

SUB SUMMARY

CIVIL AND SANITARY & PLUMBING WORK FOR B-2, STAFF QUARTER AT ST. STEPHEN'S COLLEGE, DELHI.		
S. NO.	DESCRIPTION	AMOUNT
A	TOTAL FOR CIVIL WORK	
B	TOTAL FOR SANITARY AND PLUMBING WORK	
	GRAND TOTAL (A+B)	

SUMMARY

CIVIL WORK FOR B-2, STAFF QUARTER AT ST. STEPHEN'S COLLEGE, DELHI.		
S. NO.	DESCRIPTION	AMOUNT
1.	DISMANTLING & DEMOLISHING WORK	
2.	EARTH WORK	
3.	PLAIN CEMENT CONCRETE	
4.	STEEL WORK	
5.	WOOD WORK	
6.	ALUMINIUM WORK	
7.	FLOORING	
8.	ROOFING	
9.	FINISHING	
	GRAND TOTAL	

Schedule of Quantities - Civil work for B-2, Staff Quarter at St. Stephen's College, Delhi.					
S. No.	Description	Qty.	Unit	Rate	Amount
1.	DISMANTLING & DEMOLISHING WORK				
Note:	Demolition shall not be done by mechanical means.				
1.01	Demolishing cement flooring / stone flooring / tile flooring and window cill slabs manually including lime concrete / cement concrete including disposal of demolished materials within the site as directed by site Engineer/Architect.	15	Cum		
1.02	Dismantling half brick masonry wall in cement mortar including disposal of demolished materials within the site as directed by site Engineer/Architect. (No extra shall be paid if any plaster/tiling work already done on wall).	5	Sqm		
1.03	Demolishing roof water proofing treatment including china mosaic, brick tiles, mud phuska and removing tar felt / bitumen paint using hand grinders / mechanical means to get neat roof surface. Dismantled serviceable materials shall be stacked separately and unserviceable material shall be disposed off to Municipal dumping ground by mechanical means.	185	Sqm		
1.04	Dismantling doors, windows and clerestory windows (steel or wood) shutter including chowkhats, architrave, holdfasts etc. complete and stacking within the site as directed by site Engineer/Architect.				
a	Of area 3 sq. metres and below	19	Each		
b	Of area beyond 3 sq. metres	R/o	Each		
1.05	Dismantling of cement plaster from wall including raking out joints and disposal of unserviceable material within the site as directed by site Engineer/Architect.	60	Sqm		
1.06	Disposal of building rubbish / malba / similar unserviceable, dismantled or waste materials by mechanicals means, including loading, transporting, unloading to approved Municipal dumping ground including all leads and lifts. (Demolished quantity only shall be measured).	17	Cum		
	Total for Dismantling & Demolishing work				

2	EARTH WORK				
2.01	Earth work in excavation in foundation trenches or drains including dressing of sides and ramming of bottoms, lift up to 1.5 M including getting out the excavated soil and disposal of surplus excavated soil as directed within a lead of 100 M. (Excavation to be done manually).				
a	Upto 1.5 M depth from the average ground level.	14	Cum		
2.02	Filling available excavated earth (excluding rock & debris) in trenches, plinth, sides of foundations etc. in layers not exceeding 20 cm in depth, consolidating each deposited layer by ramming and watering, lead up to 100 M and lift upto 1.5 M. (After density test only this item will be measured).	R/o	Cum		
2.03	Supplying and filling in plinth with Jamuna sand or fine sand under floors including watering, ramming consolidating and dressing complete.	12	Cum		
2.04	Supplying chemical emulsion in sealed containers including delivery as specified chlorpyriphos / lindane emulsifiable concentrate of 20% (consumption to be 0.65 liters/sqm.)	113	Litre.		
2.05	Diluting and injecting chemical emulsion for post-constructional anti termite treatment (excluding the cost of chemical emulsion):				
a	Along external wall where the apron is not provided using chemical emulsion @ 7.5 litres / sqm of the vertical surface of the substructure to a depth of 300 mm including excavation channel along the wall & rodding etc. complete:				
i	With Chlorpyriphos / Lindane E.C. 20% with 1% concentration	79	Rm		
b	Along the external wall below concrete or masonry apron using chemical emulsion @ 2.25 litres per linear metre including drilling and plugging holes etc:				
i	With Chlorpyriphos / Lindane E.C. 20% with 1% concentration	79	Rm		
c	Treatment of soil under existing floors using chemical emulsion @ one litre per hole, 300 mm apart including drilling 12 mm diameter holes and plugging with cement mortar 1:2 (1 cement : 2 coarse sand) to match the existing floor:				
i	With Chlorpyriphos / Lindane E.C. 20% with 1% concentration	174	Sqm		

d	Treatment of existing masonry using chemical emulsion @ one litre per hole, 300 mm interval including drilling holes at 45 degree and plugging them with cement mortar 1:2 (1 cement : 2 coarse sand) to the full depth of the hole:				
i	With Chlorpyrifos / Lindane E.C. 20% with 1% concentration	37	Rm		
e	Treatment at points of contract of wood work by chemical emulsion Chlorpyrifos / Lindane (in oil or kerosene based solution) @ 0.5 litres per hole by drilling 6 mm dia holes at downward angle of 45 degree at 150 mm centre to centre and sealing the same.	R/o	Rm		
	Total for Earth work				
3.	PLAIN CEMENT CONCRETE				
3.01	Providing and laying cement concrete 1:3:6 (1 cement : 3 coarse sand : 6 graded stone aggregate 20mm nominal size.) under floors.	9	Cum		
3.02	Providing and laying 75mm thick cement concrete 1 : 3 : 6 (1 cement : 3 coarse sand : 6 graded stone aggregate 20 mm nominal size) over 75 mm thick bed of dry brick ballast 40 mm nominal size, well rammed and consolidated and grouted with fine sand. (For plinth protection).	56	Sqm		
3.03	Providing and laying half brick masonry in 1 : 4 cement mortar (1 cement : 4 coarse sand).	6	Sqm		
3.04	Extra for providing and placing in position 2 Nos 6 mm dia M.S bars at every third course of half brick masonry.	6	Sqm		
	Total for Plain cement concrete				
4.	STEEL WORK				
4.01	Providing and fixing steel door frame made out of composite sections using steel angles, M.S. flats, M.S. square bars etc. joints mitred and welded with 20x3 mm lugs 23 cm long embedded in cement concrete blocks 15x10x10 cm of 1 : 3 : 6 (1 cement : 3 coarse sand : 6 graded stone aggregate 12.5 mm nominal size) or with wooden plugs and screws or with nut and bolt as required including fixing of necessary stainless steel butt hinges and screws and applying priming coat of zinc chromate steel primer.	425	Kg		
	Total for Steel work				

5.	WOOD WORK				
5.01	Providing and fixing flush door shutters non-decorative core of block board construction with frame of 1st class hard wood and well matched teak ply veneering on both side with vertical grains or cross bands and free veneers on both faces of shutters. 38 mm thick including ISI marked stainless steel butt hinges with stainless steel screws.	14	Sqm		
5.02	Providing and fixing flush door shutters non-decorative core of block board construction with frame of 1st class hard wood and well matched commercial ply veneering on one side and teak ply veneering on other side with vertical grains or cross bands and free veneers on both faces of shutters. 38 mm thick including ISI marked stainless steel butt hinges with stainless steel screws.	5	Sqm		
5.03	Extra for providing and fixing lipping with 1st class Indian teak wood battens 25mm minimum depth on all edges of flush door shutters.	14	Sqm		
5.04	Providing and fixing laminated sheet on flush doors using adhesive and nails etc. (Make : Formica).	5	Sqm		
5.05	Providing and fixing M.S. hold fast made out of 40x6 mm M.S flat 23 cm long including fixing to frame with 10 diameter bolts, nuts and wooden plugs and embedding in cement concrete blocks 30x10x15 cm with 1:3:6 mix (1 cement : 3 coarse sand : 6 graded stone aggregate 12.5 nominal size.)	6	Each		
5.06	Providing and fixing Stainless steel sliding door bolts ISI marked anodized anodic coating not less than grade AC 10 as per IS : 1868), transparent or dyed to required colour or shade, with nuts and screws etc. complete. (Sample to be got approved).				
a	300 x 16 mm	7	Each		
b	250 x 16 mm	3	Each		
5.07	Providing and fixing Stainless steel tower bolts, ISI marked anodized (anodic coating not less than grade AC 10 as per IS : 1868) transparent or dyed to required colour or shade with necessary screws etc. complete. (Sample to be got approved).				
a	300x10 mm	11	Each		
b	250x10 mm	11	Each		

5.08	Providing and fixing Stainless steel handles, ISI marked anodized (anodic coating not less than grade AC 10 as per IS : 1868) transparent or dyed to required colour or shade with necessary screws etc. complete. (Sample to be got approved).				
a	125 mm	20	Each		
b	100 mm	R/o	Each		
5.09	Providing and fixing Stainless steel handles of size 450mm, ISI marked anodized (anodic coating not less than grade AC 10 as per IS : 1868) transparent or dyed to required colour or shade with necessary screws etc. complete in plank door shutter (Dorma Make). (Sample to be got approved).	2	Each		
5.10	Providing and fixing Stainless steel hanging floor stopper, ISI marked, anodized (anodic coating not less than grade AC 10 as per IS : 1868) transparent or dyed to required colour or shade with necessary screws etc. complete. (Sample to be got approved).				
a	Twin rubber stopper.	10	Each		
b	Back rubber stopper.	10	Each		
5.11	Providing and fixing 2" thick shutter with internal frame of 1½"x4", 3 Nos vertically and 5 Nos horizontally, fixing 12mm commercial ply on both sides and clad with 1/4"x4" teak wood planks with over lapping grooves all as per detail. All wooden members shall be in first class Indian teak wood.	2.5	Sqm		
	Total for Wood work				
6.	ALUMINIUM WORK				
6.01	Providing and fixing (anodised transparent or dyed to required shade according to IS 1868, minimum anodic coating of grade AC25 for windows, ventilators with extruded built up standard tubular sections/appropriate Z sections and other sections of approved make conforming to IS:733 and IS: 1285, fixing with dash fasteners of Hilti make of required dia and size including necessary filling up the gaps at junctions i.e. at top, bottom and sides with required EPDM rubber/neoprene gasket etc. Aluminium sections shall be smooth, rust free, straight, mitred and jointed mechanically wherever required including cleat angle, aluminium snap beading for glazing/paneling, C.P. brass/stainless steel screws, all complete as per architectural drawings and the direction of the Architect. (Glazing, paneling to be paid separately)	200	Kg		

6.02	For shutters of windows and ventilators including providing and fixing hinges and making provision of fixing of fittings wherever required including the cost of EPDM rubber / neoprene gasket required.				
a	Anodised aluminium (anodised transparent or deyed to required shade according to IS:1868, minimum anodic coating of grade AC25)	50	Kg		
6.03	Providing and fixing glazing in aluminium windows, ventilators shutters with EPDM rubber / neoprene gasket etc. complete as per the architectural drawings and the direction of the Architect.				
a	With float glass panes of 4.0 mm thickness	9	Sqm		
b	With pin headed glass of 4.0 mm thickness	2	Sqm		
6.04	Providing and fixing fly proof stainless steel wire gauge to windows and clerestory windows using wire gauge with average width of aperture 1.4mm in both directions with wire of dia 0.63 mm all complete with necessary fixing arrangements in aluminium beading. (Sample to be got approved).	11	Sqm		
6.05	Providing and fixing stainless steel (SS 304 grade) adjustable friction windows stays of approved quality with necessary stainless steel screws etc. to the side hung windows as per the Architect complete.				
a	355x19 mm	10	Each		
6.06	Providing and fixing aluminium Z handles. (Sample to be got approved).	10	Each		
	Total for Aluminium work				

7.	FLOORING				
7.01	Providing and laying 18 mm thick machine cut and mirror polished granite stone slab flooring with 20 mm thick cement mortar in 1:4 (1 cement : 4 coarse sand) base and joints finished with cement slurry mixed in white cement and pigment to match the shade of the slab including chamfering and polishing the exposed/cut edges of the slab (Rubbing, polishing the edges shall be done prior to fixing) as per drawing. Cost of laying of granite stone shall include protecting stone surface by using 50 micron polythene sheet overlapped by minimum 300 mm and laying second class plaster of paris of half inch thick. Rate shall include removal of plaster of Paris and polythene sheet and cleaning the surface.				
a	Cheema pink granite. (Sample to be got approved).	6	Sqm		
b	Lakha red granite. (Sample to be got approved).	3	Sqm		
7.02	Providing and laying 18 mm thick machine cut and mirror polished granite stone slab skirting with 20 mm thick cement mortar in 1:4 (1 cement : 4 coarse sand) base and joints finished with cement slurry mixed in white cement and pigment to match the shade of the slab including chamfering and polishing the exposed/cut edges of the slab (Rubbing, polishing the edges shall be done prior to fixing.)				
a	Cheema pink granite.	R/o	Sqm		
b	Lakha red granite	1	Sqm		
7.03	Providing and fixing 25mm thick pre polished and calibrated kota stone of size 300mm x 300mm in flooring over 20mm (average) thick cement mortar in 1:4 (1 cement : 4 coarse sand) laid over and jointed with grey cement slurry mixed with pigment to match the shade of stone including making 6mm x 6mm grooves between stone and finishing grooves with neat cement and epoxy grout recessed by 3mm.	75	Sqm		
7.04	Providing and fixing 18 mm granite or more thickness in window cills, top of walls etc. including making pre polished full round moulding using mortar as specified in flooring item.				
	Hassan Green granite	13	Sqm		

7.05	Providing and fixing 18 mm thick mirror polished machine cut granite for platforms, vanity counters facias and urinal partitions of required size of approved colour and texture including making and pre polished moulding laid over 20 mm thick base cement mortar 1:4 (1 cement : 4 coarse sand) with joints treated with white cement, mixed with matching pigment, epoxy touch ups, including rubbing, curing etc. complete at all levels including making full round moulding.				
	Hassan Green	11	Sqm		
7.06	Extra for providing opening of required size and shape for wash basins/kitchen sink in kitchen platform, vanity counters and similar location in granite work including necessary holes for pillar taps etc. including rubbing and polishing of cut edges etc. complete.	3	Each		
7.07	Providing and fixing 40mm thick Dholpur stone for making vertical support and counter slab instead of R.C.C. slab with required fixing details.	7	Sqm		
7.08	Providing and laying selected rectified / fully vitrified and joint less floor tiles of size 300x300 mm to 600x600 mm of 1st quality of approved make laid on epoxy grout (Laticrete make) including grouting the joints with white cement and matching pigments etc. complete. Make: Kajaria, Somany. (Sample to be got approved prior to placing order).	132	Sqm		
7.09	Providing and fixing Ist quality joint less ceramic glazed wall tiles conforming to IS: 15622 (thickness to be specified by the manufacture's) of approved make in all colours, shades of 200x300 mm / 300x600 mm size as approved by the Architect, in skirting and dados, over 12 mm thick bed of cement mortar 1:3 (1 cement : 3 coarse sand) and jointed with grey cement slurry @ 3.3 kg/sqm, including pointing in white cement mixed with pigment of matching shade complete.	70	Sqm		
7.10	Providing and laying 25 mm thick Mandana stone in plinth protection 750mm wide with 20 mm thick cement mortar in 1:4 (1 cement : 4 coarse sand) base and joints finished with cement slurry mixed in white cement and pigment to match the shade of the slab including providing and making 6mm x 6mm groove in between stone and grouted with neat cement including rubbing and polishing complete.	56	Sqm		
	Total for Flooring				

8.	ROOFING				
8.01	Providing fixing and embedding sand cast iron pipe (only R.I.F make shall only be used) in cement concrete 1 : 2 : 4 (1 cement : 2 course sand : 4 graded stone aggregate 20 mm nominal size) including shoe, bend, Tee etc.				
	100 mm diameter pipe	12	Rm		
8.02	Providing lead caulked joints to sand cast iron rain water pipes and fittings (Quality of lead to be got approved prior to start of work).				
	100 mm diameter pipe	6	Each		
8.03	Providing and laying integral cement based water proofing treatment including preparation of surface as required for treatment of roofs balconies, terraces, etc. consisting of following operations. (To be got done by approved specialised agency).				
a	Applying and grouting a slurry coat of neat cement using 2.75 Kg/sq.m of cement admixed with proprietary water proofing compound conforming to IS 2645 over the RCC slab including cleaning the surfaces before treatment.				
b	Laying cement concrete using broken bricks/brick bats 25 mm to 100 mm size with 50% of cement mortar 1:5 (1 cement : 5 coarse sand) admixed with proprietary water proofing compound conforming to IS : 2645 over 20 mm thick layer of cement mortar of mix 1:5 (1 cement : 5 coarse sand) admixed with proprietary water proofing compound conforming to IS : 2645 to required slope and treating similarly the adjoining walls up to 300 mm height including rounding off junctions of walls and slabs.				
c	After two days of proper curing applying a second coat of cement slurry admixed with proprietary water proofing compound conforming to IS : 2645.				
d	Finishing the surface with 20 mm thick joint less cement mortar of mix 1:4 (1 cement : 4 coarse sand) admixed with proprietary water proofing compound conforming to IS : 2645 and finally finished the surface and making of 300 x 300 mm squares.				
e	The whole surface so finished shall be flooded with water for a minimum period of two weeks for curing and for final test. All above operations to be done in order and as directed and specified by the Architect.				

	With average thickness of 120 mm and minimum thickness at khurra 65 mm. (cement consumption shall be 0.45 bag/sq.m)	170	Sqm		
8.04	Providing and fixing china mosaic with 5 mm thick broken glazed tiles (white colour only) of uniform thickness on top of brick coba water proofing laid in cement mortar 1:3 (1 cement : 3 coarse sand). The tiles shall be broken in triangular shape of not more than 1” size with gap between tiles not more than 10 mm. The gaps shall be finished smooth with neat cement and 6mmx6mm grooves finished with neat cement and grouted with epoxy. (Commercial tiles shall not be used) for pattern of grooves refer drawing.	170	Sqm		
	Total for Roofing				
9.	FINISHING				
9.01	Providing and laying 15/18 mm thick cement plaster of mix 1 : 6 (1 cement : 6 fine sand) on brick work.	6	Sqm		
9.02	Providing and applying white washing with lime to given an even shade on old work. (Sample to be got approved).	132	Sqm		
9.03	Providing and applying P.O.P punning on walls.	6	Sqm		
9.04	Providing and finishing with melamine polishing (two or more coats on new works including a coat of wood filler. (Sample to be got approved).	44	Sqm		
9.05	Providing and applying ICI Velvet touch/Asian paint Royale paint on walls, including preparation of base with necessary priming coats & putty and applying 2 to 3 coats of acrylic emulsion paint in approved shade. (Sample to be got approved).	382	Sqm		
9.06	Repairing in plastering in 1:4 cement mortar (1 cement : 4 coarse sand) in patches.	20	Sqm		
	Total for Finishing				
	Grand Total				

SUMMARY

SANITARY AND PLUMBING WORK FOR B-2, STAFF QUARTER AT ST. STEPHEN'S COLLEGE, DELHI.		
S. NO.	DESCRIPTION	AMOUNT
1	SANITARY FIXTURES AND C.P. FITTINGS	
2	INTERNAL DRAINAGE	
3	INTERNAL WATER SUPPLY	
4	EXTERNAL SEWERAGE	
	GRAND TOTAL	

Schedule of Quantities - Sanitary & Plumbing work for B-2, Staff Quarter at St. Stephen's College, Delhi.

S. No.	Description	Qty.	Unit	Rate	Amount
1	SANITARY FIXTURE AND C.P. FITTINGS				
1.01	Providing and fixing white vitreous china extended wall mounting water closet of approved shape including providing and fixing concealed cistern make of Grohe with dual flush capacity 3/6 litre (adjustable to 4/8 litres), including seat cover and cistern fitting nut, bolt and gasket etc. complete. (Western wall mounting water closet W.C Hindware, Cat No. 92036).	2	Each		
1.02	Providing and fixing water closet squatting pan (Indian type W.C. pan) with 100 mm sand cast iron P or S trap, 10 litre low level white P.V.C. flushing cistern, including flush pipe, with manually controlled device (handle lever) conforming to IS : 7231, with all fittings and fixtures complete, including cutting and making good the walls and floors wherever required: Make : W.C. - Hindware, Cistern - Commander	R/o	Each		
1.03	Salem Stainless steel 39/20 sink with drain board. Single bowl and single drain board (Make Jaina).	1	Each		
1.04	Providing and fixing, testing & commissioning of white vitreous china wash basin with C.P. brass waste assembly, C.P. cast brass bottle trap with C.P. extension piece, wall flanges & rubber adapters for waste connection complete including C.I./M.S. brackets and duly painted, wall flange and union complete, including nuts, washers including cutting and making good the walls/ floors wherever required as per direction of the Architect: White vitreous Circular/oval wash basin below counter Make : Hindware, Model : Zen, Cat No. 10049 .	2	Each		
1.05	Providing and fixing urinal with electrical operated automatic flushing system and sensor, including S.S. plate 125 x 125mm chrome sensor with C.P. brass body, ball valve etc, complete in all respect including cutting and making good the walls wherever required electrical connection complete. Electrical sensor operated urinal. Make : Hindware Model : Sensomatic, Cat No. 60013	R/o	Each		

1.06	Providing and fixings stone slab with table rubbed, edges rounded and polished, of size 75x50 cm deep and 1.8 cm thick , fixed in urinal partitions by cutting a chase of appropriate width with chase cutter and embedding the stone in the chase with epoxy grout or with cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 6 mm nominal size) as per direction of Architect and finished smooth. Hasan green granite stone.	R/o	Each		
1.07	Providing and fixings C.P. brass angle valve of standard design and of approved make conforming to IS:8931. 15mm dia, Make: Jaguar, Model: Kubix (F), Cat No. 35053 F	13	Each		
1.08	Providing and fixings of C.P. brass flexible or 375 mm with angle valve to tap connection pipe of approved quality :	13	Each		
1.09	Providing and fixings C.P. brass bib cock of approved quality conforming to IS:8931 : (For Indian W.C) 15mm nominal bore Make : Jaguar, Model : Kubix, Cat No. 35037 F	3	Each		
1.10	Providing and fixings Health faucet with 1 m of C.P. brass flexible pipe : Make : Jaguar, Model : Allied, Cat No. 573	2	Each		
1.11	Providing and fixings C.P. brass robe hook approved quality : Make: Jaguar, Model : Queens, Cat No. 7761	4	Each		
1.12	Providing and fixings liquid soap dispenser with auto sensor suitable for operation with less than 5 pounds of force complete with spout, shank, and fluid bottle complete in all respects including cutting and making good the walls required. Make: Jaguar, Model: Kubix premium, Cat No. 35735 P	3	Each		
1.13	Providing and fixing C.P. Brass toilet paper holder including cutting and making good the walls wherever required. Make : Jaguar, Model : Queens, Cat No. 7753	2	Each		
1.14	Providing and fixing self closing pillar cock auto closing system for washbasin and sink including cutting and making good the walls wherever required (For wash basin) Make : Jaguar, Model : Presmatic, Cat No. 031	R/o	Each		

1.15	Supplying and fixing C.P. single leaver hot and cold basin mixer complete 15mm dia of approved brand as specified and directed. Make : Jaguar, Model : Kubix (F), Cat No. 35011FB	2	Each		
1.16	Providing and fixing C.P. concealed stop cock with wall flange. (Make : Jaguar, Model : Kubix, Cat No. 35083FK (ALD089))	3	Each		
1.17	Providing and fixing C.P. concealed push cock with wall flange. (Make : Jaguar)	R/o	Each		
1.18	Providing and fixing 600x450 mm beveled edge mirror of superior glass (complete with 6mm thick hard board ground fixed to wooden cleats with C.P. brass screws and washers complete. (Atul glass)	2	Each		
1.19	Providing and fixing in position 20 mm dia 600 mm long C. P. Brass towel rods with brackets and screws for concealed fixing arrangements, (Make Jaquar Cat No. AKP - 35711P).	2	Each		
1.20	Providing and fixing C.P. single leaver hot and cold diverter for arrangement for head shower and spout inlet and outlet connections 4 way diverter. (Make Jaguar Kubix Cat No. 35065FK) (ALD065)	2	Each		
1.21	Providing and fixing C.P. head shower with arm casted 190 mm long flat shape for wall mounted showers with flange complete as per specification. (Make: Jaguar Cat No. SHA-483 (OHS 1801))	2	Each		
1.22	Providing and fixing C.P. bath tub spout with wall flange complete as per specification. (Make : Jaguar STJ-35429)	2	Each		
1.23	Providing and fixing C.P. sink mixer with swinging casted spout wall mounted model with connecting legs & wall flanges complete as per specification (Make: Jaguar Cat No. CON-309KN).	1	Each		
1.24	Providing and fixing water heater with inlet and outlet connection with brackets and screws for concealed fixing arrangements complete as per specification. (a) 25 litre capacity (Make: Jaguar/Recold).	3	Each		
	Total for Sanitary Fixture and C.P. Fittings				

2	INTERNAL DRAINAGE (Soil, Waste, Vent and Rain Water Pipes & Fittings)				
2.01	Providing fixing & testing cast iron soil & waste pipes (IS:1729) including all fittings such as bends, junction inspection doors, offsets, cowls, access pieces / plugs etc. clamps / structural steel supports as required / directed at site, jointing with refined pig lead with deep lead joints including cutting holes in walls and making good.				
a	75 mm dia	R/o	Rm		
b	100 mm dia	20	Rm		
2.02	Providing and fixing floor drain with 'P' trap of self cleansing design without vent arm complete in all respects including cutting and making good the walls floors and RCC work.				
a	75 mm dia	R/o	Nos.		
b	100 mm dia	5	Nos.		
2.03	Providing and fixing in position G.I. pipe and fittings of heavy class (C) conforming to IS:1239 (for waste pipe from individual fixtures to floor trap / floor drain & vent pipe) Including fixing at wall / ceiling level supported by galvanized clamps and hangers etc., cutting chases in wall and filling with 1:1 cement mortar, painting two coats of anti-corrosive bitumastic paint over one coat of primer wrapping with one layer of 400 microne sheet and finally one apply one coat of anti-corrosive paint. (Internal drainage) Make : TATA C.				
a	32 mm dia	R/o	Rm		
b	40 mm dia	2	Rm		
c	50 mm dia	2	Rm		
2.04	Providing and laying cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm down gauge) 75 mm in bend all around CI soil and waste pipes under floor, including shuttering and centering.				
a	75 mm dia	R/o	Rm		
b	100 mm dia	20	Rm		

2.05	Providing and fixing G.I. inlet hopper with two or three inlets fittings to receive waste pipes from fixtures waste. The hopper shall be fabricated from 100 mm dia upto 600 mm long G.I. heavy class pipe and welded G.I. sockets, fixed to C.I. trap with lead joint and support through galvanized steel support from slab or set in cement concrete mix 1:2:4 complete as required. The hopper shall be hot dip galvanized after fabrication, painted with two coats of anti-corrosive paint from inside and outside and fixed to CI trap / pipe with drip seal joint.	5	No.		
2.06	Providing and fixing 6 mm thick CP brass hinged grating with rim of approved design including setting in floor with cement mortar.				
a	100 mm dia	8	No.		
2.07	Providing and fixing 'Y' tee complete all fittings and lead joints as per specifications.	R/o	Nos.		
2.08	Providing and fixing M.S. structural work fabricated from standard sections e.g M.S. rounds, angles, plates, channels, R.S. joints, GI clamps including cutting to size, drilling, welding, insert plates, dash fasteners of required specification in R.C.C. structural masonry members as directed by Architect including cutting and making good the walls and floors and painting with two coats of enamel paint over primer coat after rubbing and cleaning for pipe supports, clamps, M.S. ladder and Manhole tank covers etc. wherever required .	100	Kg		
	Total for Internal Drainage				
3	INTERNAL WATER SUPPLY				
3.01	Providing and fixing Stainless Steel pipe (SS 316) including all fittings of grade AISI 304 as per JIS standard 3448 complete with press type fitting i/c fixing of the pipe with clamps at 1.00m spacing and also including cutting of chases and making good the walls including testing of joints complete as per direction of the Architect. (The pipe length inserted in the fitting shall be measured for payment) (Make: Viega) Grade-316 Internal work - Concealed pipe in toilet				
a	15 mm dia	30	Rm		
b	20 mm dia	22	Rm		
c	25 mm dia	52	Rm		
d	32 mm dia	R/o	Rm		

3.02	Providing and fixing full way wheel operated gate valve of brass body with forged brass hard chrome plated brass ball tested to a pressure not less than 10 Kg / sqcm with threaded / flanged joints complete with nuts, bolts, gaskets, washers etc. Make : Sant				
a	15 mm dia	R/o	Each		
b	20 mm dia	R/o	Each		
c	25 mm dia	3	Each		
d	32 mm dia	1	Each		
e	40 mm dia	2	Each		
f	50 mm dia	R/o	Each		
3.03	Providing and fixing in position 'SINTEX' polyethylene water storage tank of following capacities with mosquito proof lids including effecting all inlets, outlets, overflow and drain out connections.				
a	2000 liters net capacity	1	Each		
3.04	Providing and fixing G.I. pipes (Heavy class) of approved make conforming to IS: 1239-1982 complete with G.I. fittings such as tees crosses, plugs, sockets, elbows, reducers, unions, sleeve pieces, check nuts etc. including jointing with C. I. pipes (Wherever required cutting and making) good the walls, floors, RCC work etc. cutting chases and filling the same for waste pipe work. (Make TATA)				
a	15 mm dia	R/o	Rm		
b	20 mm dia	R/o	Rm		
c	25 mm dia	25	Rm		
d	32 mm dia	R/o	Rm		
e	40 mm dia	20	Rm		
f	50 mm dia	R/o	Rm		
3.05	Providing and fixing insulations for hot water line				
a	15 mm dia	30	Rm		
b	20 mm dia	R/o	Rm		
c	25 mm dia	5	Rm		
	Total for Internal water supply				

4	EXTERNAL SEWERAGE				
4.01	Providing and fixing UPVC SN 4/SN 8 conforming to IS : 15328 PVC-U underground pipes for sewerage and drainage system including all fittings with solvent cement joint interconnection complete as directed by the Architect. Make : Suprime				
a	160 mm dia	15	Rm		
4.03	Providing and laying cement concrete 1:4:8 (1 cement : 4 coarse sand : 8 graded stone aggregate 20mm nominal size) all round covering 15cm thick of UPVC pipes including bed concrete as per direction of the Architect.				
a	160 mm dia	15	Rm		
4.01	Construction water tight brick masonry man hole with first class bricks in cement mortar 1 : 6 (1 cement : 6 coarse sand) RCC top slab with 1 : 2 : 4 mix (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) foundation concrete 150 mm thick 1 : 4 : 8 (1 cement :4 coarse sand : 8 stone aggregate) 150 mm thick 1 : 4 : 8 (1 cement :4 coarse sand : 8 graded stone aggregate 40 mm nominal size) including plastering 12 mm thick with cement plaster 1 : 3 (1 cement : 3 coarse sand) finished with a floating coat of neat cement and making channel in cement concrete 1 : 3 : 6 mix, M. S. foot rests including fixing in 20 x 20 x 10 cm cement concrete block neatly finished, complete as per standard design and approved drawings (Price shall include the cost of excavation, back filling, disposal of surplus earth dewatering and water proofing of manholes as directed at site and other associated civil works)				
a	Internal size 900 x 800 mm up to 1 meter depth	4	Nos		
4.02	Providing and fixing pre-cast steel fibre reinforced concrete manhole cover / grating with frame (As per IS 12592) (Make K.K. only)				
a	Light duty rectangular of 450 x 600 mm internal size and total weight of cover and frame to be not less than 70 Kg.	4	Nos.		

4.03	Excavating trenches of required width for pipes, cables, etc including excavation for sockets and dressing of sides ramming of bottoms depth upto 1.5 m including getting out the excavated soil and then returning the soil as required in layers not exceeding 20 cm. in depth including consolidating Each deposited layer by ramming watering etc. and disposing of surplus excavated soils as directed within a lead of 50 M. All kinds of Soil				
a	Pipes, cables etc, not exceeding 80 mm dia.	15	Rm		
-	Total for External Sewerage	-	-		
	Grand Total				