cement 4 coarse sand) including pointing the jointing the joints with white cement and matching pigment etc. complete	10	sqm	428.82	4288.20
123	Providing and laying polished vitrified floor tiles in different size (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 and shade, laid on 20mm thick cement mortar 1:4(1 cement 4 coarse sand) including grouting the joints with white cement and matching pigment etc. complete				
123.1	Size of tile 50x50cm	1	sqm	675.13	675.13
123.2	Size of tile 60x60cm	1	sqm	768.60	768.60
123.3	Size of tile 80x80cm	1	sqm	912.94	912.94
123.4	Size of tile 100x100cm	1	sqm	1315.64	1315.64
124	Deduct for not using 20mm thick cement mortar 1:4(1 cement 4 coarse sand) bending in laying of floor tiles	1	sqm	224.51	224.51

BHEL Item No	Description	Qty.	Unit	LPR Rate	Amount
125	Fixing glazed / ceramic vitrified floor tiles with cement based high polymer modified quick set tile adhesive (water based) conforming to IS 15477 using 5 kg adhesive per sqm of tile area in average 3mm thickness	200	sqm	208.12	41624.00
126	Ellis pattern flooring 20 mm thick cement concrete using one cement and three granite stone metal chippings of 3 to 10mm gauge including fine finishing, neat thread lining, curing, cost of all materials etc. complete	100	One Sqm	78.92	7892.00
127	Flooring with rough shahabad stone slabs of 20 to 30 mm thick and approved quality over a base of cement mortar 1:6 and pointing with CM 1:3 including curing, cost of all materials etc. complete.	75	One Sqm	65.25	4893.75
128	Flooring / dadoing polished shahabad stone slabs of 25 mm thick (Tandur blue) uniform shade and approved quality, over a base of cement mortar 1:6 and pointing with cement paste including curing, cost of all materials etc. complete	75	One Sqm	254.89	19116.75
129	Removing the existing flooring and redoing the same with Ellis pattern flooring 20 mm thick cement concrete using one cement and three granite stone chippings of 3 to 10 mm gauge including fine finishing, neat thread lining, curing, disposing off the spoils within a lead of 2 km etc. complete as directed by the Engineer- in-charge.	100	One Sqm	86.69	8669.00
130	Polishing to the existing mosaic / polished shahbad stone flooring using necessary / machines/materials such as carborandam stone etc including neat finishing etc complete as directed by Engineering - in-charge.	1	One Sqm	17.27	17.27
131	Removing the exiting cement flooring , supplying and laying of 25 mm thick (± 1 mm) designer floor tiles of approved colour and brand over a base of cement mortar 1:4, 20 mm thick, with required quantity of cement slurry for flooring including colouring pigment to match with tiles, cost of all materials etc complete all as directed by Engineer-in-charge.	1	One Sqm	431.39	431.39
132	Labour charges for fixing tiles (both Vitrified /Ceramic tiles)- with cement mortar as base including pointing the joints with white cement and matching pigment etc complete.	1	Sqm	138.63	138.63
133	Labour charges Removing and refixing of damaged floor / wall tiles of various sizes with cement motor as base including pointing the joints with white cement and matching pigment, etc complete.	10	sqm	151.44	1514.40
134	Providing and laying Parking / interlocking tiles of 20 to 25mm thick depending on manufactures specification, over a bed of CC/CM, which will be paid spearely under separate item, all as directed by the Engineer in charge.	1	sqm	370.12	370.12
135	Providing and fixing 18mm thick gang saw cut mirror polished premoulded and prepolished) machine cut for kitchen platforms vanity counters window sills facias and similar locations of required size of approved shade colore and texture laid over 20mm thick base cement mortar 1:4(1cement 4 coarse sand) with joints treated with white cement mixed with matching pigment epoxy touch ups, including rubbing curing moulding and polishing to edge to give high gloss finish etc. complete at all levels.				
135.1	Raj nagar plain white marble udaipur green marble / Zebra black marble				
135.2	Area of slab upto 0.50 sqm	1	sqm	1140.64	1140.64
135.3	Granite stone of any colour and shade				
135.4	Area of slab over 0.50 sqm	1	sqm	1869.26	1869.26
ROOFING					
136	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 10mm gap for thermal expansion (i) <u>single socketed pipes</u>				
136.1	75mm diameter	10	mtr	76.02	760.20
136.2	110mm diameter	10	mtr	126.35	1263.50

BHEL Item No	Description	Qty.	Unit	LPR Rate	Amount
137	Providing and fixing precoated galvanised iron profile sheets (size, shape and pitch of corrugation as approved by Engineer-in-charge) 0.50 mm (+ 0.05 %) total coated thickness with zinc coating 120 grams per sqm as per IS: 277, in 240 mpa steel grade, 5-7 microns epoxy primer on both side of the sheet and polyester top coat 15-18 microns. Sheet should have protective guard film of 25 microns minimum to avoid scratches during transportation and should be supplied in single length upto 12 metre or as desired by Engineer in-charge. The sheet shall be fixed using self drilling /self tapping screws of size (5.5x 55 mm) with EPDM seal, complete upto any pitch in horizontal/ vertical or curved surfaces, excluding the cost of purlins, rafters and trusses and including cutting to size and shape wherever required.	10	sqm	364.30	3643.00
138	Providing and fixing precoated galvanised steel sheet roofing accessories 0.50 mm (+ 0.05 %) total coated thickness, Zinc coating 120 grams per sqm as per IS: 277, in 240 mpa steel grade, 5-7 microns epoxy primer on both side of the sheet and polyester topcoat 15-18 microns using self drilling/ self tapping screws complete .				
138.1	Ridges plain (500 - 600mm)	1	mtr	375.91	375.91
138.2	Flashings/ Aprons. (Upto 600 mm)	1	mtr	364.40	364.40
138.3	North light curves	1	mtr	392.38	392.38
138.4	Barge board (Upto 300 mm)	1	mtr	343.05	343.05
138.5	Crimp curve	1	mtr	374.55	374.55
138.6	Gutter .(600 mm over all girth)	1	mtr	457.28	457.28
139	Providing impervious coat in CM 1:4, 20 mm thick using approved water proofing compound at one Kg/bag of cement when the roof slab is green including arranging proper slopes, for easy flow of rain water curing etc complete	10	One Sqm	75.63	756.30
140	Labour charges for fixing AC sheet / Galvalumme sheet roofing and ceiling using 'J' bolts, nuts, bitumen / GI washers etc.complete, (only AC sheets/ Galvalume sheets and ridges will be supplied free of cost at BHEL stores) all as directed by Engineer - in - charge.	20	One Sqm	35.34	706.80
141	Labour charges Fixing of Hi-rib s galvalume /Zincalume sheets of 0.5 mm tk. 1 mtr width and length upto 12 mts with factory cut and fixing to the roof shall be crest fixed to roofpurlins with number 12-14 x 55 mm polymer coated galvanised hex head self drilling screws with integral washers and EPDM seals (4 fasteners for support) for sheet etc., complete as directed - For roofing, side cladding and louvers with necessary fixtures. All the safety measures should be taken care by the agency itself.	100	One Sqm	66.28	6628.00
142	Fixing North Light curves/ Barges in required girth with 0.5 mm galvalume sheets upto a length of 2.5 M having curved width upto 600 mm fixing to the steel members with self drilling / self stitching, fasteners at a maximum of 500 mm c/c along the length of capping, flashing etc., complete as directed by Engineer-in-charge. including the cost of labouretc.,complete. (North Light Curves / Barges Will be issued free of cost by BHEL at their Stores).All the safety measures should be taken by the agency itself.	9	One Rmt	48.60	437.40
143	Dismantling the existing garrage structural work, AC sheets and MS angles including stacking & handing over of service cable materials and disposal of debris all as directed by Engineering - in - charge.	1	Each Shed	2272.27	2272.27

BHEL Item No	Description	Qty.	Unit	LPR Rate	Amount
144	Providing and fixing in true horizontal level 600 mm x 600 mm false ceiling system manufactured by M/s. Armstrong World Industries using DUNE SUPREME RH 99 MICROLOOK EDGE WITH SILHOUETTE GRID, using hot dipped galvanized steel section, rotary stitched main tee of size 15mm x 42 mm web height, having 0.36 mm gauge at every 600 mm centre to centre maximum and rotary stitched cross tee of size 15 mm x 42 mm, having 0.33 mm gauge at every 600 mm. c/c. and wall angle of size 19 x 19 mm., having 0.35 mm gauge fixed to the periphery of the wall. The above grid is suspended at every 600mm c/c. in both directions using 2.0 mm. thick pre-straightened GI wire, and laying Dune Supreme Microlook Edge ceiling tiles manufactured by M/s. Armstrong World Industries, of size 600mmx600mmx15mm having NRC 0.50, Light reflectance of >85% (WT), thermal conductivity $k = 0.052-0.057$ W/m0K, Humidity Resistance of 99% (having LIFETIME GUARANTEE against SAG), having Fire Performance CLASS O / CLASS 1 (BS 476), surface having 3 coats of white paint - crisp finely granulated with microperforations, back of the tile duly sanded with a coat of protective paint over the formed grid and complete in all respect ,Boards where light fixtures to be fixed shall be handed over to Department. M/s- Armstrong etc complete all as directed by Engineer-in-charge	1	SQM	779.70	779.70
FINISHING					
145	12mm cement plaster of mix (In fine sand)				
145.1	1:4(1 cement 4 fine sand)	100	sqm	55.59	5559.00
145.2	1:6 (1 cement: 6 fine sand)	100	sqm	55.50	5550.00
146	15mm cement plaster on the rough side of single or half brick wall of mix				
146.1	1:4(1 cement 4 fine sand) (in coarse Sand)	1	sqm	43.32	43.32
146.2	1:6 (1 cement: 6 fine sand)	1	sqm	62.70	62.70
147	20mm cement plaster of mix (In Fine sand)				
147.1	1:4(1 cement 4 fine sand)	100	sqm	77.96	7796.00
147.2	1:6(1 cement 6 fine sand)	100	sqm	77.55	7755.00
CEMENT PLASTER (IN COARSE SAND)					
148	12 mm cement plaster of mix :				
148.1	1:6 (1 cement: 6 coarse sand)	1	sqm	62.66	62.66
149	15 mm cement plaster on rough side of single or half brick wall of mix :				
149.1	1:6 (1 cement: 6 coarse sand)	1	sqm	72.24	72.24
150	20mm cement plaster of mix (In Coarse sand)				
150.1	1:4(1 cement 4 coarse sand)	100	sqm	85.80	8580.00
150.2	1:6(1 cement 6 coarse sand)	100	sqm	85.61	8561.00
151	18mm cement plaster in two coats under layer 12mm thick cement plaster 1:5(1 cement 5 coarse sand) finished with a top layer 6mm thick cement plaster 1:6(1cement 6 fine sand)	100	sqm	91.44	9144.00
152	18mm cement plaster in two coats under layer 12mm thick cement plaster 1:5(1 cement 5 coarse sand) finished with a top layer 6mm thick cement plaster 1:3(1cement 3 coarse sand) finished rough with sponge	100	sqm	93.98	9398.00
153	6mm cement plaster of Mix				
153.1	1:3(1 cement 3 fine sand)	1	sqm	48.74	48.74
154	Pointing on stone work with cement mortar 1:3 (1 cement 3 fine sand)				
154.1	Flush / Ruled pointing	16	sqm	65.44	1047.04
154.2	Raised and cut pointing	50	sqm	117.63	5881.50
155	Raised and cut pointing on stone work in white cement mortar 1:3(1 white cement 3 marble dust)	1	sqm	128.94	128.94
156	White washing with lime to give an even shape				
156.1	New work (three or more coats)	100	sqm	7.38	738.00
157	Colour washing such as green , blue or buff to buff to give an even shape				
157.1	New work (two or more coats) with a base coat of white washing with lime	1	sqm	10.15	10.15
157.2	New work (two or more coats) with a base coat of whiting	100	sqm	9.97	997.00
158	Distempering with oil bound washable distemper of approved brand and manufacture to give an even shade				
158.1	New work (two or more coats) over and including priming coat with cement primer.	100	sqm	41.65	4165.00

BHEL Item No	Description	Qty.	Unit	LPR Rate	Amount
159	Distempering with 1st quality acrylic washable distemper (ready mixed) of approved manufacture and of required shade and colour complete as per manufacturer specification				
159.1	Two or more coats on new work	8359	sqm	23.32	194931.88
160	Applying one coat of cement primer of approved brand and manufacture on wall surface				
160.1	Cement primer	100	sqm	17.23	1723.00
161	Finishing walls with Acrylic smooth exterior paint of required shade				
161.1	New work (two or more coat applied @ 1.67 ltr/ 10 sqm) over and including base coat of water proofing cement paint applied @ 2.20kg/ 10sqms	100	sqm	41.64	4164.00
162	Painting the external wall surfaces by applying two or more coats of Acrylic smooth exterior paint (after completion of one coat prior clearance to be taken to apply the second coat with department officials) of BHEL supplied paint on existing old surface, including scrapping, cost of thinner, brushes labour, ladders, scaffolding, tools and other incidentals etc. complete up to 7m height including rectifying the wall cracks, patches etc with Birla wall care putty crack filler etc complete all as directed by Engineer-in-charge (Only Acrylic paint will be supplied by BHEL). All the safety precautions would be responsibility of the contractor.	100	Sqm	11.22	1122.00
163	Finishing with epoxy paint (two or more coats) at all locations prepared and applied as per manufacturer's specifications including appropriate priming coat preparation fo surface etc. complete				
163.1	on steel work	1	sqm	65.17	65.17
163.2	on concrete work	100	sqm	67.04	6704.00
164	Painting (two or more coats) on rain water soil waste and vent pipes and fitting with black anticorrosive bitumastic paint approved brand and manufacture over and including a priming of ready mixed zinc chromate yellow primer on new work				
164.1	100mm dia meter pipes	1	mtr	16.01	16.01
164.2	150mm dia meter pipes	1	mtr	23.89	23.89
165	Painting with synthetic enamel paint of approved brand and manufacture to give an even shade (Iron work/Plastered surface/Signboards frames/wood work/Road speed breakers etc.)				
165.1	Two or more coats on new work	10480	sqm	33.42	350241.60
166	Two or more coats on new work over an under coat of suitable shade with ordinary paint of approved brand and manufacture	100	sqm	48.98	4898.00
167	Applying two or more coats of Synthetic Enamel Paint of given shade to old surfaces including scrapping, cost of thinner, brushes, labour tools, and other incidentals etc. complete up to 7m height. (Only Synthetic Enamel Paint will be supplied by BHEL, free of cost at their stores) etc. complete all as directed by Engineer-in-charge. All the safety precautions would be responsibility of the contractor	4023	Sqm	24.67	99247.41
168	Painting with aluminium paint of approved brand and manufacture to give an even shade as directed by Engineer In charge				
168.1	Two or more coats on new work	708	sqm	29.79	21091.32
169	Varnishing with varnish of approved brand and manufacture				
169.1	Two or more coats of glue sizing with copal varnish over an under coat of flatting varnish	40	sqm	50.23	2009.20
169.2	Two or more coats glue sizing with spar varnish or an under coat of flatting varnish	1000	sqm	50.85	50850.00
170	Scraping the existing paint surface, repairing the wall surface and supply and application of One coats of Altek Superfine lappam, applying one coat of required primer thorough polishing the area using emery papers of appropriate grade to get required level and finish of walls before painting the surfaces, as directed by the Engineer in charge etc complete	1	sqm	88.83	88.83

BHEL Item No	Description	Qty.	Unit	LPR Rate	Amount
171	Scraping the existing paint surface, repairing the wall surface and supply and application of Two coats of Altek Superfine lappam, applying one coat of required primer thorough polishing the area using emery papers of appropriate grade to get required level and finish of walls before painting the surfaces, as directed by the Engineer in charge etc complete	1	sqm	98.70	98.70
172	Providing & Applying two or more coats of Tractor emulsion paint of Approved shade including cost of all materials, labour etc, complete.	1	sqm	48.36	48.36
173	Providing and applying altek lappam of 2 mm thickness over plastered surface to prepare the surface even and smooth including thorough scraping to remove the old paint complete as directed by Engineer in charge.	7	Sqm	27.26	190.82
REPAIRS TO BUILDINGS					
174	Providing and fixing 25mm thick shutters for cup board etc				
174.1	Panelled or Panelled and glazed shutters				
174.2	Superior class teak wood including nickel plated bright finished MS piano hinges with necessary screws	1	sqm	1869.23	1869.23
174.3	1st class teak wood including nickel plated bright finished MS piano hinges with necessary screws	1	sqm	1544.42	1544.42
174.4	Glazed shutters				
174.5	Superior class teak wood including nickel plated bright finished MS piano hinges with necessary screws	1	sqm	1942.96	1942.96
174.6	1st class teak wood including nickel plated bright finished MS piano hinges with necessary screws	1	sqm	1593.77	1593.77
175	Old work (two or more coats)	1000	sqm	4.42	4420.00
175.1	Old work (one or more coats)	1	sqm	2.73	2.73
176	Removing white or colour wash by scraping and sand papering and preparing the surface smooth including necessary repairs to scratches etc. complete	23667.28	sqm	3.60	85202.21
177	Distempering with oil bound washable distemper of approved brand and manufacture to give an even shade				
177.1	old work (two or more coats)	84813	sqm	14.58	1236573.54
178	Removing dry or oil bound distemper water proofing cement paint and the like by scraping sand papering and preparing the surface smooth including necessary repairs to scratches etc. complete	100	sqm	4.73	473.00
179	Painting with synthetic enamel paint of approved brand and manufacture to give an even shade				
179.1	one or more coats on old work	400	sqm	21.89	8756.00
180	Finishing walls with Acrylic smooth exterior paint of required shade				
180.1	old work (two or more coats applied @ 1.67ltr/10sqm) on existing cement paint surface)	1000	sqm	29.78	29780.00
180.2	old work (one or more coat applied @0.90 ltr/ 10sqm)	1000	sqm	19.57	19570.00
181	Painting to black boards with one coat of black board paint of approved brand including cost of all materials etc., complete all as directed by Engineer-in-charge.	1	One Sqm	33.42	33.42
182	Applying golden colour or other approved colour to statues from 3' height to 8' height statue painting including scraping the old surface and applying one or more coats to give good appearance including cost of scaffolding cost of all material all as directed by Engineer-in-charge	9	Nos	1295.39	11658.51
183	Providing gultas in triangular shape of base 150 mm and height 150 mm with cement mortar 1:4, including fine finishing, cost of all materials etc complete all as directed by Engineer-in-charge.	100	One Rmt	21.59	2159.00
184	Providing bands to slab / chajja projections in cement mortar 1:4, 20 mm thick and 20 mm wide including cost of all materials, curing etc complete all as directed by Engineer-in-charge.	1	One Rmt	21.59	21.59
185	Flooring and skirting with 25 mm thick polished shahabad stone slabs (Tandur blue) of required sizes over a base of 20 mm thick cement mortar 1:6 including pointing in CM 1:2, curing, cost of all materials etc complete all as directed by Engineer-in-charge	1	One Sqm	267.36	267.36

BHEL Item No	Description	Qty.	Unit	LPR Rate	Amount
186	Rectifying the wall cracks by chipping off the existing plastered surfaces to the required width, depth and applying cement slurry in the cracks to the required depth, making good all damages and finishing to match with the existing one by plastering with CM 1:5; 12/15 mm thick and a coat of white wash / snowcem / distemper etc as the case may be as directed by the Engineer-in-charge.	1	One Sqm	81.62	81.62
187	Crack filling without pressure grouting: Routing out the cracks with a mechanically operated groove cutter and sealing with expansive crack filling compound - CERA POLY CRACKFILLER or equivalent and tooling to finish neatly. Providing ,two top coats of CRACKFLEX, single component hinghly flexible membrance coating (for a width of 10 cms with the crack at the center) or equivalent as per manufacturer's recommendation and curing adequately. Rate quoted includes cost of material, labour charges, conveyance, toold and all other incidental charges etc complete all as directed by Engineering - in -charge. (local market rate)	1	Rmt	64.77	64.77
DISMANTLING AND DEMOLISHING					
188	Demolishing lime concrete manually/ by mechanical means and disposal of material within 50 metres lead as per direction of Engineerin-charge	14	cum	147.82	2069.48
189	Demolishing concrete manually / by mechanical means including disposal of material within 50mtr lead as per direction of engineer in charge				
189.1	1:3.6 or richer mix	13	cum	423.56	5506.28
189.2	1:4:8 or leaner mix	150	cum	261.09	39163.50
190	Demolishing RCC work manually/ by mechanical means including stacking of steel bars and disposal of unserviceable material within 50mtr lead as per direction of engineer in charge	2	cum	617.90	1235.80
191	Extra for cutting reinforcement bars manually by mechanical means in RCC or RB work (payment shall be made on the cross sectional area of RCC or RB work) as per direction of engineer in charge	1	sqm	205.23	205.23
192	Extra for scrapping, cleaning and straightening reiforcement from RCC or RB work	1	kg	1.64	1.64
193	Demolishing brick work manually / by mechanical means including stacking of serviceable material and disposal of unserviceable material within 50mtr lead as per direction of engineer in charge				
193.1	In cement mortar	200	cum	357.63	71526.00
194	Demolishing stone rubble masonry manually by mechanical means including stacking of serviceable material and disposal of unserviceable material within 50mtr lead as per direction of engineer in charge				
194.1	In cement mortar	50	cum	426.71	21335.50
195	Dismantling door windows and clerestory windows (steel or wood) quantity of stacks of cleaned material will be measured)				
195.1	Of area 3sqm and below	32	each	64.19	2054.08
195.2	Of area beyond 3sqm	1	each	88.27	88.27
196	Taking out doors windows and clerestory window shutters(steel or wood) including stacking within 50mtr lead				
196.1	Of area 3sqm and below	1	each	25.06	25.06
196.2	Of area beyond 3sqm	1	each	33.11	33.11
197	Dismantling steel work in single sections including dismembering and stacking within 50mtr lead in				
197.1	RS joists	1	kg	0.60	0.60
197.2	Channels angles tees and flats	1	kg	0.41	0.41
198	Dismantling steel work in built up sections in angles tees flats and channels including all gusset plates bolts nuts cutting rivets welding etc. including dismembering and stacking within 50mtr lead	1	kg	0.98	0.98
199	Dismantlig steel work manually by mechanical means in built up section without dismembering and stacking within 50mtr lead as per direction of engineer in charge	1	kg	0.66	0.66

BHEL Item No	Description	Qty.	Unit	LPR Rate	Amount
200	Demolishing R.B. work manually/ by mechanical means including stacking of steel bars and disposal of unserviceable material within 50 metres lead as per direction of Engineer-in-charge.	1	cum	551.97	551.97
201	Dismantling precast concrete or stone slabs in walls, partition walls etc. including stacking within 50 metres lead				
201.1	Thickness up to 40 mm	1	sqm	50.75	50.75
202	Dismantling cement asbestos or other hard board ceiling or partition walls including stacking of serviceable materials and <u>disposal of unserviceable materials within 50mtr lead</u>	1	sqm	10.00	10.00
203	Dismantling G.I pipes (external work) including excavation and refilling trenches after taking out the pipes manually by mechanical means including stacking of pipes within 50mtr lead as per <u>direction of engineer in charge</u>				
203.1	15mm to 40mm nominal bore	100	mtr	27.84	2784.00
203.2	Above 40mm nominal bore	1	mtr	31.75	31.75
204	Dismantling old plaster or skirting raking out joints and cleaning the surface for plaster including disposal of rubbish to the dumping ground within 50mtr lead	100	sqm	9.47	947.00
205	Dismantling aluminium / Gypsum partitions doors windows fixed glazing and false ceiling including disposal of unserviceable surplus material and stacking of serviceable material with in 50mtr lead as <u>directed by engineer in charge</u>	1	sqm	10.04	10.04
206	Demolishing C.C/ RCC work by mechanical means and stockpiling at designated locations and disposal of dismantled materials upto a lead of 1000m , stacking serviceable and unserviceable material separately including cutting reinforcement bars	47	cum	679.09	31917.23
SANITARY WORKS					
207	Providing and fixing water closet squatting pan(indian type WC pan) with 100mm sand cast iron P or S trap 10 ltr low level white PVC flushing cistern with manually controlled device (handle level) conforming to IS 7231 with all fitting and fixtures complete including cutting and making good the walls and floors wherever required				
207.1	White vitreous china orissa pattern WC pan of size 580x440mm with integral type foor rests	237	each	1798.98	426358.26
208	Providing and fixing white vitreous china pedestal type water closet (european type WC pan) with seat and lid 10ltr low level white PVC flushing cistern with manually controlled decice (handle level) conforming to IS 7231 with all fittings and fixtures complete including cutting and making good the wall and floors wherever required				
208.1	WC pan with ISI marked white solid plastic seat and lid	54	each	1751.27	94568.58
208.2	WC pan with ISI marked black solid plastic seat and lid	1	each	1739.34	1739.34
209	Providing and fixing white vitreous china pedestal type water closet (european type)with seat and lid 10 ltr low level white vitreous china flushing cistern and CP flush bend with fitting and CI brackets 40mm flush bend overflow arrangement with specials of standard make and mosquito proof coupling of approved municipal desgin complete including painting of fitting and brackets cutting and making good the walls and floors wherever required				
209.1	WC pan with ISI marked white solid plastic seat and lid	15	each	2559.18	38387.70
209.2	WC pan with ISI marked black solid plastic seat and lid	1	each	2547.97	2547.97
210	Providing and fixing white vitreous china flat back or wall corner type lipped front urinal basin of 430x260x350mm and 430x410x265mm sizes respectively with automatic flushing cistern with standard flush pipe and CP brass spreaders with brass unios and GI clamps complete including painting of fitting and brackets cutting and making good the walls and floors wherever required				
210.1	One urinal basin with 5 ltr white PVC automatic flushing cistern	1	each	1739.21	1739.21

BHEL Item No	Description	Qty.	Unit	LPR Rate	Amount
211	Providing and fixing white vitreous china flat back half stall urinal of size 580x380x350mm with white PVC automatic flushing cistern with fitting standard size CP brass flush pipe spreaders with unions and clamps (all in CP brass) with waste fitting as per IS 2556 CI trap with outlet grating and other couplings in CP brass including painting of fitting and cutting and making good the walls and floors wherever required				
211.1	Single half stall urinal with 5 ltr PVC automatic flushing cistern	2	each	3285.73	6571.46
212	Providing and fixing one piece construction white vitreous china squatting plate with an integral longitudianl flushing pipe white PVC automatic flushing cistern with fitting standard size GI flush pipe for back and front flush with standard spreader pipes with fitting GI clamps and CP brass coupling complete including painting of fitting and cutting and making good the walls and floors etc. wherever required				
212.1	Single squatting plate with 5 ltr PVC automatic flushing cistern	1	each	2161.49	2161.49
213	Providing and fixing wash basin with CI brackets 15mm CP brass pillar taps 32mm CP brass waste of standard pattern including painting of fittings and brackets cutting and making good the walls wherever require				
213.1	White Vitreous China Wash basin size 630x450 mm with a pair of 15 mm C.P. brass pillar taps	23	each	1120.02	25760.46
213.2	white vitreous china wash basin size 630x450mm with a single 15mm CP brass pillar tap	7	each	986.91	6908.37
213.3	White vitreous china flat back wash basin size 550x400mm with single 15mm CP brass pillar tap	2	each	885.16	1770.32
213.4	White Vitreous China Flat back wash basin size 450x 300 mm with single 15 mm C.P. brass pillar tap	1	each	811.50	811.50
213.5	White vitreous china surgeon type wash basin of size 660x460mm with a pair of 15mm CP brass pillar tap with elbow operated levers	1	each	1947.89	1947.89
213.6	Stainless steel AISI 304(18/8) wash basin size 530x345mm with single 15mm CP brass pillar tap	1	each	1544.06	1544.06
214	Providing and fixing white vitreous china pedestal for wash basin completely recessed at the back for the reception of pipes and fittings.	1	each	542.32	542.32
215	Providing and fixing kitchen sink with CI brackets CP brass china with rubber plug 40mm CP brass waste complete including painting the fittings and brackets cutting and making good the walls wherever required				
215.1	White glazed fire clay kitchen sink of size 600x450x250mm	1	each	1334.09	1334.09
216	Providing and fixing stainless steel A ISI 304(18/8) kitchen sink as per IS 13983 with CI brackets and stainless steel plug 40mm including painting of fitting and brackets cutting and making good the walls wherever required				
216.1	Kitchen sink with drain board				
216.2	510x1040mm bowl depth 200mm	1	each	3412.34	3412.34
216.3	Kitchen sink without drain board				
216.4	610x510mm bowl depth 200mm	1	each	2376.78	2376.78
216.5	610x460mm bowl depth 200mm	3	each	2236.47	6709.41
216.6	470x420mm bowl depth 178mm	2	each	1745.38	3490.76
217	Providing and fixing white vitreous china laboratory sink with CI brackets CP brass china with rubber plug 40mm CP brass waste and 40mm CP brass trap with necessary CP brass unions complete including painting of fitting and brackets cutting and making good the wall wherever required				
217.1	Size 450x300x150mm	1	each	1172.76	1172.76
217.2	Size 600x450x200mm	1	each	1667.36	1667.36
218	Dismantling, Providing and fixing white vitreous china water closet squatting pan (indian type)				
218.1	Long pattern WC pan of size 580mm	1	each	458.99	458.99
218.2	Orissa pattern WC pan of size 580x440mm	4	each	746.65	2986.60
219	Extra for using coloured WC pan instead of white WC pan				
219.1	Orissa pattern WC pan 580x440mm	4	each	359.16	1436.64
220	Providing and fixing white vitreous china pedestal type (european type/ wash down type) water closet pan	1	each	697.54	697.54

BHEL Item No	Description	Qty.	Unit	LPR Rate	Amount
221	Extra for using coloured pedestal type WC pan (european type) with low level cistern of same colour instead of white vitreous china WC pan and cistern	1	each	696.57	696.57
222	Providing and fixing a pair of white vitreous china foot rests of standard pattern for squatting pan water closet				
222.1	250x130x30mm	1	pair	75.38	75.38
222.2	250x125x25mm	1	pair	82.42	82.42
223	Providing and fixing PVC low level flushing cistern with manually controlled device (handle level) conforming to IS 7231 with all fittings and fixtures complete				
223.1	10 Ltr capacity white	10	each	504.89	5048.90
223.2	10 Ltr capacity coloured	1	each	538.47	538.47
224	Providing and fixing controlled flush low level cistern made of vitreous china with all fitting complete				
224.1	10 Ltr (full flush) capacity white	10	each	899.66	8996.60
224.2	10 Ltr (full flush) capacity coloured	1	each	1197.83	1197.83
225	Providing and fixing solid plastic seat with lid for pedestal type WC pan complete				
225.1	white solid plastic seat with lid	23	each	232.12	5338.76
225.2	black solid plastic seat with lid	1	each	220.19	220.19
226	Providing and fixing GI inlet connection for flush pipe connecting with WC pan	3	each	57.41	172.23
227	Providing and fixing white vitreous china flat back or wall corner type lipped front urinal basin of 430x260x350mm and 340x410x265mm sizes respectively.	1	each	482.10	482.10
228	Providing and fixing white vitreous china squatting plate urinal with integral rim longitudinal flush pipe	1	each	939.48	939.48
229	Providing and fixing white vitreous china wash basin including making all connectons but excluding the cost of fitting				
229.1	Flat back wash basin of size 630x450mm	2	each	537.20	1074.40
229.2	Flat back wash basin of size 550x400mm	1	each	435.48	435.48
229.3	Angle back wash basin of size 600x480mm	1	each	470.57	470.57
229.4	Angle back wash basin of size 400x400mm	1	each	347.78	347.78
229.5	Flat back wash basin of size 450x300mm	1	each	361.82	361.82
229.6	Surgeon type wash basin of size 660x460mm	1	each	761.71	761.71
230	Providing and fixing kitchen sink including making all connections excluding cost of fittings				
230.1	White glazed fire clay sink of size 600x450x250mm	1	each	997.55	997.55
231	Providing and fixing white vitreous china laboratory sink including making all connections excluding cost of fittings				
231.1	Size 450x300x150mm	1	each	625.72	625.72
231.2	Size 600x450x200mm	1	each	1120.35	1120.35
232	Providing and fixing PVC waste pipe for sink or wash basin including PVC waste fitting complete				
232.1	semi rigid pipe				
232.2	32mm dia	65	each	36.89	2397.85
232.3	40mm dia	1	each	41.09	41.09
232.4	Flexible pipe				
232.5	32mm dia	1	each	40.40	40.40
232.6	40mm dia	1	each	41.78	41.78
233	Providing and fixing 100mm sand cast iron grating for gully trap	1	each	15.05	15.05
234	Providing and fixing in position 25mm dia metre mosquito proof coupling of approved municipal design	1	each	20.92	20.92
235	Providing and fixing 600x450mm beveled edge mirror of superior glass (of approved quality) complete with 6mm thick hard board ground fixed to wooden cleats with CP brass screws and washers complete	3	each	412.51	1237.53
236	Providing and fixing mirror of superior glass (approved quality) and of required shape and size with plastic moulded frame of approved make and shade with 6 mm thick hard board backing				
236.1	circular shape 450mm dia	1	each	447.41	447.41
236.2	Rectangular shape 453x357mm	5	each	368.32	1841.60
236.3	oval shape 450x350mm (outer dimensions)	1	each	393.94	393.94
236.4	Rectangular shape 1500x450mm	1	each	737.17	737.17

BHEL Item No	Description	Qty.	Unit	LPR Rate	Amount
237	Providing and fixing 600x120x5mm glass shelf with edges round of supported on anodised aluminium angle frame with CP brass brackets and guard rail complete fixed with 40mm long screws rawl plugs etc complete	1	each	210.42	210.42
238	Providing and fixing toilet paper holder				
238.1	CP brass	1	each	153.60	153.60
238.2	Vitreous china	1	each	159.06	159.06
239	Providing and fixing soil waste and vent pipes				
239.1	100mm dia				
239.2	sand cast iron S&S pipe as per IS 1729	1	mtr	444.59	444.59
239.3	Centrifugally cast (spun) iron socketed pipe as per IS 3989	1	mtr	518.92	518.92
239.4	75mm diametre				
239.5	sand cast iron S&S pipe as per IS 1729	1	mtr	397.51	397.51
239.6	Centrifugally cast (spun) iron socketed pipe as per IS 3989	1	mtr	453.53	453.53
240	Providing and filling the joints with spun yarn cement slurry and cement mortar 1:2(1 cement 2 fine sand) in SCI/CI pipes				
240.1	75mm dia pipe	1	each	29.69	29.69
240.2	100mm dia pipe	1	each	34.97	34.97
241	Providing and fixing MS holder bat clamps of approved design to sand cast iron/cast iron(spun) pipe embedded in and including cement concrete blocks 10x10x10cm of 1:2:4 mix (1 cement 2 coarse sand 4 graded stone aggregate 20mm nominal size) including cost of cutting holes and making good the walls etc.				
241.1	for 100mm dia pipe	1	each	68.59	68.59
241.2	for 75mm dia pipe	1	each	67.17	67.17
242	Providing and fixing bend of required degree with access door insertion rubber washer 3mm thick bolt and nuts complete				
242.1	100mm				
242.2	sand cast iron S&S pipe as per IS 1729	1	each	188.06	188.06
242.3	sand cast iron S&S pipe as per IS 3989	1	each	214.00	214.00
242.4	75mm diametre				
242.5	sand cast iron S&S pipe as per IS 1729	1	each	150.70	150.70
242.6	sand cast iron S&S pipe as per IS 3989	1	each	170.33	170.33
243	Providing and fixing plain bend of required degree				
243.1	100mm				
243.2	sand cast iron S&S pipe as per IS 1729	1	each	162.09	162.09
243.3	sand cast iron S&S pipe as per IS 3989	1	each	179.64	179.64
243.4	75mm diametre				
243.5	sand cast iron S&S pipe as per IS 1729	1	each	131.07	131.07
243.6	sand cast iron S&S pipe as per IS 3989	1	each	134.57	134.57
244	Providing and fixing heel rest sanitary bend				
244.1	100mm				
244.2	sand cast iron S&S pipe as per IS 1729	1	each	182.44	182.44
244.3	sand cast iron S&S pipe as per IS 3989	1	each	207.69	207.69
244.4	75mm diametre				
244.5	sand cast iron S&S pipe as per IS 1729	1	each	152.12	152.12
244.6	sand cast iron S&S pipe as per IS 3989	1	each	180.17	180.17
245	Providing and fixing double equal junction of required degree with access door insertion rubber washer 3 mm thick bolts and nuts complete				
245.1	100x100x100x100mm				
245.2	sand cast iron S&S aa per IS 1729	1	each	396.29	396.29
245.3	sand cast iron S&S as per IS 3989	1	each	452.40	452.40
245.4	75x75x75mm				
245.5	sand cast iron S&S aa per IS 1729	1	each	296.63	296.63
245.6	sand cast iron S&S as per IS 3989	1	each	352.74	352.74
246	Providing and fixing double equal plain junction of required degree				
246.1	100x100x100x100mm				
246.2	sand cast iron S&S aa per IS 1729	1	each	359.49	359.49
246.3	sand cast iron S&S as per IS 3989	1	each	411.15	411.15
246.4	75x75x75mm				
246.5	sand cast iron S&S aa per IS 1729	1	each	246.83	246.83
246.6	sand cast iron S&S as per IS 3989	1	each	327.49	327.49
247	Providing and fixing single equal plain junction of required degree with access door insertion rubber washer 3 mm thick bolts and nuts complete				
247.1	100x100x100x100mm				

BHEL Item No	Description	Qty.	Unit	LPR Rate	Amount
248.2	sand cast iron S&S aa per IS 1729	1	each	270.15	270.15
248.3	sand cast iron S&S as per IS 3989	1	each	350.81	350.81
248.4	75x75x75mm				
247.5	sand cast iron S&S aa per IS 1729	1	each	201.92	201.92
247.6	sand cast iron S&S as per IS 3989	1	each	265.07	265.07
248	Providing and fixing single equal plain junction of required degree				
248.1	100x100x100mm				
248.2	sand cast iron S&S aa per IS 1729	1	each	232.25	232.25
248.3	sand cast iron S&S as per IS 3989	1	each	316.45	316.45
248.4	75x75x75mm				
248.5	sand cast iron S&S aa per IS 1729	1	each	180.17	180.17
248.6	sand cast iron S&S as per IS 3989	1	each	229.28	229.28
249	Providing and fixing double unequal junction of required degree with access door insertion rubber washer 3mm thick bolts and nut complete				
249.1	100x100x75x75mm				
249.2	sand cast iron S&S aa per IS 1729	1	each	410.46	410.46
249.3	sand cast iron S&S as per IS 3989	1	each	620.93	620.93
249.4	Providing and fixing double unequal plain junction of required degree				
249.5	100x100x75x75mm				
249.6	sand cast iron S&S aa per IS 1729	1	each	372.56	372.56
249.7	sand cast iron S&S as per IS 3989	1	each	561.98	561.98
250	Providing and fixing single unequal junction of required degree with access door insertion rubber washer 3mm thick bolts and nut complete				
250.1	100x100x75mm				
250.1	sand cast iron S&S aa per IS 1729	1	each	298.20	298.20
250.2	sand cast iron S&S as per IS 3989	1	each	466.57	466.57
251	Providing and fixing single unequal junction of required degree				
251.1	100x100x75mm				
251.2	sand cast iron S&S aa per IS 1729	1	each	259.67	259.67
251.2	sand cast iron S&S as per IS 3989	1	each	407.02	407.02
252	Providing and fixing double equal plain invert branch of required degree				
252.1	100x100x100x100mm				
252.2	sand cast iron S&S aa per IS 1729	1	each	372.56	372.56
252.3	sand cast iron S&S as per IS 3989	1	each	383.10	383.10
252.4	75x75x75x75mm				
252.5	sand cast iron S&S aa per IS 1729	1	each	279.77	279.77
252.6	sand cast iron S&S as per IS 3989	1	each	295.93	295.93
253	Providing and fixing single equal plain invert branch of required degree				
253.1	100x100x100mm				
253.2	sand cast iron S&S aa per IS 1729	1	each	286.27	286.27
253.3	sand cast iron S&S as per IS 3989	1	each	291.89	291.89
253.4	75x75x75mm				
253.5	sand cast iron S&S aa per IS 1729	1	each	215.23	215.23
253.6	sand cast iron S&S as per IS 3989	1	each	224.36	224.36
254	Providing and fixing double unequal invert branch of required degree				
254.1	100x100x75x75mm				
254.2	sand cast iron S&S aa per IS 1729	1	each	397.11	397.11
254.3	sand cast iron S&S as per IS 3989	1	each	505.86	505.86
255	Providing and fixing single unequal plain invert branch of required degree				
255.1	100x100x75mm				
255.2	sand cast iron S&S aa per IS 1729	1	each	341.69	341.69
255.3	sand cast iron S&S as per IS 3989	1	each	369.05	369.05
256	Providing and fixing sand cast iron and S&S off sets as per IS 1729				
256.1	76mm off sets				
256.2	with 75mm dia pipe	1	each	154.70	154.70
256.3	with 100mm dia pipe	1	each	176.20	176.20
256.4	114mm off sets				
256.5	with 75mm dia pipe	1	each	204.19	204.19
256.6	with 100mm dia pipe	1	each	263.80	263.80
256.7	152mm off sets				

BHEL Item No	Description	Qty.	Unit	LPR Rate	Amount
256.8	with 75mm dia pipe	1	each	254.62	254.62
256.9	with 100mm dia pipe	1	each	328.28	328.28
257	Providing and fixing sand cast iron S&S off sets as per IS 3989				
257.1	75mm off sets				
257.2	with 75mm dia pipe	1	each	162.63	162.63
257.3	150mm off sets				
257.4	with 75mm dia pipe	1	each	207.03	207.03
257.5	with 100mm dia pipe	1	each	277.19	277.19
258	Providing and fixing door piece insertion rubber washer 3mm thick bolts and nuts complete				
258.1	100mm				
258.2	sand cast iron S&S pipe as per IS 1729	1	each	270.15	270.15
258.3	sand cast iron S&S pipe as per IS 3989	1	each	284.16	284.16
258.4	75mm				
258.5	sand cast iron S&S pipe as per IS 1729	1	each	196.99	196.99
258.6	sand cast iron S&S pipe as per IS 3989	1	each	201.92	201.92
259	Providing and fixing terminal guard				
259.1	100mm				
259.2	sand cast iron S&S pipe as per IS 1729	1	each	145.96	145.96
259.3	sand cast iron S&S pipe as per IS 3989	1	each	148.08	148.08
259.4	75mm				
259.5	sand cast iron S&S pipe as per IS 1729	1	each	107.90	107.90
259.6	sand cast iron S&S pipe as per IS 3989	1	each	134.57	134.57
260	Providing and fixing collar				
260.1	100mm				
260.2	sand cast iron S&S pipe as per IS 1729	1	each	108.06	108.06
260.3	sand cast iron S&S pipe as per IS 3989	1	each	144.54	144.54
260.4	75mm				
260.5	sand cast iron S&S pipe as per IS 1729	1	each	80.54	80.54
260.6	sand cast iron S&S pipe as per IS 3989	1	each	102.98	102.98
261	Providing lead caulked joints to sand cast iron rain centrifugally cast (spun) iron pipes and fitting of diametre				
261.1	100mm	1	each	127.63	127.63
261.2	75mm	1	each	108.28	108.28
261.3	50mm	1	each	86.83	86.83
262	Providing and fixing MS stays and clamps for sand cast iron / centrifugally cast (spun) iron pipes of diameter				
262.1	100mm	1	each	36.07	36.07
262.2	75mm	1	each	30.29	30.29
262.3	50mm	1	each	26.07	26.07
263	Providing and fixing trap of self cleansing design with screws down or hinged grating with or without vent arm complete, including cost of cutting and making good the walls and floors				
263.1	100mm inlet and 100mm outlet				
263.2	sand cast iron S&S as per IS 3989	1	each	483.85	483.85
263.3	sand cast iron S&S pipe as per IS 1729	1	each	393.34	393.34
263.4	100mm inlet and 75 mm outlet				
263.5	sand cast iron S&S as per IS 3989	1	each	506.29	506.29
263.6	sand cast iron S&S pipe as per IS 1729	1	each	347.74	347.74
265	cutting chases in brick masonry walls for following diametre sand cast iron/ centrifugally cast (spun) iron pipes and making good the same with cement concrete 1:3:6(1 cement 3 coarse sand 6 grade stone aggregate 12.5 mm nominal size) including necessary plaster and painting in cement mortar 1:4(1 cement 4 coarse sand)				
265.1	100mm	1	mtr	137.79	137.79
265.2	75mm	1	mtr	99.22	99.22
265.3	50mm	1	mtr	65.04	65.04
266	painting CI cistern with bitumastic or any other anti corrosive paint inside and white paint over a coat of zinc chromate yellow primer (of approved quality) on the outside surface of the cistern flush pipe other fitting etc. complete for new work	1	each	210.65	210.65
267	Re-painting CI cistern with bitumastic or any other anti corrosive paint inside and white paint on the outside surface of the cistern flush pipe other fitting etc. complete including polishing of wooden seat and lid and cleaning of WC pan with acid wherever necessary	1	each	147.37	147.37

BHEL Item No	Description	Qty.	Unit	LPR Rate	Amount
268	Repainting CI cistern with synthetic enamel paint of approved colour brand and manufacture on the outside surface fo cistern flush pipe other fitting etc. complete	1	each	62.65	62.65
269	painting sand cast iron / centrifugally cast (spun) iron soil waste vent pipes and fitting with paint of any colour such as chocolate grey or buff etc, over a coat of primer(of approved quality) for new work				
269.1	100mm dia meter pipes	1	mtr	16.01	16.01
269.2	75mm dia metre pipe	1	mtr	12.28	12.28
270	Repainting sand cast iron / centrifugally cast iron (spun) iron soil waste vent pipes and fitting with paint of any colour such as chocolate grey or buff etc.				
270.1	100mm dia meter pipes	1	mtr	8.03	8.03
270.2	75mm dia metre pipe	1	mtr	6.01	6.01
271	Repainting bath tub of size 1700x730x430mm with enamel paint	1	each	181.61	181.61
272	Providing and fixing vitreous china dual purpose closet suitable for use as squatting pan or european type water closet (angle indian WC pan) with seat lid with CP brass hinges and rubbers buffers 10ltr low level flushing cistern with fitting and brackets 40mm flush bend 20mm over flow pipe with specials of standard make and mosquito proof coupling of approved municipall design complete, including painting of fitting and brackets cutting and making good the walls and floors wherever required				
272.1	white vitreous china dual purpose WC pan with white solid plastic seat and lid with white vitreous china flushing cistern and CP flush bend	1	each	3546.03	3546.03
273	Dismantling, Providing and fixing PTMT waste coupling for wash basin and sink of approved quality and colour				
273.1	waste coupling 31mm of 79mm length and 62mm breadth weighing not less than 45 grms	1	each	57.94	57.94
273.2	waste coupling 38mm of 83mm length and 77mm breadth weighing not less than 60grms	1	each	67.06	67.06
274	Dismantling, Providing and fixing PTMT bottle trap for wash basin and sink				
274.1	Bottle trap 31mm single piece moulded with height of 270mm effective length of tail pipe 260mm from the centre of the waste coupling 77mm breadth with 25mm minimum water seal weighinng not less than 260 grms	1	each	244.55	244.55
274.2	Bottle trap 38mm single piece moulded with height of 270mm effective length of tail pipe 260mm from the centre of the waste coupling 77mm breadth with 25mm minimum water seal weighinng not less than 263 grms	1	each	263.87	263.87
275	Dismantling, Providing and fixing PTMT liquid soap container 109mm wide 125mm high and 112mm distance from wall of standard shape with bracket of the same material with snap fitting of approved quality and colour weighing not less than 105grms	1	each	109.10	109.10
276	Dismantling, Providing and fixing PTMT towel ring trapezoidal shape 215mm long 200mm wide with a minimum distances of 37mm from wall face with concealed fitting arrangement of approved quality and colour weighing not less than 88 grms	1	each	103.55	103.55
277	Dismantling, 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				
277.1	450mm long towel rail with total length of 495mm 78mm wide and effective height of 88mm weighing not less than 170grms	1	each	230.58	230.58
277.2	600mm long towel rail with total length of 645mm width 78mm and effective height of 88mm weighing not less than 190grms	1	each	253.62	253.62
278	Dismantling, Providing and fixing PTMT shelf 440mm long 124mm width and 36 mm height of approved quality and colour weighinng not less than 300 grams	1	each	276.06	276.06
279	Dismantling, Providing and fixing PTMT 15mm urinal spreader size 95x69x100mm with 1/2" BSP thread and shapes weighing hot less than 60 grms	1	each	96.48	96.48
280	Dismantling, Providing and fixing PTMT urinal cock of approved quality and colour				

BHEL Item No	Description	Qty.	Unit	LPR Rate	Amount
280.1	15mm nominal bore 80mm long 42mm high and 30mm wide with BSP female threads weighing not less than 48grm	1	each	74.76	74.76
281	Dismantling, Providing and fixing MS holder bat clamp of approved design to sand cast iron cast iron (spun) pipes comprising of MS flat brackets made of 50x5mm flat of specified shape projecting 75mm outside the wall surface and fixed on wall with 4nos 6mm dia expansion hold fasteners including drilling neccessary holes in brick wall CC/RCC surface and the cost of bolts etc. the pipe shall be fixed to the already fixed brackets with the help of 30mm x 1.6mm galvanised MS flats of specified shape and of total length 420mm and shall be fixed with MS nuts bolts and washers of size of size 25x6mm , one bolts on each side of the pipe				
281.1	total bracket length 580mm of approved shape and design (for single 100mm dia pipe)	1	each	103.95	103.95
281.2	total bracket length 810mm of approved shape and design (for two 100mm dia pipes)	1	each	127.59	127.59
281.3	total bracket length 1040mm of approved shape and design (for three 100mm dia pipes)	1	each	150.97	150.97
282	Rectifying the dampness due to leaking joints of Nahany traps alkathin / lead pipe connections to W.C's joints in AC pipes embedded in flooring including chasing brick work / concrete and making good after repairs in cement mortar including cost of all materials, curing etc complete for all specials all as directed by Engineer-in-charge.(trap and PVC Pipe if replaced will be measured separately)	413	Each	153.33	63325.29
283	Dismantling and replacing with new ones of approved make including chasing of brick work / concrete, making good in CM cost of all materials, curing for the following items etc complete all as directed by Engineer-in-charge				
283.1	Wash hand basins of size 22"x16" (without fittings)	10	Each	394.79	3947.90
283.2	Wash hand basins of size 18"x12" (without fittings).	1	Each	345.44	345.44
283.3	Indian water closet 630 mm / 580 mm	5	Each	419.46	2097.30
283.4	European Water closets complete all as directed by Engineer-in-charge.	1	Each	592.18	592.18
283.5	Standing type white glazed flat back urinals.	5	Each	296.09	1480.45
283.6	Porcelain 'P' trap of size 4"	10	Each	148.04	1480.40
283.7	Orissa Pan of approved make and size 580 x 440 mm	10	Each	493.48	4934.80
284	SWG gully traps 6"x6" or 4"x4" with CI frame and cover.	10	Each	106.66	1066.60
285	Fixing of white coloured PVC low level flushing cistern 10 lit capacity supplied from BHEL stores complete all as directed by Engineer-in-charge.	1	Each	197.39	197.39
286	labour charges for Fixing kitchen black stone sinks of 1/2" thick, 24" x 18" x 7" with CI brackets CP brass china with CP brass waste complete including painting the fittings and brackets cutting and making good the walls wherever required. (Black stone sink along with waste water pipe,waste coupling and brackets will be free issue from BHEL store).	10	Each	272.41	2724.10
287	Dismantling and replacing with new ones of approved make including cost of all materials etc complete all as directed by Engineer-in-charge.				
287.1	1/2" C.P. pillar taps (500 gms) SEIKO DELUX HEAVY DUTY.	10	Each	174.66	1746.60
287.2	1/2" brass stop cock (400 gms)	10	Each	165.55	1655.50
287.3	3/4" brass stop cock.	10	Each	203.12	2031.20
287.4	1/2" X 18" PVC pipe connections. (Heavy duty).	10	Each	38.65	386.50
287.5	PVC flexible pipe 32 mm dia.	10	Each	40.42	404.20
287.6	3/4" polymer ball cock of ISI makes approved brand.	10	Each	166.66	1666.60
287.7	1/2" polymer ball cock of ISI makes approved brand.	10	Each	121.33	1213.30
287.8	E.W.C seat covers (solid) of any shade.	10	Each	264.17	2641.70
287.9	CP concealed stock cock 1/2" dia with internal brass threadings.	10	Each	226.67	2266.70
287.10	Hot and cold mixing vlate of SEIKO DELUX make.	1	Each	713.34	713.34
287.11	C.P. waste coupling 1 1/4" dia (32 mm).	10	Each	109.91	1099.10
287.12	C.P. Nahani trap jalise 5" dia.	10	Each	12.00	120.00
287.13	Hot water connections.	4	Each	68.00	272.00
287.14	C.I. brackets.	10	Each	56.00	560.00
287.15	Porcelain foot rests 250 x 125 x 25 mm	2	Each	97.46	194.92
287.16	1/2" C.I bib taps with brass internal, turning (Alto brand or equivalent).	2	Each	54.67	109.34

BHEL Item No	Description	Qty.	Unit	LPR Rate	Amount
287.17	1/2" Polymet bib taps (PTMT material) prayag make.	10	Each	102.66	1026.60
287.18	PVC shower swing type for the 1/2" 3/4" pipe (Prayag make).	10	Each	100.00	1000.00
287.19	1/2" C.I. stop cock with brass internal turnings (Alto or equivalent brand).	1	Each	89.33	89.33
288	PVC siphon set suitable for PVC/CI low down flush tank of 10 litres capacity with all fittings etc.	10	Each	654.43	6544.30
289	Supplying and fixing of PVC balls ISI marked for ball cocks in overhead tanks and flush tanks for 20 mm dia.etc. complete all as directed by Engineer-in-charge.	1	Each	18.81	18.81
290	Supplying and fixing CI Nahany trap 76 mm (3") dia in cement concrete 1:2:4 and 12.7 mm (5") dia CI grating hinged to Nahany trap including breaking of the flooring and redoing the same wherever necessary etc complete all as directed by Engineer-in-charge.	10	Each	172.72	1727.20
291	Removing and refixing GI pipe 13 to 40 mm dia including cost of jointing materials such as specials like collars, elbows, bends etc complete all as directed by Engineer-in-charge.	100	One Rmt	30.91	3091.00
292	Supplying and fixing Telephonic shower including cost of all materials and fixtures and fittings etc complete all as directed by Engineer-in-charge.	2	Each	733.19	1466.38
293	Providing PVC storage tank covers located over the buildings to suit existing PVC storage tanks with nut and bolts etc complete all as directed by Engineer-in-charge.	5	Each	51.82	259.10
294	Dismantling of the existing AC/PVC Pipe (old pipes are to be handed over to department as per instructions of the Engineer-in-charge) and Supply & Fixing of 75 mm dia Prince/ Sudhakar make or equivalent quality as approved by Engineer-in-charge of PVC / SWR pipes (as per ISI standards) 4 kgs/ cm ² . etc complete all as directed by Engineer-in-charge.	100	Rmt	72.54	7254.00
295	Dismantling of the existing AC /PVC Pipes (the pipes are to be returned to department as per instructions of the Engineer-in-charge) and Supply & Fixing Prince / Sudhakar make or equivalent approved quality PVC / SWR pipes (as per ISI standards) 4 kg / cm ² ...110 mm dia etc complete all as directed by Engineer-in-charge.	100	Rmt	123.49	12349.00
296	Dismantling of the existing specials and Supplying & Fixing Prince / Sudhakar make or equivalent approved quality (U.V. resistant UPVC) SWR pipe fittings (as per ISI standards) etc complete all as directed by Engineer-in-charge.				
296.1	75 mm dia plain bend.	10	Each	57.00	570.00
296.2	75 mm dia plug bend.	10	Each	68.22	682.20
296.3	75 mm dia off-set.	10	Each	51.82	518.20
296.4	75 mm dia Single 'Y' with door.	5	Each	88.83	444.15
296.5	75 mm dia pipe clip.	5	Each	12.95	64.75
296.6	75 mm dia single tee with door.	5	Each	75.13	375.65
296.7	110 mm dia plain bend.	10	Each	59.22	592.20
296.8	110 mm dia plug bend.	10	Each	74.02	740.20
296.9	110 mm dia Single 'Y' with door.	10	Each	98.70	987.00
296.10	110 mm dia Double 'Y' with door.	5	Each	123.37	616.85
296.11	110 mm dia off-set.	10	Each	80.31	803.10
296.12	110 mm dia vent cowl.	5	Each	28.50	142.50
296.13	110 mm dia pipe clip.	5	Each	15.54	77.70
296.14	110 mm dia single tee with door.	1	Each	74.02	74.02
296.15	110 mm dia coupler.	1	Each	50.09	50.09
296/I	Labour Charges for dismantling and replacing with new ones of approved make including chasing of brick work / concrete, making good in CM cost of all materials, curing for the following items etc complete all as directed by Engineer-in-charge.				
a	Wash hand basins of size 22"x16" (without fittings)	10	Each	396.31	3963.10
b	Wash hand basins of size 18"x12" (without fittings).	15	Each	396.31	5944.65
c	Indian water closet 630 mm / 580 mm	1	Each	509.54	509.54
d	European Water closets complete all as directed by Engineer-in-charge.	10	Each	509.54	5095.40
e	Standing type white glazed flat back urinals.	4	Each	452.92	1811.68
f	Porcelain 'P' trap of size 4"	10	Each	169.85	1698.50
g	Orissa Pan of approved make and size 580 x 440 mm	10	Each	552.00	5520.00
h	SWG gully traps 6"x6" or 4"x4" with CI frame and cover.	10	Each	382.16	3821.60

BHEL Item No	Description	Qty.	Unit	LPR Rate	Amount
i	Fixing of white coloured PVC low level flushing cistern 10 lit capacity supplied from BHEL stores complete all as directed by Engineer-in-charge.	10	Each	203.81	2038.10
296/II	labour charges for Fixing kitchen black stone sinks of 1/2" thick, 24" x 18" x 7" with CI brackets CP brass china with CP brass waste complete including painting the fittings and brackets cutting and making good the walls wherever required.	10	Each	254.77	2547.70
296/III	labour charges for Dismantling and replacing with new ones of approved make including cost of all materials etc complete all as directed by Engineer-in-charge.				
a	1/2" C.P. pillar taps (500 gms) SEIKO DELUX HEAVY DUTY.	10	Each	118.89	1188.90
b	1/2" brass stop cock (400 gms)	10	Each	101.91	1019.10
c	3/4" brass stop cock.	10	Each	107.57	1075.70
d	1/2" X 18" PVC pipe connections. (Heavy duty).	10	Each	39.63	396.30
e	PVC flexible pipe 32 mm dia.	10	Each	28.31	283.10
f	3/4" polymer ball cock of ISI makes approved brand.	10	Each	152.86	1528.60
g	1/2" polymer ball cock of ISI makes approved brand.	8	Each	164.18	1313.44
h	E.W.C seat covers (solid) of any shade.	10	Each	96.25	962.50
i	CP concealed stock cock 1/2" dia with internal brass threadings.	20	Each	260.43	5208.60
j	Hot and cold mixing vlvae of SEIKO DELUX make.	2	Each	543.50	1087.00
k	C.P. waste coupling 1 1/4" dia (32 mm).	10	Each	36.800	368.00
l	C.P. Nahani trap jalise 5" dia.	10	Each	28.31	283.10
m	Hot water connections.	1	Each	33.97	33.97
n	C.I. brackets.	10	Each	39.63	396.30
o	Porcelain foot rests 250 x 125 x 25 mm	2	Each	101.91	203.82
p	1/2" C.I. bib taps with brass internal, turning (Alto brand or equivalent).	10	Each	90.58	905.80
q	1/2" Polymet bib taps (PTMT material) prayag make.	10	Each	84.92	849.20
r	PVC shower swing type for the 1/2" 3/4" pipe (Prayag make).	10	Each	90.58	905.80
s	1/2" C.I. stop cock with brass internal turnings (Alto or equivalent brand).	5	Each	79.26	396.30
t	PVC siphon set suitable for PVC/CI law down flush tank of 10 litres capacity with all fittings etc.	7	Each	317.04	2219.28
u	Supplying and fixing of PVC balls ISI marked for ball cocks in overhead tanks and flush tanks for 20 mm dia.etc. complete all as directed by Engineer-in-charge.	23	Each	42.460	976.58
v	Supplying and fixing CI Nahany trap 76 mm (3") dia in cement concrete 1:2:4 and 12.7 mm (5") dia CI grating hinged to Nahany trap including breaking of the flooring and redoing the same wherever necessary etc complete all as directed by Engineer-in-charge.	10	Each	339.69	3396.90
w	Removing and refixing GI pipe 13 to 40 mm dia including cost of jointing materials such as specials like collars, elbows, bends etc complete all as directed by Engineer-in-charge.	12	One Rmt	39.63	475.56
x	Supplying and fixing Telephonic shower including cost of all materials and fixtures and fittings etc complete all as directed by Engineer-in-charge.	1	Each	96.25	96.25
y	Providing PVC storage tank covers located over the buildings to suit existing PVC storage tanks with nut and bolts etc complete all as directed by Engineer-in-charge.	26	Each	96.25	2502.50
296/IV	Dismantling of the existing AC/PVC Pipe (old pipes are to be handed over to department as per instructions of the Engineer-in-charge) and Supply & fixing of 75 mm dia Prince/ Sudhakar make or equivalent quality as approved by Engineer-in-charge of PVC / SWR pipes (as per ISI standards) 4 kgs/ cm ² . etc complete all as directed by Engineer-in-charge.	10	Rmt	291.83	2918.30
296/V	Labour charges for Dismantling of the existing AC /PVC Pipes (the pipes are to be returned to department as per instructions of the Engineer-in-charge) and Supply & Fixing Prince / Sudhakar make or equivalent approved quality PVC / SWR pipes (as per ISI standards) 4 kg / cm ² ...110 mm dia etc complete all as directed by Engineer-in-charge.	10	Rmt	350.20	3502.00
296/VI	Labour charges for Dismantling of the existing specials and Supplying & Fixing Prince / Sudhakar make or equivalent approved quality (U.V. resistant UPVC) SWR pipe fittings (as per ISI standards) etc complete all as directed by Engineer-in-charge.				

BHEL Item No	Description	Qty.	Unit	LPR Rate	Amount
a	75 mm dia plain bend.	10	Each	75.88	758.80
b	75 mm dia plug bend.	10	Each	75.88	758.80
c	75 mm dia off-set.	10	Each	87.55	875.50
d	75 mm dia Single 'Y' with door.	10	Each	128.41	1284.10
e	75 mm dia pipe clip.	9	Each	11.67	105.03
f	75 mm dia single tee with door.	10	Each	134.24	1342.40
g	110 mm dia plain bend.	10	Each	87.55	875.50
h	110 mm dia plug bend.	10	Each	93.39	933.90
i	110 mm dia Single 'Y' with door.	10	Each	105.06	1050.60
j	110 mm dia Double 'Y' with door.	22	Each	116.73	2568.06
k	110 mm dia off-set.	10	Each	116.73	1167.30
l	110 mm dia vent cowl.	20	Each	35.02	700.40
m	110 mm dia pipe clip.	10	Each	29.18	291.80
n	110 mm dia single tee with door.	20	Each	134.24	2684.80
o	110 mm dia coupler.	1	Each	52.53	52.53
WATER SUPPLY WORKS					
297	Providing and fixing Polyethene -Aluminium-Polythelene(PE-AL-PE) Complete Pressure Pipe conforming to IS -15450 U.V.stabilized for hot & cold water supply, capable to withstand tempreature up to 80 C including all special fittings of composite metrial (engineering plastic bland and brass inserts wherever required) e.g.elbows,tees,reducers, couplers &connectors etc.with clamp at 1.00metre speacing. this includes testing of joint complete as per direction of the Engineer in charge				
	Internal work-Exposed on wall				
297.1	1216(16 mm OD) pipe	5	metre	114.63	573.15
297.2	1620 (20 mm OD) pipe	5	metre	136.96	684.80
297.3	2025 (25 mm OD) pipe	5	metre	169.31	846.55
297.4	2532 (32 mm OD) pipe	1	metre	220.83	220.83
297.5	3240 (40 mm OD) pipe	1	metre	313.82	313.82
297.6	4050 (50 mm OD) pipe	1	metre	363.03	363.03
298	Providing and fixing Polyethelene-Aluminium-Polyethelene (PE-AL-PE) Composite Pressure Pipes conforming to IS - 15450 U.V.stabilized with carbon black having thermal stability for hot & cold water supply, capable to withstand temperature up to 80 C including all special fittings of composite material (engineering plastic bland and brass inserts wherever required) e.g. elbows, tees, reducers, couplers & connectors etc. with clamps at 1.00 metre spacing. This includes the costs of cutting chases and including testing of joints complete as per direction of the engineer in charge.				
	Comcealed work including cutting chases and making good the wall etc.				
298.1	1216 (16mm OD)Pipe	1	metre	179.87	179.87
298.2	1620 (20 mm OD) pipe	1	metre	205.63	205.63
298.3	2025(25mm OD) Pipe	1	metre	244.92	244.92
298.4	2532(32mm OD) Pipe	1	metre	306.32	306.32
299	Providing and fixing chlorinted polyvinyl chloride (CVCV) pipes , having thermal stability for hot and cold water supply including all CPVC plain and brass threaded fitting including of pipes with clamps at 1.00m spacing. This including jointing of pipes and fitting with one step CPVC solvent cement and testing of joints completes as per direction of engineer in charge				
	Internal work-Exposed on wall				
299.1	15mm nominal outer dia. Pipes	4	mtr	82.27	329.08
299.2	20mm nominal outer dia. Pipes	4	mtr	96.39	385.56
299.3	25mm nominal outer dia. Pipes	1	mtr	120.96	120.96
299.4	32mm nominal outer dia. Pipes	1	mtr	154.27	154.27
299.5	40mm nominal outer dia. Pipes	1	mtr	212.54	212.54
299.6	50mm nominal outer dia. Pipes	1	mtr	312.87	312.87
300	providing and fixing chlorinated polyvinyl chloride (CPVC) pipes, having thermal stability for hot & cold water supply including all CPVC plain and brass threaded fitting i/c fixing the pipe with clamps at 1.00m spacing. This including jointing of pipes and fitting 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				
	Concealed work including cutting chases and making good the walls etc.				

BHEL Item No	Description	Qty.	Unit	LPR Rate	Amount
300.1	15mm nominal outer dia. Pipes	40	mtr	131.97	5278.80
300.2	20mm nominal outer dia. Pipes	59	mtr	147.12	8680.08
300.3	25mm nominal outer dia. Pipes	1	mtr	179.87	179.87
300.4	32mm nominal outer dia. Pipes	1	mtr	216.68	216.68
301	Providing and fixing GI pipes complete with GI fitting and clamps including cutting and making good the walls etc. Internal work-Exposed on wall				
301.1	15mm nominal bore	10.5	mtr	80.69	847.25
301.2	20mm nominal bore	10.5	mtr	93.14	977.97
301.3	25mm nominal bore	10.5	mtr	122.91	1290.56
301.4	32mm nominal bore	1	mtr	153.55	153.55
301.5	40mm nominal bore	1	mtr	193.10	193.10
301.6	50mm nominal bore	1	mtr	247.73	247.73
302	Providing and fixing G.I. Pipes complete with G.I. fittings and clamps, i/c making good the walls etc. concealed pipe, including painting with anti corrosive bitumastic paint, cutting chases and making good the wall :				
302.1	15 mm dia nominal bore	36	mtr	141.63	5098.68
302.2	20 mm dia nominal bore	2	mtr	155.06	310.12
303	Providing and fixing GI pipe complete with GI fitting including trenching and refilling etc. External work				
303.1	15mm nominal bore	100	mtr	87.15	8715.00
303.2	20mm nominal bore	100	mtr	98.63	9863.00
303.3	25mm nominal bore	100	mtr	127.83	12783.00
303.4	32mm nominal bore	1	mtr	151.47	151.47
303.5	40mm nominal bore	7	mtr	179.15	1254.05
303.6	50mm nominal bore	7	mtr	216.45	1515.15
303.7	65mm nominal bore	1	mtr	275.75	275.75
303.8	80mm nominal bore	7	mtr	348.15	2437.05
304	Making connection of GI distribution branch with GI main of following sizes by providing and fixing tee including cutting and threading the pipe ect complete				
304.1	25 to 40mm nominal bore	2	each	173.48	346.96
304.2	50 to 80mm nominal bore	1	each	388.65	388.65
305	Providing and fixing brass bib cock of approved quality:				
305.1	15 mm nominal bore	1	each	124.56	124.56
305.2	20 mm nominal bore	1	each	161.21	161.21
305.3	Providing and fixing brass stop cock of approved quality :				
305.4	15 mm nominal bore	5	each	124.56	622.80
305.5	20 mm nominal bore	1	each	161.52	161.52
306	Providing and fixing gun metal gate valve with C.I. wheel of approved quality (screwed end)				
306.1	25 mm nominal bore	7	each	225.78	1580.46
306.2	32 mm nominal bore	5	each	272.93	1364.65
306.3	40 mm nominal bore	1	each	330.46	330.46
306.4	50 mm nominal bore	1	each	472.19	472.19
306.5	65 mm nominal bore	1	each	649.02	649.02
306.6	80 mm nominal bore	1	each	1108.02	1108.02
307	Providing and fixing ball valve (brass) of approved quality ,High or low pressure ,with plastic floats complete :				
307.1	15 mm nominal bore	1	each	156.88	156.88
307.2	20 mm nominal bore	1	each	218.83	218.83
307.3	25 mm nominal bore	1	each	256.20	256.20
308	Providing and fixing gun metal non return of approved quality (screwed end)				
308.1	25 mm nominal bore				
308.2	Horizontal	1	each	232.25	232.25
308.3	vertical	1	each	239.25	239.25
308.4	32 mm nominal bore				
308.5	Horizontal	1	each	296.82	296.82
308.6	vertical	1	each	359.97	359.97
308.7	40 mm nominal bore				
308.8	Horizontal	1	each	375.40	375.40
308.9	vertical	1	each	494.66	494.66
308.10	50 mm nominal bore				
308.11	Horizontal	1	each	566.40	566.40
308.12	vertical	1	each	671.61	671.61
308.13	65 mm nominal bore				
308.14	Horizontal	1	each	1016.81	1016.81

BHEL Item No	Description	Qty.	Unit	LPR Rate	Amount
308.15	vertical	1	each	1178.17	1178.17
308.16	80 mm nominal bore				
308.17	Horizontal	1	each	1446.33	1446.33
308.18	vertical	1	each	1867.27	1867.27
309	Providing and fixing uplasticised PVC connection pipe with brass unions				
309.1	30 cm length				
309.2	15 mm nominal bore	40	each	31.59	1263.60
309.3	20 mm nominal bore	1	each	36.51	36.51
309.4	45 cm length				
309.5	15 mm nominal bore	1	each	37.90	37.90
309.6	20 mm nominal bore	1	each	44.94	44.94
310	Providing and fixing CP brass shower rose with 15 or 20mm inlet				
310.1	100 mm dia meter	1	each	35.44	35.44
310.2	150 mm dia meter	1	each	47.40	47.40
311	laying in position centrifugally cast spun iron S&S or flanged pipes(excluding cost of pipe)	1	quintal	64.19	64.19
312	Laying in position S&S or flanged CI special such as tees bends collars tapers and caps etc. (excluding cost fo specials)	1	quintal	117.46	117.46
313	Providing and laying S&S CI standard specials such as tees bends collars tapers caps etc., (Heavy class)				
313.1	Upto 300mm dia	1	quintal	2543.59	2543.59
313.2	over 300mm dia	1	quintal	2613.74	2613.74
314	Providing and laying flanged CI standard specials such as tees bends collars tapers caps etc. suitable for flanges jointing as per IS 1538				
314.1	Upto 300mm dia	1	quintal	3841.46	3841.46
314.2	over 300mm dia	1	quintal	4051.93	4051.93
315	Providing and laying S&S centrifugally cast (spun) iron pipes (class LA) conforming to IS 1536				
315.1	100 mm dia pipe	1	mtr	596.41	596.41
315.2	125 mm dia pipe	1	mtr	748.05	748.05
315.3	150 mm dia pipe	1	mtr	892.94	892.94
315.4	200 mm dia pipe	1	mtr	1521.35	1521.35
315.5	250 mm dia pipe	1	mtr	2031.60	2031.60
315.6	300 mm dia pipe	1	mtr	2683.05	2683.05
316	Providing lead caulked joints to spun iron or CI pipes and specials including testing of joints but excluding the cost of pig lead				
316.1	100 mm diameter pipe	1	each	94.00	94.00
316.2	125 mm diameter pipe	1	each	138.38	138.38
316.3	150 mm diameter pipe	1	each	140.78	140.78
316.4	200 mm diameter pipe	4	each	187.00	748.00
316.5	250 mm diameter pipe	6	each	233.63	1401.78
316.6	300 mm diameter pipe	4	each	281.26	1125.04
316.7	350 mm diameter pipe	1	each	290.40	290.40
317	Supplying pig lead at site of work	1	quintal	6319.79	6319.79
318	Providing flanged joints to double flanged CI / DI pipes and specials including testing of joints				
318.1	80 mm diameter pipe	1	each	56.87	56.87
318.2	100 mm diameter pipe	1	each	95.03	95.03
318.3	125 mm diameter pipe	1	each	101.34	101.34
318.4	150 mm diameter pipe	1	each	117.87	117.87
318.5	200 mm diameter pipe	1	each	121.41	121.41
318.6	250 mm diameter pipe	1	each	181.28	181.28
318.7	300 mm diameter pipe	1	each	186.89	186.89
318.8	350 mm diameter pipe	1	each	249.98	249.98
319	Providing and fixing CI sluice valves (with cap) complete with bolts nuts rubber insertions etc. (the tail pieces if required will be paid separately)				
319.1	100 mm dia pipe				
319.2	Class I	1	each	1851.71	1851.71
319.3	Class II	1	each	2111.34	2111.34
319.4	125 mm dia pipe				
319.5	Class I	1	each	2088.81	2088.81
319.6	Class II	1	each	2524.52	2524.52
319.7	150 mm dia pipe				
319.8	Class I	1	each	2708.56	2708.56

BHEL Item No	Description	Qty.	Unit	LPR Rate	Amount
319.9	Class II	1	each	3139.76	3139.76
319.10	200 mm dia pipe				
319.11	Class I	1	each	4976.01	4976.01
319.12	Class II	1	each	6798.97	6798.97
319.13	250 mm dia pipe				
319.14	Class I	1	each	7267.38	7267.38
319.15	Class II	1	each	10097.21	10097.21
319.16	300 mm dia pipe				
319.17	Class I	1	each	10123.00	10123.00
319.18	Class II	1	each	12650.07	12650.07
320	Constructing masonry chamber 30x30x50 cm inside with 75 class designation brick work in cement mortar 1:4(1 cement 4 coarse sand) for stop cock with CI surface box 100x100x75mm (inside) with hinged cover fixed in cement concrete slab 1:2:4 mix (1 cement 2 coarse sand 4 graded stone aggregate 20mm nominal size) necessary excavation foundation concrete 1:5:10(1 cement 5 fine sand 10 graded stone aggregate 40mm nominal size) and 12mm thick finished with a floating coat of neat cement complete as per standard design				
320.1	With FPS bricks	1	each	434.11	434.11
321	Constructing masonry chamber 60x60x75 cm inside with 75 class designation brick work in cement mortar 1:4 (1 cement 4 coarse sand) for sluice valve with CI surface box 100mm top diameter 160mm bottom diameter and 180mm deep (inside) with chained lid and RCC top slab 1:2:4 mix (1 cement 2 coarse sand 4 graded stone aggregate 20mm nominal size) necessary excavation foundation concrete 1:5:10(1 cement 5 fine sand 10 graded stone aggregate 40mm nominal size) and inside plastering with cement mortar 1:3(1 cement 3 coarsened sand) 12mm thick finished with a floating coat of neat cement complete as per standard design				
321.1	With FPS bricks	1	each	2699.26	2699.26
322	Constructing masonry chamber 90x90x100 cm inside with 75 class designation brick work in cement mortar 1:4 (1 cement 4 coarse sand) for sluice valve with CI surface box 100mm top diameter 160mm bottom diameter and 180mm deep (inside) with chained lid and RCC top slab 1:2:4 mix (1 cement 2 coarse sand 4 graded stone aggregate 20mm nominal size) necessary excavation foundation concrete 1:5:10(1 cement 5 fine sand 10 graded stone aggregate 40mm nominal size) and inside plastering with cement mortar 1:3(1 cement 3 coarsened sand) 12mm thick finished with a floating coat of neat cement complete as per standard design				
322.1	With FPS bricks	1	each	4682.39	4682.39
323	Constructing masonry chamber 120x120x100 cm inside with 75 class designation brick work in cement mortar 1:4 (1 cement 4 coarse sand) for sluice valve with CI surface box 100mm top diameter 160mm bottom diameter and 180mm deep (inside) with chained lid and RCC top slab 1:2:4 mix (1 cement 2 coarse sand 4 graded stone aggregate 20mm nominal size) necessary excavation foundation concrete 1:5:10(1 cement 5 fine sand 10 graded stone aggregate 40mm nominal size) and inside plastering with cement mortar 1:3(1 cement 3 coarsened sand) 12mm thick finished with a floating coat of neat cement complete as per standard design				
323.1	With FPS bricks	1	each	6472.82	6472.82
324	Constructing masonry chamber 60x60x75 cm inside with 75 class designation brick work in cement mortar 1:4 (1 cement 4 coarse sand) for sluice valve with CI surface box 100mm top diameter 160mm bottom diameter and 180mm deep (inside) with chained lid and RCC top slab 1:2:4 mix (1 cement 2 coarse sand 4 graded stone aggregate 20mm nominal size) necessary excavation foundation concrete 1:5:10(1 cement 5 fine sand 10 graded stone aggregate 40mm nominal size) and inside plastering with cement mortar 1:3(1 cement 3 coarsened sand) 12mm thick finished with a floating coat of neat cement complete as per standard design				
324.1	With FPS bricks	1	each	2596.80	2596.80

BHEL Item No	Description	Qty.	Unit	LPR Rate	Amount
325	Constructing masonry chamber 60x45x50 cm inside with 75 class designation brick work in cement mortar 1:4 (1 cement 4 coarse sand) for sluice valve with CI surface box 100mm top diameter 160mm bottom diameter and 180mm deep (inside) with chained lid and RCC top slab 1:2:4 mix (1 cement 2 coarse sand 4 graded stone aggregate 20mm nominal size) necessary excavation foundation concrete 1:5:10(1 cement 5 fine sand 10 graded stone aggregate 40mm nominal size) and inside plastering with cement mortar 1:3(1 cement 3 coarsened sand) 12mm thick finished with a floating coat of neat cement complete as per standard design				
325.1	With FPS bricks	1	each	2471.39	2471.39
326	Providing and fixing GI union in GI pipe including cutting and threading the pipe and making long screws etc, complete (new work)				
326.1	15 mm nominal bore	1	each	74.23	74.23
326.2	20 mm nominal bore	1	each	88.27	88.27
326.3	25 mm nominal bore	2	each	95.28	190.56
326.4	32 mm nominal bore	1	each	116.33	116.33
326.5	40 mm nominal bore	1	each	140.88	140.88
326.6	50 mm nominal bore	1	each	188.54	188.54
326.7	65 mm nominal bore	1	each	335.85	335.85
326.8	80 mm nominal bore	1	each	399.00	399.00
327	Providing and fixing GI union in existing GI pipe line cutting and threading the pipe and making long screws including excavation refilling the earth or cutting of wall and making good the same complete wherever required				
327.1	15 mm nominal bore	23	each	162.63	3740.49
327.2	20 mm nominal bore	52	each	176.67	9186.84
327.3	25 mm nominal bore	12	each	183.68	2204.16
327.4	32 mm nominal bore	1	each	204.73	204.73
327.5	40 mm nominal bore	1	each	229.28	229.28
327.6	50 mm nominal bore	1	each	309.06	309.06
327.7	65 mm nominal bore	1	each	456.38	456.38
327.8	80 mm nominal bore	1	each	519.53	519.53
328	Providing and fixing CP brass bib cock of approved quality conforming to IS 8931				
328.1	15 mm nominal bore	10	each	240.64	2406.40
329	Providing and fixing CP brass long nose bib cock of approved quality conforming to IS standards and weighing not less than 810gms				
329.1	15 mm nominal bore	10	each	249.26	2492.60
330	Providing and fixing CP brass long body bib cock of approved quality conforming to IS standards and weighing not less than 690 gms				
330.1	15 mm nominal bore	10	each	260.74	2607.40
331	Providing and fixing CP brass stop cock (concealed) of standard design and of approved make conforming to IS 8931				
331.1	15 mm nominal bore	4	each	258.19	1032.76
332	Providing and fixing CP brass angle valve for basin mixer and geyser points of approved quality conforming to IS 8931a) 15mm nominal bore				
332.1	15mm nominal bore	32	each	271.95	8702.40
333	Providing and fixing PTMT bib cock of approved quality and colour				
333.1	15mm nominal bore, 86mm long weighing not less than 88gms	46	each	78.96	3632.16
333.2	15mm nominal bore, 122mm long weighing not less than 99gms	1	each	107.02	107.02
333.3	15mm nominal bore, 165mm long weighing not less than 110gms	1	each	121.06	121.06
333.4	15mm nominal bore, 90mm long weighing not less than 93gms	1	each	102.13	102.13
334	Providing and fixing PTMT stop cock of approved quality and colour				
334.1	15mm nominal bore, 86mm long weighing not less than 88gms	1	each	78.96	78.96
334.2	20mm nominal bore, 89mm long weighing not less than 88gms	2	each	100.01	200.02
334.3	concealed stop cock, 15mm nominal bore, 108mm long weighing not less than 108gms	1	each	130.18	130.18
335	Providing and fixing PTMT pillar cock of approved quality and colour				

BHEL Item No	Description	Qty.	Unit	LPR Rate	Amount
335.1	15mm nominal bore, 107mm long weighing not less than 110gms	26	each	122.61	3187.86
335.2	15mm nominal bore, 125mm long weighing not less than 120gms	1	each	167.90	167.90
336	Providing and fixing PTMT push cock of approved quality and colour				
336.1	15mm nominal bore, 98mm long weighing not less than 75gms	1	each	71.96	71.96
336.2	15mm nominal bore, 80mm long weighing not less than 46gms	1	each	64.92	64.92
337	Providing and fixing PTMT grating of approved quality and colour .				
337.1	Circular type				
337.2	100 mm nominal dia .	1	each	26.29	26.29
337.3	125 mm nominal dia with 25mm waste hole	1	each	30.49	30.49
337.4	Rectangular type with openable circular lid .				
337.5	150 mm nominal size square 100 mm diameter of the inner hinged round grating	1	each	75.40	75.40
338	Providing and fixing enclosed type water meter (bulk type) conforming to IS 2373 and tested by municipal board complete with bolts nuts rubber insertions etc. (the tail pieces if required will be paid separately)				
338.1	80 mm nominal bore	1	each	1745.13	1745.13
338.2	100 mm nominal bore	1	each	2620.18	2620.18
339	Providing and fixing CI dirt box stairner for bulk type water meter with nuts bolts rubber insertions etc complete conforming to IS 2373				
339.1	80mm dia	1	each	2017.05	2017.05
339.2	100mm dia	1	each	3204.72	3204.72
340	Providing and fixing PTMT ball cock of approved quality colour and make complete with Epoxy coated aluminium rod with L.P/ H.P.H.D plastic ball				
340.1	15mm nominal bore, 105mm long weighing not less than 138gms	3	each	117.59	352.77
340.2	20mm nominal bore, 120mm long weighing not less than 198gms	86	each	166.19	14292.34
341	Providing and fixing PTMT swivelling shower 15mm nominal bore weighing not less than 40 gms	1	each	68.42	68.42
342	Providing and fixing PTMT soap Dish holder having length of 138mm breadth 102mm height of 75mm with concealed fitting arrangement. Weighing not less than 106gms	1	each	91.59	91.59
343	Providing and laying S&S CI standard specials such as tees bends collars tapers and caps etc suitable for flanged jointing as per IS 1538				
343.1	Upto 300mm dia	1	quintal	4221.03	4221.03
343.2	Above 300mm dia	1	quintal	5356.50	5356.50
344	Providing and fixing unplasticised PVC connection pipe with PTMT nuts collar and bush of approved quality and colour				
344.1	15mm nominal bore with 30cm length	1	each	36.51	36.51
244.2	15mm nominal bore with 45 cm length	1	each	41.44	41.44
345	Providing and fixing PTMT extension nipple for water tank pipe fitting of approved quality and colour				
345.1	15mm nominal bore. weighing not less than 32gms	1	each	26.13	26.13
345.2	20mm nominal bore. weighing not less than 40gms	1	each	30.36	30.36
345.3	25mm nominal bore. weighing not less than 62gms	1	each	43.68	43.68
346	Cutting holes up to 30x 30 cm in walls including making good the same				
346.1	with FPS bricks	1	each	74.61	74.61
347	Cutting holes up to 15 x 15 cm in RCC floors and roofs for passing drain pipe etc, and repairing the holes after insertion of drain pipe etc. with cement concrete 1:2:4(1cement 2 coarse sand 4 grade stone aggregate 20mm nominal size) including finishing complete so as to make it leak proof	1	each	82.30	82.30
348	Labour for cutting CI pipe with steel saw				
348.1	80 mm dia meter C.I pipe	1	each cut	26.10	26.10
348.2	100 mm dia meter C.I pipe	1	each cut	35.13	35.13
348.3	125 mm dia meter C.I pipe	1	each cut	49.01	49.01
348.4	150 mm dia meter C.I pipe	1	each cut	66.09	66.09
348.5	200 mm dia meter C.I pipe	1	each cut	88.15	88.15
348.6	250 mm dia meter C.I pipe	1	each cut	109.26	109.26
348.7	300 mm dia meter C.I pipe	1	each cut	131.32	131.32

BHEL Item No	Description	Qty.	Unit	LPR Rate	Amount
348.8	350 mm dia meter C.I pipe	1	each cut	152.40	152.40
349	Labour charges for erection PVC tanks-1000Lts including transportation from Dept stores to work spot (including all necessary fittings and specials like ball cock, nipples, etc).	10	Each	468.81	4688.10
350	Only Labour charges for erection & commissioning of PVC flush tanks. (Flush tank & all required materials will be issued by BHEL at their stores).	1	Each	55.54	55.54
351	Supply & fixing of brass spindle rods for 3" to 14" valves, including machine threading and finishing and with check nut as per site requirement. (Finished item weight will be measured for payment)	1	kg	542.83	542.83
352	Supply & Fixing of 114mm Alkthene pipes	15	Rmt	236.87	3553.05
HORTICULTURE WORKS					
353	Trenching in ordinary soil up to a depth of 60 cm including removal and stacking of serviceable materials and then disposing of surplus soil, by spreading and neatly leveling within a lead of 50 m and making up the trenched area to proper levels by filling with earth or earth mixed with sludge or/and manure before and after flooding trench with water (excluding cost of imported earth, sludge or manure).	1	cum	19.50	19.50
354	Supplying and stacking of good earth at site including royalty and carriage up to 1 km (earth measured in stacks will be reduced by 20% for payment)	714	cum	164.55	117488.70
355	Supplying and stacking of good earth at site including royalty and carriage up to 1 km (earth measured in stacks will be reduced by 8% for payment)	1	cum	135.80	135.80
356	Supplying and stacking at site dump manure from approved source including carriage up to 1 km (earth measured in stacks will be reduced by 8% for payment)				
356.1	Screeemed through sieves of IS designation 20mm	1	cum	87.29	87.29
356.2	Screeemed through sieves of IS designation 16mm	1	cum	96.32	96.32
356.3	Screeemed through sieves of IS designation 4.75mm	58	cum	103.58	6007.64
357	Rough dressing the trenched ground including breaking clods	2	100sqm	37.78	75.56
358	Uprooting weeds from the trenched area after 10 to 15 days of its flooring with water including disposal of uprooted vegetation	1	100sqm	122.48	122.48
359	Fine dressing the ground	2	100sqm	92.09	184.18
360	Spreading of sludge, dump manure or / and good earth in required thickness (cost of sludge, dump manure or / and good earth to be paid separately)	82	cum	13.25	1086.50
361	Mixing earth and sludge or manure in proportion specified or directed.	1	cum	9.06	9.06
362	Grassing with doob grass including watering and maintenance of the lawn for 30 days or more till the grass forms a thick lawn free from weeds and fit for mowing including supplying good earth if needed (the good earth shall be paid for separately)				
362.1	In rows 15cm apart in either direction	88	100sqm	441.99	38895.12
362.2	in rows 7.5cm apart in either direction	1	100sqm	333.33	333.33
363	Renovating lawns including weeding cheeling the grass forking the ground top dressing with sludge or manure mixing the same with forked soil watering and maintaining the lawn for 30 days or more till the grass forms a thick lawn free from weeds and fit for mowing and disposal of rubbish as directed including supplying good earth if needed but excluding the cost of sludge or manure(the good earth shall be paid for separately)	1	100sqm	854.06	854.06
364	Uprooting rank vegetation and weeds by digging the area to a depth of 60cm removing all weeds and other growth with roots by forking repeatedly breaking clods, rough dressing flooring with water uprooting fresh growths after 10 to 15 days and then fine dressing for planting new grass including disposal of all rubbish with all leads and lifts	88	100sqm	1516.47	133449.36

BHEL Item No	Description	Qty.	Unit	LPR Rate	Amount
365	Digging holes in ordinary soil and refilling the same with the excavated earth mixed with manure or sludge in the ratio of 2:1 by volume (2 parts of stacked volume of earth after reduction by 20% :1 part of stacked volume of manure after reduction by 8%) flooring with water dressing including removal of rubbish and surplus earth., if any with all leads and lifts (cost of manure sludge or extra good earth if needed to be paid for separately)				
365.1	Holes 1.2 m dia and 1.2m deep	1	each	117.97	117.97
365.2	Holes 60cm dia and 60cm deep	1	each	50.62	50.62
366	Providing and fixing MS flat iron tree guard 60cm dia. And 2 m height above ground level formed of 4 nos. 25x6mm and 8 nos. 25x3mm vertical MS flats riveted to 3 nos. 25x6mm MS flat iron rings in two halves bolted together with 8mm dia. And 30mm long bolts including painting two coats with paint of approved brand and manufacture over a coat of priming complete in all respects	1	each	1580.23	1580.23
367	Excavation in dumped stones or malba including stacking of serviceable and material separately and disposal of unseviceable material lead up to 50m and lift up to 1.5m disposed material to be neatly dressed.	1	cum	126.74	126.74
368	Excavation in bajri path including stacking of serviceable and unserviceable material lead up to 50m and lift up to 1.5 m disposed material to be neatly dressed	1	cum	141.26	141.26
369	Excavation in water bound macadam road including stacking the serviceable material lead up to 50m and lift up to 1.5m disposed material to be neatly dressed	1	cum	173.83	173.83
370	Flooding the ground with water including making kiaries and dismantling the same	1	100sqm	69.97	69.97
372	Cutting the hedges around the quarters and public buildings with big scissors, knives etc including clearing and disposing the cut waste within a lead of 2 km all as directed by the Engineer-in-charge. The waste materials shall be cleared on the same day and the rate shall include all tools transport etc	100	One Cum	3.03	303.00
373	Uprooting and clearing parthinium and other weeds with big scissors, knives etc including clearing and disposing the cut waste within a lead of 2 km all as directed by the Engineer-in-charge. The waste materials shall be cleared on the same day and the rate shall include all tools transport etc	1	One Sqm	1.03	1.03
374	Arresting the growth of trees along the walls of the buildings in Township by applying gylcil with ammonia od required quantity till tree is dried and removing the dried tree along with roots and disposing off, upto 2 KM lead etc complete as directed by Engineering - in - charge	1	each	176.73	176.73
375	Cutting of tree branches over buildings at more than 6 meters height and removing other kind of branches from the cut branch and stocking as directed by the Engineer-in-charge within a lead of 3 kms (separate payment will be made for transporting the tree branches from site to BHEL Nursery stockyard).				
375.1	100 to 200 mm girth with its braches.	1088	Each	30.22	32879.36
375.2	above 200 mm girth with its braches.	2520	Each	50.02	126050.40
PROVIDING MACHINERY					
376	Supply of JCB	50	Per Hour	504.95	25247.50
377	Supply of Tractor with ripper / Trolley	10	Per Day	1009.90	10099.00
378	Supply of Tractor with hydraulic Lift with 4 USW	50	Per Day	2019.80	100990.00
379	Supply of water Tanker	10	Per Day	1262.37	12623.70
380	Supply of Kambi Series/ Machine for de-silting or De-choking or Removal of silt	1	Per Day	12623.73	12623.73
381	Supply of tractor with levelling blade & Plough equipment	1	Per Day	2625.74	2625.74
382	Supply of road roller on hire basis for rolling the grounds / play fields / filled up soil / rolling by the side of roads etc complete all as directed by Engineer-in-charge hire charges include cost of services operating staff and supply of lubricating oil etc complete all as directed by Engineer-in-charge	1	perday 8 hrs	1918.81	1918.81

BHEL Item No	Description	Qty.	Unit	LPR Rate	Amount
383	Providing a Mobile crane for lifting of trunk tree mains at road sides, electrical poles, placing of transformers whenever needed as directed by Engineer-in-charge, including cost of services of operating staff and supply of lubricant oil etc complete all as directed by Engineer-in-charge	1	perday	2423.76	2423.76
MISCELLANEOUS WORKS					
384	Cleaning and removing all un wanted things from the roof terrace of various buildings at an elevated level of 12 to 20 metre from FFL. Rate includes labour, tools, wire brush, brooms, baskets etc., sweeping and clearing off all dirt, silt, dust, leaves and other foreign matters etc, with out damaging the terrace treatment and thereby collecting all the wastes in bags / casketc, lowering to ground floor with out affecting the working environment and dumping the same in the near by dust bins / earmarked areas / low lying areas etc complete. Sweeping has to be done only as and when necessary. Payment will be made only for the areas where actually the job was carried out.	56719	One Sqm	1.02	57853.38
385	Labour charges for Fixing barbed wire fencing to the RCC poles / MS angles horizontally and diagonally with GI binding wire including cost of fixing materials. The payment shall be mad for running length of each row of fencing and including tightening the loose barbed wire wherever necessary. The barbed wire shall be supplied free of cost at BHEL stores	1	One Rmt	7.49	7.49
386	Erection RCC poles/M.S angles posts in position by coveying the same to the places as directed.	812	Each	29.14	23661.68
387	Carrying the earth / gravel from stacks to the areas of filling, spreading in layers of 150 mm thick watering, ramming and consolidation with power roller of required capacity so as to bring the surface to proper line, level camber and grade etc complete as directed by Engineer-in-charge	235	One Cum	15.90	3736.50
388	Labour charges for fixing of chain link mesh to the exisitng poles with a required tools, material etc complete all as directed by Engineer-in-charge.	5000	Sqm	16.16	80800.00
389	Removing of silt and debris from the open drains and removing and replacing of approach paths wherever required to remove the silt underneath the approach paths, including loading, unloading and conveyance to a distance of 2 kms and spreading at the places as directed by the Engineer-in-charge	9999	One Rmt	4.70	46995.30
390	Removal of silt , debris and vegetation growth from the nallahs including loading, unloading and conveyance to a distance of 2 kms and spreading at the places as directed by the Engineer-in-charge.				
390.1	Bed width upto 5M	100	One Rmt	63.62	6362.00
390.2	Bed width upto 10M	300	One Rmt	127.25	38175.00
391	Removing silt and debris from the R.C.C hume pipes of all dia. Provided at the approches to residential and non-residential buildings, etc.	1	One Rmt	30.01	30.01
392	Supply of SFRC Medium Duty Approach Slabs for open drains including transportation and placing at one location etc complete all as directed by Engineer-in-charge.				
392.1	Size 1000 x 600 x 60 mm	48	No	802.62	38525.76
392.2	Size 1200 x 600 x 60 mm	20	No	960.90	19218.00
393	Providing and fixing 12 mm thick frameless toughened glass partitions of approved brand and manufacture including providing and fixing arrangement and making necessary holes for fixing required partition fittings including cost of 3M frosted film with specified design over the glass, and all other required fittings completed as per direction of Engineer in charge	1	Sqm	3182.96	3182.96

BHEL Item No	Description	Qty.	Unit	LPR Rate	Amount
394	Providing and fixing 12 mm thick frameless tough hand glass door shutter of approved brand and manufacture including providing and fixing top and bottom pivot, handle, SS door lock, stopper and floor spring type fixing arrangement and making necessary holes etc. for fixing required door fittings and including cost of 3M frosted film over the glass, and all other required fittings completed as per direction of Engineer-in-charge	1	Sqm	6662.01	6662.01
395	Supply & fixing precast RCC fencing poles of size of size 150mm square at bottom of the pole & 100mm square at top of the pole and length of the pole should be minimum 1800 length. (Specification should be checked for standard size) as directed by Engineer In charges	1	each	197.39	197.39
Conveyance					
396	Conveyance by Manual or Mechanical means of Lime, Murram, building Rubbish including loading un-loading with lift of 50 m upto lead mentioned below all complete all as directed by Engineer in charge				
396.1	1 Km	200	Cum	41.80	8360.00
396.2	2 Km	100	Cum	47.43	4743.00
396.3	3 Km	1	Cum	53.01	53.01
397	Conveyance by Manual or Mechanical means of Earth including loading un-loading with lift of 50 m upto lead mentioned below all complete all as directed by Engineer in charge				
397.1	1 Km	242	Cum	52.25	12644.50
397.2	2 Km	1	Cum	59.29	59.29
398.3	3 Km	17	Cum	66.26	1126.42
399	Conveyance by Manual or Mechanical means of Excavated rock including loading un-loading with lift of 50 m upto lead mentioned below all complete all as directed by Engineer in charge				
399.1	1 Km	1	Cum	83.60	83.60
399.2	2 Km	1	Cum	94.87	94.87
399.3	3 Km	1	Cum	106.03	106.03
SUPPLY OF BUILDING MATERIALS					
401	Supply and stacking of 40 mm machine crushed granite metal including all incidental charges etc complete as directed by Engineer-in-charge.	1	One Cum	722.27	722.27
402	Supply of 20 mm guage hard granite stone metal including cost and conveyance to site and stacking as directed by the Engineer-in-charge.	1	One Cum	722.27	722.27
403	Supply of 12 mm guage hard granite stone metal including cost and conveyance and stacking as directed etc complete.	1	One Cum	722.27	722.27
404	Supply of ground moulded number bricks of best quality including cost and conveyance to site and stacking neatly as directed by the Engineer-in-charge.	1	Nos	2.54	2.54
405	Supply of good quality course River Sand Bhodan / Karimnagar / Kurnool / Sirisilla quality including cost and conveyance to site and stacking neatly as directed by the Engineer-in-charge.	20	One Cum	819.52	16390.40
406	Supply and spreading quarry stone dust on walking track, stadium etc, complete as directed by Engineer-in-charge.	46	One Cum	866.38	39853.48
Lettering of Boards and Banners					
407	Applying one coat of synthetic enamel paint of Apcolite brand and an approved shade to the speed breakers and road sign boards including cost of all materials, labour etc complete etc complete all as directed by Engineer-in-charge.	1157	Sqm	25.66	29688.62
408	Painting the township layout on supplied boards approximate Size 3.00x1.50 M, as per the layout with different shades indicating the functional and residential buildings separately and in different colours for various types, bordering, index preparations, key plan etc, complete as per the instructions (The paints shall be of synthetic enamel for G.P of approved make). The rate quoted shall include rubbing the existing painting surface and cost of all the materials like brushes and paintsetc complete all as directed by Engineer-in-charge.	1	Sqm	542.34	542.34

BHEL Item No	Description	Qty.	Unit	LPR Rate	Amount
409	Preparing the supplied boards of different sizes to receive the painting as per the drawing and painting the letters of different sizes in different shapes with synthetic enamel paint of approved make in different shades as per the instructions. The quoted rate shall include rubbing of the existing painted surface to receive the new painting and cost of all materials like brushes, paints etc etc directed by Engineering in charge	50	Sqm	260.00	13000.00
410	Providing radium sticker letters and arrow marks of approved colour and design and size. The base board will be supplied by the department and as directed by the Engineer-in-charge.	1	Sqm	1818.21	1818.21
411	Supply and fixing of multi colour digital printing on paper with lamination on 10 mm M.D.F. Board Supporting with Iron Frame including all incidental charges etc complete as directed by Engineer-in-charge etc directed by Engineering - in charge	1	Sqm	5613.36	5613.36
412	Supply and fixing of self glow radium sticker on the radium paper including cutting charges, fixing charges etc complete as directed by Engineer-in-charge.	1	Sqm	5454.63	5454.63
413	Re-lettering with black Japan paint of approved brand and manufacture for numbering to shops with black ground paint and also including cost of all material etc complete all as directed by Engineer-in-charge.	1	per letter per centimeter height	1.06	1.06
414	Supply and fixing of radium plain sheet wherever required etc complete all as directed by Engineer-in-charge.	1	Sqm	863.59	863.59
415	Labour charges for 2 coats painting run way / taxi track / apron marking with adequate number of coats to give uniform finish with road marking supplied paint including cleaning the surface of all dirt, scales, oil, grease and other foreign material etc and lining out etc complete all as directed by Engineer-in-charge.	1	Sqm	37.21	37.21
416	Construction of granular sub base by providing close graded material conforming to specifications ,mixing in a mechanical plant at OMC,carriage of mixed material by tippers to work site,for all leads & lifts,spreading in uniform layers of specified thickness with motor grader on prepared surface and compacting with vibratory power roller to achieve the desired density complete as per specifications,site conditions and directions of Engineer in charge.				
416.1	With material conforming to Ggrade -II (size range 53 mm to .075 mm) having CBR value -25	1	Cum	1214.16	1214.16
417	Supply and fixing of satin cloth flags of 1 mtr x 3 mtrs in size and providing BHEL monogram on the flag including stitching charges, cost of all materials etc complete all as directed by Engineer-in-charge.	17	Each	299.92	5098.64

BHEL Item No	Description	Qty.	Unit	LPR Rate	Amount
INJECTION GROUTING					
418	Chipping of loose and spalling concrete of bottom slab / Stair case etc.; cleaning of reinforcement carrying out sand blasting, application of anti corrosive zinc rich epoxy primer to the exposed reinforcement (incl. Cost of tools, Material, Labour etc. complete as directed by engineer-in-charge)	1	Sq.m	229.53	229.53
419	Drilling of 14mm dia hole to a depth of 50 mm and fixing of shear connectors of 8mm rebar using polyester resin grout (Sysgrout 657 or its equivalent) incl. cost of all materials, labour etc,complete as directed by Engineer-in-charge.	1	Nos.	45.15	45.15
420	Supply and application of one coat protective epoxy coating on shotcreted surface using sika Icosit K-25 or its equivalent including cost of material labour etc. complete as directed by Engineer-in-charge. (Qty Same as Item 1)	1	Sq.m	214.77	214.77
421	Carrying out 50-60 mm thick shotcreting using a mix proportion of 1:2:2 (Cement:sand:6mm down aggregate) added with polypropylene fibers at a dosage rate of 125 gms / bag of cement (incl. cost of material, labour etc. complete as directed by Engineer-in-charge.	1	Sq.m	661.60	661.60
422	Supply, Fabrication and fixing of 50mm*50mm*5mm Geo grid tied to the shear connectors / exposed reinforcement incl. cost of material, labour etc. complete as directed by Engineer-in-charge.	1	Sq.m	161.18	161.18
423	Providing and laying APP (Atactic Polypropylene Polymer) modified prefabricated five layer 3mm thick water proofing membrane, black finished reinforced with non-woven polyester matt consisting of a coat of bitumen primer for bitumen membrane @ 0.40 ltr/sqm, by the same membrane manufacturer of density at 25° C, 0.87-0.89 kg/ltr and viscosity 70-160 cps. Over the primer coat the layer of membrane shall be laid using butane Torch and sealing all joints etc, and preparing the surface complete . The vital physical and chemical parameters of the membrane shall be joint strength in longitudinal and transverse direction at 23° C as 350/300N/5cm. Tear strength in longitudinal and transverse direction as 60/80N. softening point of membrane not less than 150° C. Cold flexibility shall be up to -2°C when tested in accordance with ASTM , D-5147. The laying of membrane shall be got done through the authorised applicator of the manufacturer of membrane : (3mm thick membrane) cost of all materials including scaffolding etc. complete all as directed by Engineer-in-Charge.	1	Sq.m	172.76	172.76

Total Amount Rs. **6,162,080.70**

Tender %	In words	Figures
Excess		
Less		
Estimate		

Important notes:-

1	Please refer the NIT terms and conditions of the NIT and its related penalties and recoveries pertaining to the work.
2	As mentioned in the NIT, penalty clause 2.1.36 shall be applicable for this work.
2	No additional material shall be issued to the agency for doing rectification during warranty period. All charges including material shall be solely borne by the agency.
3	Corresponding amount shall be deducted for using crushed stone sand in place of river sand.
4	Cement , reinforcement steel and structural steel will be free issued by BHEL.
5	All the bills of the contractors will be cleared subject to the production of clearance certificate by the contractors in respect of compliance of all statutory requirement, issued by IR section of HR department BHEL.

BHEL Item No	Description	Qty.	Unit	LPR Rate	Amount
6	The agency shall submit the I.R. clearance certificate for the above work and arrange to get the final bill sent to Finance within one month from the actual date of completion of work.				
7	The Contract period of the work is 12 months and maintenance period of the work is 06 months. The security deposit will be released after satisfactory completion of the work and after getting I.R clearance and payment of final bill.				
8	All the terms & conditions of the contract with respect to Taxes & Duties are subject to the new taxation laws introduced from time to time (e.g., GST). The terms & conditions will be modified in accordance with the provisions of new laws (e.g., GST)				