

## SUB SUMMARY

<b>CIVIL, SANITARY &amp; PLUMBING AND ELECTRICAL WORK FOR C-1, STAFF QUARTER AT ST. STEPHEN'S COLLEGE, DELHI.</b>		
<b>S. NO.</b>	<b>DESCRIPTION</b>	<b>AMOUNT</b>
<b>A</b>	<b>TOTAL FOR CIVIL WORK</b>	
<b>B</b>	<b>TOTAL FOR SANITARY AND PLUMBING WORK</b>	
<b>C</b>	<b>TOTAL FOR ELECTRICAL WORK</b>	
	<b>GRAND TOTAL (A+B+C)</b>	

## SUMMARY

<b>CIVIL WORK FOR C-1, STAFF QUARTER AT ST. STEPHEN'S COLLEGE, DELHI.</b>		
<b>S. NO.</b>	<b>DESCRIPTION</b>	<b>AMOUNT</b>
<b>1.</b>	<b>DISMANTLING &amp; DEMOLISHING WORK</b>	
<b>2.</b>	<b>EARTH WORK</b>	
<b>3.</b>	<b>PLAIN CEMENT CONCRETE</b>	
<b>4.</b>	<b>REINFORCEMENT CEMENT CONCRETE</b>	
<b>5.</b>	<b>BRICK WORK</b>	
<b>6.</b>	<b>STEEL WORK</b>	
<b>7.</b>	<b>WOOD WORK</b>	
<b>8.</b>	<b>FLOORING</b>	
<b>9.</b>	<b>ROOFING</b>	
<b>10.</b>	<b>FINISHING</b>	
	<b>GRAND TOTAL</b>	

**Schedule of Quantities - Civil work for C-1, Staff Quarter at St. Stephen's College, Delhi.**

S. No.	Description	Qty.	Unit	Rate	Amount
<b>1.</b>	<b>DISMANTLING &amp; DEMOLISHING WORK</b>				
<b>Note:</b>	Demolition shall not be done by mechanical means.				
1.01	Demolishing cement flooring / stone flooring / tile flooring and window cill slabs manually including base lime concrete / cement concrete below flooring including disposal of demolished materials within the site as directed by site Engineer/Architect.	66	Cum		
1.02	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.	293	Sqm		
1.03	Demolishing R.C.C. work manually including stacking of steel bars and disposal of unserviceable material within the site as directed by site Engineer/Architect.	2	Cum		
1.04	Extra for cutting reinforcement bars manually in R.C.C. work (Payment shall be made on the cross sectional area of R.C.C. work) as per direction of site Engineer/Architect.	200	Kg		
1.05	Extra for scrapping, cleaning and straightening reinforcement from R.C.C. work and stacking at one place as directed by Engineer/Architect.	200	Kg		
1.06	Demolishing brick work manually in lime mortar/cement mortar including stacking of serviceable material and disposal of unserviceable material within the site as directed by site Engineer/Architect.	30	Cum		
1.07	Dismantling dressed stone work ashlar face stone work or precast concrete work manually in lime mortar/cement mortar including stacking of serviceable material and disposal of unserviceable material within the site as directed by site Engineer/Architect. (Stone to be numbered and stacked).	5	Cum		
1.08	Removing lime mortar/cement from and cleaning stones and concrete articles (net quantity of stacks of cleaned materials will be measured).	35	Nos		
1.09	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	72	Each		
B	Of area beyond 3 sq. metres	R/o	Each		
1.10	Dismantling C.I. pipes, taking out the pipes, manually breaking lead caulked joints, melting of lead and making into blocks including stacking of pipes within the site as directed by site Engineer/Architect.				
A	Up to 150 mm diameter	40	Rm		
1.11	Dismantling of cement plaster from ceiling including disposal of unserviceable material within the site as directed by site Engineer /Architect.	310	Sqm		
1.12	Dismantling of cement plaster of any thickness from wall including raking out joints and disposal of unserviceable material within the site as directed by site Engineer/Architect.	500	Sqm		
1.13	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).	115	Cum		
	<b>Total for Dismantling &amp; Demolishing work</b>				
<b>2</b>	<b>EARTH WORK</b>				
2.01	Earth work in excavation in foundation trenches or drains including dressing of sides and ramming of bottoms, lift up to 1.5 metre including getting out the excavated soil and disposal of surplus excavated soil as directed within a lead of 100 metre. (Excavation to be done manually) within the site.				
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).	14	Cum		
2.03	Supplying and filling in plinth with Jamuna sand or fine sand under floors including watering, ramming consolidating and dressing complete.	32	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.)	268	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 Chlorpyrifos / Lindane E.C. 20% with 1% concentration	82	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 Chlorpyrifos / Lindane E.C. 20% with 1% concentration	82	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 Chlorpyrifos / Lindane E.C. 20% with 1% concentration	413	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	103	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.	94	Rm		
	<b>Total for Earth work</b>				
<b>3.</b>	<b>PLAIN CEMENT CONCRETE</b>				
3.01	Providing and laying in position cement concrete 1 : 4 : 8 (1 cement : 5 coarse sand : 8 graded stone aggregate 40 mm nominal size) in bases of footings, foundations etc.	3	Cum		
3.02	Providing and laying cement concrete 1:3:6 (1 cement : 3 coarse sand : 6 graded stone aggregate 20 mm nominal size.) under floors.	25	Cum		
3.03	Providing and laying damp proof coarse 40 mm thick with cement concrete 1 : 2 : 4 (1 cement : 2 coarse sand : 4 graded stone aggregate 12.5 mm nominal size.)	4	Sqm		
3.04	Providing and mixing water proofing material 'impermo' or equivalent in cement concrete work @ 1 kg per 50 kg of cement.	2	Kg		

3.05	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).	33	Sqm		
	<b>Total for Plain cement concrete</b>				
<b>4.</b>	<b>REINFORCED CEMENT CONCRETE</b>				
4.01	Providing and laying Reinforced cement concrete 1 : 1½ : 3 (1 cement : 1½ coarse sand : 3 graded stone aggregate 20 mm nominal size) in lintels, beams, plinth beams, lintel band etc. excluding the cost of centering, shuttering, finishing and reinforcement.	2	Cum		
4.02	Centering, shuttering, including strutting, propping, bracing, etc. and removal of form work for (after removal of form work only this quantity will be measured) shuttering up to 4m. Height no extra charges shall be paid.				
A	Lintels, beams, plinth beams, and lintel band.	8	Sqm		
4.03	Reinforcement for RCC work including straightening, bending, binding, cutting and placing in position complete including the cost of binding wire etc. for all heights and levels.	300	Kg		
	<b>Total for Reinforced cement concrete</b>				
<b>5.</b>	<b>BRICK WORK</b>				
5.01	Providing and laying brick work in cement mortar 1 : 6 (1 cement: 6 coarse sand) in foundations and plinth.	10	Cum		
5.02	Providing and laying brick work in cement mortar 1 : 6 (1 cement : 6 coarse sand) in superstructure above plinth.	10	Cum		
5.03	Providing and fixing half brick masonry in 1 : 4 cement mortar (1 cement : 4 coarse sand).	18	Sqm		
5.04	Extra for providing and placing in position 2 Nos 6 mm dia M.S bars at every third course of half brick masonry.	18	Sqm		
5.05	Exposed brick work in cement mortar 1 : 6 (1 cement : 6 coarse sand) by cutting with machine to get sharp edges. The brick and pointing work shall be in the same pattern as existing in the building. (Source of bricks - Bijnor or Bagpat).	4	Cum		
	<b>Total for Brick work</b>				
<b>6.</b>	<b>STEEL WORK</b>				
6.01	Providing and fixing M.S. steel work in grills, gates, hand rail etc. with MS flat, angles, square bars, square tubes etc. all complete with a coat of zinc chromate steel primer.	800	Kg		

6.02	Providing and fixing stainless steel (Grade 304) railing made of hollow tubes, channels, plates etc. including welding, grinding, buffing, polishing and making curvature (wherever required) and fitting the same with necessary stainless steel nuts and bolts complete, i/c fixing the railing with necessary accessories & stainless steel dash fasteners, stainless steel bolts etc. of required size, on the top of the floor or the side of waist slab with suitable arrangement as per approval of Architect, (for payment purpose only weight of stainless steel members shall be considered excluding fixing accessories such as nuts, bolts, fasteners etc.	300	Kg		
6.03	Structural steel work in single section or fabricated section using ISMB, plates or channels as required fixed with or without connecting plate, including cutting, hoisting, fixing in position and applying a coat of zinc chromate steel primer all complete and encasing in cement concrete 1 : 1½ : 3 (1 cement : 1½ coarse sand : 3 graded stone aggregate 20 mm nominal size) (Refer drawing before quoting rates).	1045	Kg		
	<b>Total for Steel work</b>				
<b>7.</b>	<b>WOOD WORK</b>				
7.01	Providing wood work in frames of doors, windows, clearstory windows and other frames wrought framed and fixed in position using 1st class Indian teak wood:	2.10	Cum		
7.02	Providing and fixing panelled or panelled and glazed shutters for windows clearstory windows using ISI marked stainless steel butt hinges with stainless steel screws excluding panelling which will be paid for separately.				
a	1½” thick shutter with stile, rail and lock rail 4"x1½” and bottom rail 4"x1½” made out of 1st class Indian teak wood.	3	Sqm		
7.03	Providing and fixing 12 mm thick panelling or panelling and glazing 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).				
a	Using 12 mm thick water proof marine ply	R/o	Sqm		
b	Using 12 mm both sides teak ply	R/o	Sqm		
7.04	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.	27	Sqm		

7.05	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.	8	Sqm		
7.06	Extra for providing and fixing lipping with 1st class Indian teak wood battens 25 mm minimum depth on all edges of flush door shutters.	35	Sqm		
7.07	Extra for cutting rebate in flush door shutters (Total area of shutter to be measured).	5	Sqm		
7.08	Providing and fixing laminated sheet on flush doors using adhesive and nails etc. (Make : Formica).	8	Sqm		
7.09	Providing and fixing 5 mm thick glass panes in windows and window shutters using 1/2"x1/2" first class Indian teak wood beading.	3	Sqm		
7.10	Providing and fixing 8 mm thick glass panes in windows and window shutters using 1/2"x1/2" first class Indian teak wood beading.	27	Sqm		
7.11	Providing and fixing wooden moulded beading to doors and window frames with iron screws plugs and priming coat on unexposed surface of wood etc. complete.				
a	Using 30x10 mm 1st class Indian teak wood.	90	Rm		
b	Using 15x15 mm 1st class Indian teak wood.	15	Rm		
7.12	Providing and fixing architrave made out of 1½"x3/4" first class Indian teak wood.	400	Rm		
7.13	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.)	200	Each		
7.14	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. <b>(Sample to be got approved).</b>				
a	300 x 16 mm	18	Each		
b	250 x 16 mm	R/o	Each		

7.15	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. <b>(Sample to be got approved).</b>				
A	300 x 10 mm	18	Each		
B	250 x 10 mm	28	Each		
7.16	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. <b>(Sample to be got approved).</b>				
A	125 mm	43	Each		
B	100 mm	R/o	Each		
7.17	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). <b>(Sample to be got approved).</b>	4	Each		
7.18	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. <b>(Sample to be got approved).</b>				
A	Twin rubber stopper.	19	Each		
B	Back rubber stopper.	19	Each		
7.19	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.	5	Sqm		
	<b>Total for Wood work</b>				

<b>8.</b>	<b>FLOORING</b>				
8.01	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. <b>(Sample to be got approved).</b>	71	Sqm		
B	Lakha red granite. <b>(Sample to be got approved).</b>	8	Sqm		
8.02	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.	4	Sqm		
B	Lakha red granite	2	Sqm		
8.03	Providing and laying 18 mm thick machine cut and mirror polished granite stone slab flooring in staircase 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.) The surface shall be protected and cleaned prior to handing over). Width varying from 1.5 m to 2.0 m for staircase treads.				
a	Cheema pink granite.	53	Sqm		

8.04	Providing and laying 18 mm thick machine cut and mirror polished granite stone slab in risers in staircase 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.) The surface shall be protected and cleaned prior to handing over). Width varying from 1.5 m to 2.0 m for staircase risers.				
a	Cheema pink granite.	12	Sqm		
8.05	Providing, inserting and fixing 303 grade stainless steel square bars in Cheema pink granite floor in ramp of disabled persons. The bar shall be inserted 6mm inside granite stone and protrude to top by 4mm. Fixing shall be done by suitable chemicals like araldite and cleaning the surface.	100	Kg		
8.06	Providing and fixing 75 mm wide and 18 mm thick granite stone at edges of tread by using chemicals, making pre polished full round moulding. Only pre polished and pre moulded stone will be permitted to fix on staircase treads.	50	Rm		
8.07	Providing and fixing granite strips of width varying from 25 mm to 100 mm between or at edges of glazed tile dado in toilets and pantry using cement mortar as specified in granite flooring item. Granite stone shall project out from tile surface 3mm. projected edges shall be chamfered and pre polished before fixing on wall.	43	Rm		
8.08	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.				
	Lakha red granite	40	Sqm		
8.09	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	10	Sqm		

8.10	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 & polishing of cut edges etc. complete.	8	Each		
8.11	Providing and fixing 40mm thick Dholpur stone for making vertical support and counter slab instead of R.C.C. slab with required fixing details.	5	Sqm		
8.12	Providing and laying selected rectified / fully vitrified and joint less floor tiles of size 300x300 mm or 600x600 mm of 1st quality of approved make laid on 20 mm thick cement mortar 1 : 4 (1 cement : 4 coarse sand) including grouting the joints with white cement and matching pigments etc. complete. (Make Kajaria, Somany etc. Sample to be got approved prior to placing order). <b>(Base rate Rs.50/- Sq.ft)</b>	238	Sqm		
8.13	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.	93	Sqm		
8.14	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.	33	Sqm		
	<b>Total for Flooring</b>				
<b>9.</b>	<b>ROOFING</b>				
9.01	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 coarse sand : 4 graded stone aggregate 20 mm nominal size) including shoe, bend, Tee etc.				
	100 mm diameter pipe	40	Rm		
9.02	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	7	Each		

9.03	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. <b>(To be got done by approved specialised agency).</b>				
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)	293	Sqm		
9.04	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.	293	Sqm		
	<b>Total for Roofing</b>				

<b>10.</b>	<b>FINISHING</b>				
10.01	Providing and laying 10 mm cement plaster of mix 1: 3 (1 cement : 3 fine sand) on the exposed surface of R. C. C.	310	Sqm		
10.02	Providing and laying 15/18 mm thick cement plaster of mix 1 : 6 (1 cement : 6 fine sand) on brick work.	500	Sqm		
10.03	Providing and applying white washing with lime to given an even shade on old work. <b>(Sample to be got approved).</b>	310	Sqm		
10.04	Providing and applying P.O.P punning on walls.	500	Sqm		
10.05	Providing and finishing with melamine polishing (two or more coats on new works including a coat of wood filler. <b>(Sample to be got approved).</b>	80	Sqm		
10.06	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. <b>(Sample to be got approved).</b>	500	Sqm		
10.07	Providing and fixing Indian made glass bricks.	30	Nos		
10.08	Providing and fixing false ceiling plain type with standard GI frame work of main channel @ 3'-0" c/c and cross channel @ 1'-3" c/c by fixing rabbit wire mesh on GI frame work and finishing with POP punning in two or more layers complete in all respects.	310	Sqm		
10.09	Providing and laying 12 mm thick pre mixed formulated one coat gypsum light weight plaster.	R/o	Sqm		
10.10	Providing and laying 15 mm thick pre mixed formulated one coat gypsum light weight plaster.	R/o	Sqm		
	<b>Total for Finishing</b>				
	<b>Grand Total</b>				

## SUMMARY

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

**Schedule of Quantities - Sanitary & Plumbing work for C-1, Staff Quarter at St. Stephen's College, Delhi.**

<b>S. No.</b>	<b>Description</b>	<b>Qty.</b>	<b>Unit</b>	<b>Rate</b>	<b>Amount</b>
<b>1</b>	<b>SANITARY FIXTURE AND C.P. FITTINGS</b>				
1.01	Providing and fixing <b>white vitreous china extended wall</b> mounting water closet of approved shape including providing and fixing concealed cistern make of <b>Grohe</b> with dual flush capacity 3/6 litre (adjustable to 4/8 litres), including seat cover and cistern fitting nut, bolt and gasket etc. complete. <b>(western wall mounting water closet W.C Hindware, Cat No. 92036).</b>	4	Each		
1.02	Providing and fixing water closet squatting pan ( <b>Indian type W.C. pan</b> ) 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 : <b>W.C. - Hindware, Cistern - Commader</b>	R/o	Each		
1.03	Providing and fixing white vitreous china <b>laboratory sink</b> with C.I. brackets, C.P. brass chain with rubber plug, 40 mm C.P brass waste and 40mm C.P. brass trap with necessary C.P. brass unions complete, including painting of fittings and brackets, cutting and making good the wall wherever required : Size 450x300x150 mm Make : Hindware	R/o	Each		
1.04	Providing and fixing, testing & commissioning of <b>white vitreous china wash basin</b> with CP brass waste assembly, CP cast brass bottle trap with CP extension piece, wall flanges and rubber adapters for waste connection complete including CI/MS 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 Architect: White vitreous Circular/oval wash basin below counter Make : <b>Hindware, Model : Zen, Cat No. 10049.</b>	4	Each		

1.05	Providing and fixing urinal with electrical operated automatic flushing system and sensor, including font S.S plate 125 x 125mm chrome sensor with CP 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 <b>Make : Hindware Model : Sensomatic, Cat No. 60013</b>	1	Each		
1.06	Providing and fixings stone slab with table rubbed, edges rounded and polished, of <b>size 75x50 cm deep and 1.8 cm thick</b> , fixed in <b>urinal partitions</b> 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. White Agaria Marble Stone.	1	Each		
1.07	Providing and fixings C.P. brass angle valve of standard design and of approved make conforming to IS:8931. 15 mm dia, <b>Make: Jaguar, Model: Kubix (F), Cat No. 35053 F</b>	12	Each		
1.08	Providing and fixings of <b>C.P. brass flexible or 375 mm</b> with angle valve to tap connection pipe of approved quality :	12	Each		
1.09	Providing and fixings <b>C.P. brass bib cock</b> of approved quality conforming to IS:8931 : <b>(For Indian W.C)</b> 15mm nominal bore <b>Make : Jaguar, Model : Kubix, Cat No. 35037 F</b>	6	Each		
1.10	Providing and fixings <b>Health faucet with 1 m</b> of C.P. brass flexible pipe : <b>Make : Jaguar, Model : Allied, Cat No. 573</b>	4	Each		
1.11	Providing and fixings <b>C.P. brass robe hook</b> approved quality : <b>Make : Jaguar, Model : Queens, Cat No. 7761</b>	4	Each		
1.12	Providing and fixings <b>liquid soap dispenser</b> 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. <b>Make : Jaguar, Model : Kubix premium, Cat No. 35735 P</b>	4	Each		
1.13	Providing and fixing <b>C.P. Brass toilet paper holder</b> , including cutting and making good the walls wherever required. <b>Make : Jaguar, Model : Queens, Cat No. 7753</b>	4	Each		

1.14	Providing and fixing self closing <b>pillar cock auto closing</b> system for washbasin and sink including cutting and making good the walls wherever required ( <b>For wash basin</b> ) <b>Make : Jaguar, Model : Presmatic, Cat No. 031</b>	4	Each		
1.15	Supplying and fixing C.P. pillar cock of 15mm dia of approved brand as specified and directed. <b>Make : Jaguar, Model : Kubix (F), Cat No. 35001F</b>	R/o	Each		
1.16	Providing and fixing C.P. concealed stop cock with wall flange. ( <b>Make : Jaguar, Model : Kubix, Cat No. ALD 083 and ALD 089</b> )	7	Each		
1.17	Providing and fixing C.P. concealed push cock with wall flange. ( <b>Make : Jaguar</b> )	R/o	Each		
	<b>Total for Sanitary Fixture and C.P. fittings</b>				
<b>2</b>	<b>INTERNAL DRAINAGE (Soil, Waste, Vent and Rain Water Pipes &amp; Fittings)</b>				
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	1	Rm		
B	100 mm dia	50	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	1	Nos.		
B	100 mm dia	10	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) <b>Make : TATA C</b>				

A	32 mm dia	R/o	Rm		
B	40 mm dia	35	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 centring.				
A	75 mm dia	1	Rm		
B	100 mm dia	50	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.	10	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	10	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 <b>M.S structural work fabricated</b> 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 .	50	Kg		
	<b>Total for Internal Drainage</b>				

<b>3</b>	<b>INTERNAL WATER SUPPLY</b>				
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) ( <b>Make: Viega) Grade-316</b> <b>Internal work - Concealed pipe in toilet</b>				
A	15 mm dia	15	Rm		
B	20 mm dia	20	Rm		
c	25 mm dia	25	Rm		
d	32 mm dia	20	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. <b>Make : Sant</b>				
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 ' <b>SINTEX</b> ' polyethylene water storage tank of following capacities with mosquito proof lids including effecting all inlets, outlets, overflow and drain out connections.				
a	5000 liters net capacity	1	Each		
	<b>Total for Internal water supply</b>				

<b>4</b>	<b>EXTERNAL SEWERAGE</b>				
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 fram (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.	50	Rm		
-	<b>Total for External Sewerage</b>	-	-		
	<b>Grand Total</b>				

## SUMMARY

<b>ELECTRICAL WORK FOR C-1, STAFF QUARTER AT ST. STEPHEN'S COLLEGE, DELHI.</b>		
<b>S. NO.</b>	<b>DESCRIPTION</b>	<b>AMOUNT</b>
<b>PART-I</b>	<b>POINT WIRING</b>	
<b>PART-II</b>	<b>DISTRIBUTION BOARD</b>	
<b>PART-III</b>	<b>LV SYSTEM</b>	
<b>PART-IV</b>	<b>EARTHING</b>	
<b>PART-V</b>	<b>METAL BOX AND SWITCH SOCKET</b>	
<b>PART-VI</b>	<b>SUPPLY OF FITTING AND FIXTURE</b>	
<b>PART-VII</b>	<b>INSTALLATION OF FITTING AND FIXTURE</b>	
<b>PART-VIII</b>	<b>CCTV SYSTEM</b>	
	<b>GRAND TOTAL</b>	

<b>Schedule of Quantities - Electrical work for C-1, Staff Quarter at St. Stephen's College, Delhi.</b>					
<b>S. No.</b>	<b>Description</b>	<b>Qty.</b>	<b>Unit</b>	<b>Rate</b>	<b>Amount</b>
<b>PART-I</b>	<b>POINT WIRING</b>				
1.1	Wiring for light point fan point, exhaust fan point call bell point with 2x1.5sqmm copper conductor in recessed /surface Rigid PVC conduit including providing and fixing modular type switch, socket, regulator, polycorcobonate modular type cover plate in M.S. switch outlet box etc. with interconnection as required. (Cost of regulator, fan box, socket in not included in this item).	116	Each		
1.2	Wiring for 6A 3/5pin light plug point with 2x1.5sqmm single core copper conductor single core cable recessed in Rigit PVC conduit along with 1x1.5sqmm copper conductor single core cable for loop earthing as required (6 A switch and socket shall be paid separately)	276	Rmt		
1.3	Wiring for 2 Nos 6A 3/5pin light plug point with 2x2.5sqmm single core copper conductor single core cable recessed in Rigid PVC conduit along with 1x1.5sqmm copper conductor single core cable for loop earthing as required (6 A switch and socket shall be paid separately)	250	Rmt		
1.4	Wiring for 16A 3/5pin light plug point with 2x4 sqmm single core copper conductor single core cable recessed in HD conduit along with 1x4sqmm copper conductor single core cable for loop earthing as required (16 A switch and socket shall be paid separately).	336	Rmt		
1.5	Wiring for sub main along with earth wire with following size of copper conductor single core cable in surface/recessed conduit as required.				
a	4x16sqmm+2x16sqmm earth wire	40	Rmt		
1.6	Providing and fixing of 4 core 35sqmm 1100V grade Al. conductor sheathed, PVC insulated armoured cable on surface of wall / through existing PVC pipe as required.	R/o	Rmt		

1.7	Wiring for circuit wiring along with earth wire with 2x2.5sqmm+1x2.5sqmm copper conductor single core cable recessed in HD conduit (DB to 1st switch outlet).	140	Rmt		
1.8	Providing and fixing fan box with backalite sheet cover complete are required.	12	Each		
	<b>Total for Point wiring</b>				
<b>PART-II</b>	<b>DISTRIBUTION BOARD</b>				
2.1	Supplying, Installation, testing and commissioning of double door distribution board recessed in wall with 100A bus bar, neutral bar and earth bar etc. as required.				
a	12 Way TPN double door vertical Distribution board	1	Each		
b	16 Way SPN double door vertical Distribution board				
2.2	Providing and fixing following MCCB, ELCB of 300mA and MCB of 10kA in existing DBs.				
a	100A MCCB 36kA	1	Nos		
b	63A 2P RCCB 300kA	1	Nos		
c	10A to 32 A SP MCB	40	Nos		
d	Blanking plates	R/o	Nos		
	<b>Total for Distribution board</b>				
<b>PART-III</b>	<b>LV SYSTEM</b>				
3.1	Providing and fixing following size of heavy duty PVC conduit in recessed of wall complete with all accessories such as bend, junction box, hook etc as required.				
a	20mm	50	Rmt		
b	25mm	448	Rmt		
c	32mm	40	Rmt		
3.2	Supplying and drawing following wire in existing PVC conduit.				
a	2 pair 0.5 sqmm FR PVC insulated copper conductor unarmoured cable.	285	Rmt		
b	5 pair 0.5 sqmm FR PVC insulated copper conductor unarmoured cable.	40	Rmt		

c	4 Pair CAT -6 UPT data cable.	368	Rmt		
3.3	Providing and fixing RJ-11 for Telephone socket outlet.	19	Nos		
3.4	Providing and fixing RJ-45 for computer jack socket outlet.	23	Nos		
3.5	Providing and fixing 30 pair telephone tag block.	1	Nos		
	<b>Total for LV system</b>				
<b>PART-IV</b>	<b>EARTHING</b>				
4	Providing all material such as metal plate but without charcoal salt bricks masonry chamber, watering pipe, funnel, CI / RCC cover plate etc. 4.5mts deep earth pit providing necessary material refilling the earth and disbursing the excess earth mud etc as required.				
a	600x600x5 GI earthing	2	Nos		
b	Providing charcoal	192	Kg		
c	Providing salt	10	Kg		
d	25x3 earth strip	60	Mts		
	<b>Total for Earthing</b>				
<b>PART-V</b>	<b>METAL BOX AND SWITCH SOCKET</b>				
5.1	Providing and fixing of 75x75x60mm GI box modular type recessed in wall complete as required	42	Nos		
5.2	Providing and fixing of 100x75x60mm GI box modular type recessed in wall complete as required	56	Nos		
5.3	Providing and fixing of 200x75x60mm GI box modular type recessed in wall complete as required	25	Nos		
5.4	Supplying and fixing of 6A switch and socket on modular type plate in existing 100x75x60 GI box complete with interconnection as required.	23	Nos		
5.5	Supplying and fixing of 16A switch and socket on modular type plate in existing 100x75x60 GI box complete with interconnection as required.	34	Nos		
5.6	Supplying and fixing of 16A switch and socket on modular type plate in existing 100x75x60 GI box complete with interconnection as required.	12	Nos		

5.7	Providing and fixing following size of MS junction box with backlite sheet cover in recess in wall / slab complete as required.				
a	100x100x50 mm	1	Nos		
b	150x100x50 mm	1	Nos		
	<b>Total for Metal box and Switch socket</b>				
<b>PART-VI</b>	<b>SUPPLY OF FITTING AND FIXTURE</b>				
6	Supplying of light fixture with choke , blast ,lamp , tube , suspension rods of suitable size and length complete with all accessories				
6.1	1400 mm high speed Crompton ceiling fan	2	Nos		
6.2	1200 mm high speed Crompton ceiling fan	10	Nos		
6.3	300 mm dia 900 rpm exhaust fan heavy duty Crompton make as approved by the Architect.	5	Nos		
6.5	18Watt LED round light Phillips make as approved by Architect.	75	Nos		
6.6	10Watt LED tube light with prepex cover (Phillips)	4	Nos		
6.7	18Watt LED tube light with prepex cover (Phillips)	12	Nos		
6.8	10W LED Bulkhead light	9	Nos		
	<b>Total for Supply of fitting and fixture</b>				
<b>PART-VII</b>	<b>INSTALLATION OF FITTING AND FIXTURE</b>				
7.1	Installation testing and commissioning of all type of light fixture complete with all accessories on wall or on surface including wiring with 1.5sq mm copper conductor single core cable.	100	Nos		
7.2	Installation testing and commissioning of ceiling fan including wiring the down rods of standard length (up 30cm) with 2x1.5sqmm FR pvc insulated copper conductor single core cable including providing and fixing of phenolic laminated sheet cover on the fan box etc. as required.	12	Nos		
7.3	Installation testing and commissioning of Exhaust fan in existing opening fixing frame etc. as required.	5	Nos		

7.4	Extra for louvers / shutters complete with frame of exhaust of all size.	5	Nos		
	<b>Total for Installation of fitting and fixture</b>				
<b>PART-VIII</b>	<b>CCTV SYSTEM</b>				
8.1	Providing and fixing CCTV RG-6 cable in existing conduit with all interconnection complete as required.	350	Rmt		
8.2	Providing and fixing of outlet for Camera.	14	Nos		
8.3	Supply, Installation, Testing and Commissioning of Approved make Profile S compliant indoor IR indoor Dome-IR distance of 20 m. 2 MP camera as required.	14	Nos		
8.4	Supply, Installation, Testing and Commissioning of HIKVISION make 16 CH DVR with 4 Sata port.	2	Nos		
8.5	Supply Installation Testing & Commissioning of WD make NVR SV HDD Drive of 6 TB surveillance .	2	Nos		
8.6	Supply Installation Testing and Commissioning of Cisco Make 48 Port POE Switch 10/100/1000	1	Nos		
8.7	Supply, Installation, Testing and commissioning of 6U wall mounted rack with fans, 2 cable managers, stationary shelf, 2 nos of hardware packets.	2	Nos		
8.8	Supply Installation Testing and commissioning of 9U wall mounted rack with fans, 2 cable managers, stationary shelf, 2 nos of hardware packets.	1	Rmt		
	<b>Total for CCTV System</b>				
	<b>Grand Total</b>				