

"Construction work of civil ,Architectural & Structural For Office Building Extension at First floor of BHEL_ISG,BHEL-EPD campus, Prof CNR Rao Circle, IISc Post. Malleswaram, Bangalore-560 012.

Schedule of Items for Civil, Architectural, Water supply, Sanitary & Sewage Works.

SI No.	Description of Item	Unit	Qty	Rate(Rs)	Total Amount (Rs)
A	BUILDING WORKS				
1	Earth work in excavation over areas (exceeding 30cm in depth, 1.50m in width as well as 10 sqm in plan) including disposal of excavated earth, lead up to 50m and lift up to 1.5m in all kind of soil, disposed earth to be leveled and neatly dressed.				
a)	Depth up to 1.50m	Cum	40		
b)	depth 1.50m to 3.00m	Cum	9		
c)	depth 3.00m to 4.50m	Cum	9		
2	Disposal of excavated earth, unserviceable materials, building rubbish etc., by mechanical transport including loading,, unloading and stacking up to 5 Km	Cum			
a)	Up to One Km	Cum	20		
b)	from one Km to 5Km.	Cum	65		
3	Filling available excavated earth (excluding rock) in trenches, plinth, sides of foundations etc. in layers not exceeding 20cm in depth, consolidating each deposited layer by ramming and watering, lead up to 50m and lift up to 1.5m	Cum	35		
4	Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering,				
a	1:4:8 (1 cement : 4 coarse sand : 8 graded stone aggregate 40mm nominal size)	Cum	1		
b	1:3:6 (1 cement : 3 coarse sand : 6 graded stone aggregate 20mm nominal size)	Cum	6		

SI No.	Description of Item	Unit	Qty	Rate(Rs)	Total Amount (Rs)
c	1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20mm nominal size)	Cum	4		
5	Providing and laying in position machine batched, machine mixed and machine vibrated design mix cement concrete of specified grade for reinforced cement concrete structural elements, 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 : M20 grade reinforced cement concrete.				
a)	For footings	Cum	2		
b)	For Columns	Cum	35		
c)	For beams	Cum	80		
d)	For suspended slab	Cum	85		
e)	For Staircase	Cum	6		
f)	For Chejja	Cum	3		
6	Steel centering and shuttering including strutting, propping etc. and removal of form for				
a)	Foundation, footings, bases of columns etc. for mass concrete	Sqm	5		
b)	For Columns	Sqm	0		
c)	For beams	Sqm	0		
d)	Suspended floors, roofs, landings, balconies and access platform.	Sqm	620		
e)	Stairs, (excluding landings) except spiral staircases	Sqm	40		
f)	Lintels, beams, plinth beams, girders, bressumers and cantilevers.	Sqm	26		
7	Plywood centering and shuttering including strutting, propping etc. and removal of form for				
a)	For footings	Sqm	0		
b)	Columns, Pillars, Piers, Abutments, Posts and Struts	Sqm	260		

SI No.	Description of Item	Unit	Qty	Rate(Rs)	Total Amount (Rs)
c)	Lintels, beams, plinth beams, girders, bressumers and cantilevers	Sqm	450		
d)	For suspended slab	Sqm	0		
8	Reinforcement for R.C.C work including straightening, cutting, bending, placing in position and binding all complete.				
a)	Thermo - Mechanically Treated bars	Kg	26000		
9	Brickwork with bricks of class designation 50				
a)	Cement mortar 1:6 (1 cement : 6 coarse sand)	Cum	145		
10	Half brick masonry with FPS bricks of class designation 50				
a)	Above plinth level up to floor V level	Sqm	90		
11	Providing and fixing ISI marked or as approved by the Engineer - in - charge steel glazed doors, windows and ventilators of standard rolled steel sections, joints mitered and welded with 15X3mm lugs, 10cm long, embedded in cement concrete blocks 15X10X10cm of 1:3:6 (1 cement : 3 coarse sand : 6 graded stone aggregate 20mm nominal size) or with wooden plugs and screws or rawl plugs and screws or with fixing clips or with blots and nuts as required, including providing and fixing of glass panes with glazing clips and special metal sash putty of approved make complete including applying a priming coat of approved steel primer, and painting with synthetic enamel paint two or more coats; excluding the cost of metal beading and other fitting except necessary hinges or pivots as required.				
a)	Windows side hung (openable)	Sqm	20		
b)	Openable Top hung	Sqm	0		
c)	Fixed type	Sqm	0		
d)	With louvers	Sqm	0		

SI No.	Description of Item	Unit	Qty	Rate(Rs)	Total Amount (Rs)
12	Steel work welded in built up sections/framed work including cutting hoisting, fixing in position and applying a priming coat of approved steel primer using structural steel etc. as required				
a)	In gratings, frames, guard bar, ladders, railings, brackets, gates & similar works	Kg	120		
13	Anodised Aluminium louvers with glazing, all fixing arrangements as per the instruction of engineer in charge	Sqm	5		
14	Providing and fixing Steel Doors 1mm thick MS sheet door with frame of 40x40x6mm angle iron and 3mm MS gusset plate at the junctions and the corners, all necessary fittings complete including applying a priming coat of approved steel primer a) Using flats 30x6mm for diagonal braces and central cross piece.	Sqm	2.5		
15	Providing and fixing PVC doors for toilets with loc as per the instruction of Engineer in charge.	Sqm	15		
16	Providing and fixing M.S fan clamp type I of 16mm dia M.S bar bent to shape with hooked ends in R.C.C slabs during laying including painting the exposed portion of loop, all as per standard design complete.	Nos	40		

SI No.	Description of Item	Unit	Qty	Rate(Rs)	Total Amount (Rs)
17	Providing and fixing powder coated aluminium work for doors, windows, ventilators and partitions with extruded built up standard tubular and other sections of approved make conforming to IS : 733 and IS : 1285, anodised transparent or dyed to required shade according to IS : 1868 (Minimum anodic coating of grade AC 15), fixed with rawl plugs and 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, mitered and jointed mechanically wherever required including cleat angle, Aluminium snap beading for glazing/paneling, C.P brass/stainless steel screws, all complete as per architectural drawings and the directions of Engineer - in - charge (Glazing and paneling to be paid for separately.)				
a)	For shutters of doors including providing and fixing hinges/pivots and making provision for fixing of fittings wherever required including the cost of PVC/neoprene gasket required (Fittings shall be paid for separately)	Kg	135		
b)	-- do -- as above for side hung window	Kg	580		
c)	---- do --- for portion frame	Kg	150		
18	Providing and fixing glazing in aluminium partitions with PVC/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)				
a)	With 4.5mm thick plane glass	Sqm	0		
b)	With glass panes of 5.50mm thickness (weight not less than 13.75kg/sqm)	Sqm	20		
c)	With 6mm thick plane glass	Sqm	0		

SI No.	Description of Item	Unit	Qty	Rate(Rs)	Total Amount (Rs)
19	Providing & fixing glazing for Steel doors & windows				
a)	With 4.5mm thick plane glass	Sqm	0		
b)	With 5.5mm thick plane glass	Sqm	70		
c)	With 6mm thick plane glass	Sqm	0		
20	Providing and fixing 12mm thick pre-laminated three layer medium density (exterior grade) particle board grade I, Type II conforming to IS : 12823 bonded with phenol formaldehyde synthetic resin, of approved brand and manufacture in paneling fixed in aluminium doors, windows shutters and partition frames with C.P brass/stainless steel screws etc. complete as per architectural drawings and directions of Engineer - in - charge.				
a)	Pre-laminated particle board with decorative lamination on one side and balancing lamination on other side.	Sqm	20		
21	Automatic door closer - Floor type	Nos	6		
22	6mm thick cement plaster				
a)	Ceiling with CM 1:3, 6mm thick - Neeru finish	Sqm	850		
b)	Inside building with 12mm cement plaster finished with a floating coat of neat cement of mix 1:4 (1 cement : 4 fine sand) - Neeru finish	Sqm	750		
c)	Outside building with 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 (1 cement : 6 fine sand)	Sqm	800		

SI No.	Description of Item	Unit	Qty	Rate(Rs)	Total Amount (Rs)
23	Providing and laying vitrified floor tiles in office area of size 600mmX600mm of thickness not less than 10mm of M/s Johnson (Marbonite) or equivalent in light colours and shades, laid on 3mm thick cementations polymer based tile adhesive filling the joints with filler to match the colour of tiles complete as per direction of the Engineer - in - charge.				
a)	Providing and laying vitrified floor tiles in office area of size 600mmX600mm of thickness not less than 10mm of M/s Johnson (Marbonite) or equivalent in light colours and shades, laid on 3mm thick cementations polymer based tile adhesive filling the joints with filler to match the colour of tiles complete as per direction of the Engineer - in - charge.	Sqm	530		
b)	Providing and laying vitrified floor tiles for skirting in office area of size 150mmX600mm of thickness not less than 10mm of M/s Johnson (Marbonite) or equivalent in light colours and shades, laid on 3mm thick cementitious polymer based tile adhesive filling the joints with filler to match the colour of tiles complete as per direction of the Engineer - in - charge.	Rmt	165		
24	Providing and laying Ceramic glazed floor tiles in toilet area of size 300X300mm (thickness to be specified by the manufacturer) of Ist quality conforming to IS : 13755 of NITCO, ORIENT, SOMANY KAJARIA, or equivalent 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.	Sqm	33		

SI No.	Description of Item	Unit	Qty	Rate(Rs)	Total Amount (Rs)
25	Providing and fixing 1st quality wall cladding in toilet with ceramic glazed tiles conforming to IS : 13753 of minimum thickness 5mm of approved make like NITCO, ORIENT, SOMANY KAJARIA, or equivalent make in all colours, shades design and prints 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 mortar 1:3 (1 cement : 3 coarse sand) and jointing with gray cement slurry @ 3.3kg per sqm including pointing in white cement mixed with pigment of matching shade complete				
a)	Toilet area with ceramic tile	Sqm	110		
26	Stone flooring - polished for stair case	Sqm	34		
27	Painting with synthetic enamel paint on steel works of approved brand and manufacture to give an even shade				
a)	Two or more coats on new works	Sqm	65		
28	Distempering with oil bound washable distemper of approved brand and manufacture to give an even shade on interior walls				
a)	New work (two or more coats) over and including priming coat with cement primer.	Sqm	1000		
29	Finishing walls with water proofing cement paint "Snowcem Plus" of M/s Snowcem India Ltd., or equivalent of required shade on exterior walls				
a)	New work (Two or more coats applied @ 3.84 kg/10 sqm)	Sqm	950		
30	Providing and applying of granular finish of "Heritage" brand, to match the existing colour / as directed, scope inclusive of all material, labour, scaffolding etc. as directed by engineer in charge,	Sqm	200		

SI No.	Description of Item	Unit	Qty	Rate(Rs)	Total Amount (Rs)
31	White washing with lime to give an even shade to ceilings				
a)	New work (three or more coats)	Sqm	700		
32	Providing and fixing P V C down take pipes (4 Kg/Sqcm) of 150 dia of reputed make, cost inclusive of clamps, bends, shoe etc. complete	Rmt	70		
33	Providing and fixing PVC gutter - 200 dia of reputed make, cost inclusive of all supporting brackets, fixing clamps etc. complete	Rmt	25		
34	Providing and fixing 15mm thick USG - Radar Mineral Fiber False Ceiling Tiles or equivalent of size 600X600mm in true horizontal level suspended on inter locking metal grid of hot dipped galvanised steel sections (galvanised @ 170gsm/sqm) consisting of main "T" runner suitably spaced at joints to get required length and of size 24X38mm made from 0.30mm thick (minimum) sheet spaced at 1200mm center to center and cross "T" of size 24X25mm made of 0.30mm thick (minimum) sheet, 1200mm long spaced between main "T" at 600mm center to center to form a grid of 1200X600mm and secondary cross "T" of length 600mm and size 24X25mm made of 0.30mm thick (minimum) sheet to be interlocked at middle of the 1200X600mm panel to form grids of 600X600mm and laying 15mm thick mineral fiber false ceiling tiles of approved texture in the grid including, wherever, required, cutting/making, opening for services like diffusers, grills, light fittings, fixtures, smoke detectors etc. Main "T" runners to be suspended from ceiling using GI slotted cleats fixed to ceiling with 6mm dia and 50mm long dash fasteners, 4mm GI				

SI No.	Description of Item	Unit	Qty	Rate(Rs)	Total Amount (Rs)
	Note: 1) Only Mineral Fiber false ceiling area will be measured for the purpose of payment. 2) The Mineral fiber Ceiling shall either be precast (molded) or wetted product and shall have NRC value of 0.5 (minimum) CAC 35-39, light reflection 84% (minimum), fire rating class A as per ASTM E-84, suitable for 95% relative humidity and also having Thermal Resistance "(R)" = 0.33sqm deg C/W.	Sqm	0		
35	Providing and fixing Stainless Steel (SS) Hand rail made of SS grade-304. The horizontal intermediate runners will be 25mm dia SS pipes and top with 40mm dia SS pipes, vertical of 25mm dia and 900mm height at every alternate steps with necessary anchor fasteners, base plate, base cap, welded joints shall be grounded and polished etc. complete as per the instruction of engineer in charge.	Rmt	0		
36	Providing and fixing Mild steel Hand Rail 40mm dia . circular in section as shown in the drawing mounted over 32x6 M.S. flats supported on 20mm M.S. Square bars which are to be embedded in each stair case step and providing 20mm Square bar running parcel to the railing complete as shown in the drawing and polishing the hand rail with colorless polish and painting all steel works with two coats of synthetic enamel paint of approved brand & colour over two coats of primer.	Rmt	90		
37	Supplying, fabricating and erecting structural glazing works with necessary frame works made of prepainted metals and glazing with 8mm thick tinted glass with necessary fixing clips, anchor fasteners required for fixing the frames to wall or rack members complete the members provided has to be adequate to withstand the local wind velocity.	Sqm	0		

SI No.	Description of Item	Unit	Qty	Rate(Rs)	Total Amount (Rs)
38	Structural steel work in truss, roofing, cladding, step ladder etc in single section fixed with connecting plate including cutting, hoisting, fixing in position and applying a priming coat of approved steel primer all complete	Kg	1500		
39	Providing and laying pressed clay tiles (as per approved pattern 20mm nominal thickness and of approved size) on roofs jointed with cement mortar 1:4 (1 cement : 4 coarse sand) mixed with 2% integral water proofing compound laid over a bed of 20mm thick cement mortar 1:4 (1 cement : 4 coarse sand) and finished neat complete.	Sqm	550		
40	Dismantling of existing RCC and exposing the reinforcement	Cum	5		
41	Demolishing R.C.C work including stacking of steel bars and disposal of unserviceable material within 50 meters lead.	Cum	1		
42	Demolishing brickwork including stacking of serviceable material and disposal of unserviceable material within 50metres lead	Cum	13		
43	Demolishing brick tile covering in terracing including stacking of serviceable material and disposal of unserviceable material within 50 meters lead	Sqm	560		

SI No.	Description of Item	Unit	Qty	Rate(Rs)	Total Amount (Rs)
44	Providing and fixing 450mm wide strip light in the roofing sheets using 2mm thick polycarbonate profiled sheets of " GE - plastic India Ltd " or any other approved equivalent make with necessary aluminium alloy bolts, washers, nuts (No Suggestions) profile of the polycarbonate sheet unless otherwise specified. The side laps will be 1.5 corrugation and end laps 150mm.The laps will not be considered for payment.	Sqm	40		
45	Providing & fixing Inter locking mortar blocks made with CM 1 : 3 (1 Cement : 3 Course sand) , 50mm thick tile, cost inclusive of base preparation with leveling the ground, ramming, sand layer of 50mm thick, protecting the edge with brick on edge laid in CM in 1:4 ((1 Cement : 4 Course sand) etc complete as per the instruction of Engineer in charge.	Sqm	20		
46	Providing and fixing Mangalore tile roofing as below:				
a)	Providing and laying class AA of size 417 X 261mm (fort brand) Common Wealth or equivalent Mangalore pattern tile in roofs on hard wood reapers or MS angle purlins at suitable intervals in tight position and approved manner etc. complete.(Cost of reaper and purlin will be paid separately)	Sqm	50		
b)	Providing and fixing ridges and hip tiles with class AA Mangalore pattern tiles (contrast) manufactured by M/s Common wealth trust ltd. of equivalent, including fixing with lime surki mortar 1:1:2 (1 Lime putty : 1 surki: 2 course sand) as directed by engineer in charge.	Rmt	30		

SI No.	Description of Item	Unit	Qty	Rate(Rs)	Total Amount (Rs)
47	Providing & laying water proofing of the existing RCC slab to facilitate grounds for proposed toilet at first floor using screed concrete with PCC 1:2:4 to the required slope, finishing with CM 1:3 with neat cement finish 25mm thick over the screed conc using water proofing compound, providing appropriate curves at the corners, making provision to drain the water collected etc., as per the instruction of engineer in charge.	Sqm	50		
48	Providing and applying epoxy material of approved make to bring bonding to the existing and new concrete as per the manufacturers specification etc. complete as per the instruction of engineer in charge.	Sqm	10		
49	Welding by electric plant including transportation of electric welding plant at site etc. complete as per the instruction of engineer in charge. (Welding of new reinforcement rods to the existing reinforcements in the coulms to make proper lap, rate inclusive preparation of reinforcements as per specification & IS code)	Cm length	16800		
		Sub total Rs.			

SI No.	Description of Item	Unit	Qty	Rate (Rs)	Total Amount (Rs)
B	WATER SUPPLY				
	Supply and fixing of approved make medium quality G.I."B" class pipe The concealed pipe lines, the lines running in ducts/on walls & under ceiling shall be considered under internal water supply. Pipes with 'R' brand GI malleable specials such as tees, elbows, checknuts, unions, flanges reducers etc., including threading, cutting and fixing in/on walls ceiling, ground, terrace floor etc., The rate shall include for the necessary chasing the walls and making bores wherever required and making good the chased surfaces and bores in cement mortar. The quoted rate shall also include for giving two coats of bitumen paint for the concealed pipes and the pipes burried in ground shall have two coats of bitumen paint over which wrapped with pype coat or all exposed pipes to be painted with one coat of zinc chromatic primer & 2 coats of enamel paint of approved make, stencilling, arrow marking as per IS colour code. Rate shall also include for pipe sleeves across walls, slabs etc., complete.				
1	Excavating trenches in all sorts of soil of required width for pipes etc., including excavation for sockets and dressing of sides, ramming of bottoms depth upto 1.5m including getting out the excavated soil and then returning the soil as required in layers not exceeding 20cms in depth including consolidation danger lighting pumping out water removing the slush and sullage etc., and disposing the surplus excavated earth within a lead of 50m or as directed. (Pipes exceeding 25mm dia but not exceeding 300mm dia).	Cum	20		
2	Providing and fixing G.I. Pipes complete with G.I fittings and clamps, including cutting and making good the walls etc. (internal work)				

SI No.	Description of Item	Unit	Qty	Rate (Rs)	Total Amount (Rs)
a)	15mm dia nominal bore	metre	50		
b)	20mm dia nominal bore	metre	30		
c)	25mm dia nominal bore	metre	35		
b)	32mm dia nominal bore	metre	24		
e)	40mm dia nominal bore	metre	24		
f)	50mm dia nominal bore	metre	24		
3	Providing and fixing CP brass bib cock of approved quality confirming to IS 8931 with wall flange.				
a)	15mm nominal bore	each	6		
4	Providing and fixing CP brass two way tap with wall flange of approved quality confirming to IS 8931				
a)	15mm nominal bore	each	6		
5	Providing & fixing CP angular stop cock (Quarter turn type), 1/2 " size with wall flange etc complete.	Nos	11		
6	Providing and fixing gun metal gate valve with C.I wheel of approved quality (screwed end)				
a)	32mm dia nominal bore	each	2		
b)	25mm dia nominal bore	each	3		
7	Providing and fixing UPVC connecting pipes with brass unions				
a)	45Cm long - 15mm nominal bore	Nos	17		
8	Providing and placing on terrace (at all floor levels) polyethylene water storage tank ISI : 12701 marked indicating the BIS License No with cover and suitable locking arrangement and making necessary holes for inlet, outlet and overflow pipes but without fittings and the base support for tank (Sintex, Electroplast, Star, Lotus or equivalent having valid ISI licence	LTRS	2000		

SI No.	Description of Item	Unit	Qty	Rate (Rs)	Total Amount (Rs)
9	Making 'T' connection from the existing water supply main with all necessary works including all required specials, road cutting and making good the road after the connection etc., complete.	Each	1		
			Sub Total		
C	SANITARY WORKS				
	<p>a) All the works to be carried out as per relevant IS specifications, whether so mentioned in description of works or not.</p> <p>b) The quoted rate shall include for providing brackets, clamps etc., in ducts and in ceiling for drawing and supporting the pipes etc., two coats of enamel painting for the brackets, colour coding the exposed pipe works, identification labels, making bores in masonry / RCC, chasing the surfaces for concealed plumbing and making good the chased surfaces and bores in CM 1:4 / PCC 1:2:4 curing etc., complete.</p> <p>c) Only electric groove cutting, hammer drilling, core cutting and other equipment shall only be allowed for cutting and drilling etc.,</p> <p>d) If Employer supplies all the required CP and procelain fittings, the successful bidder has to fix them in position with their tools, tackles and the required fixing materials like thread, paint, safeda, screws, sand, cement, metal and bricks etc., complete.</p> <p>e) All CP fittings are make of Parryware / Jaguar - Continental Florentine & Allied</p>				

SI No.	Description of Item	Unit	Qty	Rate (Rs)	Total Amount (Rs)
1	Supply & fixing of approved make white colour European water closet floor mounted, with back inlet P or S trap by using conversion bend, Minimum 10 Litr capacity dual flush engineering plastic cistern ,with all internal parts of cistern,450mm long PVC inlet connecting pipe with end nuts,15 mm angle valve cock with wall flange , including pipe with ends and nuts, black / white solid duroplast or scrach resistant seat and cover with special hinges to suit water closet complete etc ., all of approved make as detailed below as per the instruction of Engineer in charge.	Nos	2		
	Parryware / Hindware with "S" trap				
	Dual flush cistern with all fittings of Slim line (Parry) / Sleek (Hindware) make				
	Seat & Seat cover of Parryware / Hindware				
1(a)	Labour charges with tools and tackles only for the item as above at Sl. 1. (All the items shall be supplied by BHEL free of cost)	Nos.	2		
2	Supply and fixing of approved make white glazed Indian water closet (orissa) fixed on a bed of cement concrete with PVC SWR 'P' or 'S' trap, 10 ltrs capacity engineering plastic low level twin flush cistern of approved make and colour with all internal parts of cistern including PVC flush pipe connecting water closet and cistern, 15 mm CP brass angular stop cock with wall flange and 450 mm long PVC inlet connecting pipe with ends nuts et., complete all of approved make as below.	Nos	4		
	Parryware / Hindware of size 23"(Large)				
	Dual flush cistern with all fittings of Slim line (Parry) / Sleek (Hindware) make				

SI No.	Description of Item	Unit	Qty	Rate (Rs)	Total Amount (Rs)
2(a)	Labour charges with tools and tackles only for the item as above at Sl. 2. (All the items shall be supplied by BHEL free of cost)	Nos.	2		
3	Supply and fixing of approved make white Coloured large size Oval wash basin counter sunk type mounted on C.I brackets with over C.I. brackets and following CP brass fittings like 32mm CP waste coupling, 32 mm CP Bottle trap, 1 Nos pillar cock with popup waste, 1 nos of 15mm CP brass angular stop cock with wall flange, one nos of 450mm long PVC inlet connecting pipes and 40mm OD PVC waste pipe class 3 (6 Kg/cm ²) taken upto floor trap with necessary fittings as below etc., complete .	Nos	6		
	Oval Wash Basin of Parryware (Cascade counter top) / Hindware (Vienne oval - code no. 0038)				
	Pillar cock with long neck of make Parryware (Agate) / Jaquar (code no. 7011)				
3(a)	Labour charges with tools and tackles only for the item as above at Sl. 3. (All the items shall be supplied by BHEL free of cost)	Nos.	6		
4	Providing and fixing white vitreous china flat back half stall urinal of make Parryware (Large) / Hindware (Large code no. 60002) with fittings, standard size C.P brass flush pipe, spreaders with unions and clamps (all in C.P brass) with waste fitting as per IS:2556, C.I trap with outlet grating and other couplings in C.P brass, connecting pipe with ends and nuts, angular stop cock, including painting of fittings and brackets, cutting and making good the walls and floors wherever required as per the instruction of Engineer-in-charge as below etc. complete.	Nos	5		

Sl No.	Description of Item	Unit	Qty	Rate (Rs)	Total Amount (Rs)
4(a)	Labour charges with tools and tackles only for the item as above at Sl. 4. (All the items shall be supplied by BHEL free of cost)	Nos	5		
5	Providing and fixing toilet paper holder				
a)	C.P brass	Nos	6		
6	Providing and fixing mirror of required shape and size with plastic moulded frame of approved make and shade with 6mm thick hard board backing				
a)	Rectangular shape 1500x450mm	Nos	3		
7	Providing and fixing P.V.C waste pipe for wash basin or urinals including P.V.C waste fittings complete				
a)	Flexible pipe 40mm diameter	Nos	11		
8	Providing and fixing PTMT liquid soap container 109mm wide, 125mm high and 112mm distance from wall of standard shape with bracket of the same materials with snap fittings of approved quality colour and make, weighing not less than 105gms (Prayag or equivalent)	Nos	4		
9	Providing and fixing PTMT towel rail complete with brackets fixed to wooden cleats with CP brass screws with concealed fitting arrangement of approved quality colour and make (Prayag or equivalent)				
a)	450mm long towel rail with total length of 495mm, 78mm wide and effective height of 88mm, weighing not less than 170gms	Nos	2		
10	Providing and fixing h15mm size Health faucet of make Parryware / Hindware with connecting pipe etc. complete as per the instruction of Engineer in charge.	Nos	6		

SI No.	Description of Item	Unit	Qty	Rate (Rs)	Total Amount (Rs)
11	Supply and fixing 20mm thick polished jet block granite urinal partition wall slab, fixed in walls and flooe with CM 1:3, exposed edges rounded, polished etc., complete as per the instruction of engineer-in-charge.	Sqm	5		
12	Supply and fixing 20mm thick polished jet block granite slab counter for fixing wash basins, cost inclusive of making neat cut to accommodate the wash basins, roundinf off exposed edges, polished, and supporting the partition with SS bracket, SS bolt and nuts both at top and bottom etc complete as per the instruction of Engineer-in-charge.	Sqm	4		
13	Constructing brick masonry manhole with 50 class designation bricks in cement mortar 1:4 (1 cement : 4 coarse sand) R.C.C top slab with 1:2:4 mix (1 cement : 2 coarse sand : 4 graded stone aggregate 20mm nominal size), foundation concrete 1:4:8 mix (1 cement : 4 coarse sand : 8 graded stone aggregate 40mm nominal size) inside plastering 12mm thick with cement mortar 1:3 (1 cement :3 coarse sand) finished with floating coat of neat cement and making channels in cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20mm nominal size) finished with a floating coat of neat cement complete as per standard design:				
a)	Inside size 90X80cm and 60cm deep including C.I cover with frame (light duty) 455X610mm internal dimension total weight of cover and frame to be not less than 38kg (weight of cover 23kg and weight of frame 15kg)	each	2		
14	Providing and fixing PTMT Bottle Trap for Wash basin and sink (Prayag or equivalent)				

SI No.	Description of Item	Unit	Qty	Rate (Rs)	Total Amount (Rs)
a)	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, weighing not less than 260gms	Nos	6		
			Sub Total		
D	SEWERAGE SYSTEM				
1.0	Supply and fixing of class III (6 kg/cm ²) Rigid PVC pipes (as per IS - 4985) laid as waste line under floor/under ceiling/on walls with necessary bores in foundation, walls, ceiling etc., and rendering the bores in CM 1:4 etc., complete.				
a)	50mm OD	Rmt	50		
b)	63mm OD	Rmt	72		
c)	75mm NB	Rmt	75		
2	Providing and fixing UPVC Nanhhi trap of make Supreme	Nos	11		
3	Providing and fixing UPVC Floor trap of make Supreme	Nos	4		
4.0	Supply and fixing of Type -B SWR PVC soil and waste pipes jointed with rubber ring with good quality lubricant for shafts and for suken slab or under slab with slovent cement. As per IS - 13592-1992 for pipes and IS 14735 for fittings, inclusive of all necessary specials like bends, tees, offsets, junctions, pan connector, cowls etc., laid under floor/under ceiling/on walls with suitable clamps and specials curing etc., complete.				
a)	75mm SWR PVC	Rmt	40.0		
b)	110mm SWR PVC	Rmt	30.0		
c)	160mm SWR PVC	Rmt	40.0		

SI No.	Description of Item	Unit	Qty	Rate (Rs)	Total Amount (Rs)
5.0	Supply, lay and jointing of glazed stoneware pipes (manufactured as per IS 651-1992) and jointed with yarn and cement with a stiff mixture cement mortar in praportion of 1:1 (1 cement to 1 fine sand) including curing the joints and testing the pipe lines etc., complete.				
a)	100mm dia.	Rmt	15.0		
b)	150mm dia.	Rmt	25.0		
6	Providing and fixing cowl cap of size:				
a)	75mm diametre	Nos	6		
b)	100mm diametre	Nos	6		
c)	150mm diametre	Nos	2		
7.0	Supply and fixing Class II (4 kg/cm ²) rigid PVC pipes (for rain water down takes) of approved make with necessary specials like bend, shoe, grating, clamps, screws etc., including jointing the pipes and specials with solvent cement and cutting the pipes required lengths Rate quoted should include for providing fixing Neermake CI rain water Khurra, flashing including moulded bends, enlarger & leaf trap complete at each outlet. etc., complete at all heights and depths.				
a)	75 mm OD PVC PIPE	Rmt	50.0		
8.0	Providing and fixing of square mouth gully trap complete with CI grating brick masonry chamber 115mm thick using table moulded bricks in CM 1:4 over a bed of 75mm thick PCC 1:4:8, internal and external plastering in CM 1:4, 12mm thick supply and fixing of 300 x 300mm size CI frame and cover. (The weight of CI frame and cover should not be less than 7 kgs). The quoted rate should include for necessary excavation in all sorts of soil, returning, filling, ramming and connecting to chamber etc., complete.				
a)	150 x 100mm `P' or `S' trap.	Each	1.0		

