

Name of work - Proposed Cafeteria at C-Camp (Civil, PH&TensileFabric Roof)

Bill of Quantities

Item No	Description	Units	Quantity	Rate in figure	Rate in words	Amount in figure
1	Providing and injecting chemical emulsion for pre-constructural Anti-termite treatment and creating a chemical barrier on top surface of plinth filling, junction of inside wall and floor, on top of Damp Proof Course (DPC) or on masonry at the level of plinth filling as per IS 6313(part-II)-1981 using chemicals like Chloropyripos emulsifiable (IS: 8944-1978) 20EC mixed with water in 1:19 ratio (i.e., 1 litre of Chemical to 19 litres of water). The emulsion is spread at 5 lit/sqm on top surface of plinth filling, top of Damp proof course and at 1 lit/linear meter along the junction of wall and floor, all as per specifications and directions. (Plinth area of the building at Ground floor only shall be measured).	Sqm	145.00			
2	Earthwork in SURFACE EXCAVATION in ALL KINDS OF SOILS not exceeding 30cm in depth but exceeding 1.50m in width as well as 10sqm on plan wherever necessary and disposal of excavated earth, lead up to 50m and lift up to 1.50m (disposed soil to be levelled and neatly dressed) complete as per specifications.	Sqm	145.00			
3	Earthwork in excavation by mechanical means (hydraulic excavator) / manual means for FOUNDATION TRENCHES in ALL KINDS OF SOILS including dressing of sides, ramming of bottom, disposing the surplus excavated materials within a distance of 50m and lift 1.50m complete as per specifications. (Disposed soil to be levelled by breaking clods if any and neatly dressed).	Cum	24.00			
4	Providing and laying cement concrete using 40mm nominal size graded hard granite stone aggregate obtained from approved quarry including compaction, finishing top surface to level, curing, cost of formwork, etc; complete as per specifications. Mix ratio specified is for cement : coarse river sand : graded stone aggregate. IN FOUNDATION AND PLINTH/SUB-BASE TO FLOORS.					
	PCC 1:4:8	Cum	2.00			
5	Providing and laying cement concrete using 20mm nominal size graded hard granite stone aggregate obtained from approved quarry including compaction, finishing top surface to level, curing, cost of formwork, etc; complete all as per specifications. Mix ratio specified is for cement : coarse river sand : graded stone aggregate. IN FOUNDATION AND PLINTH/SUB-BASE TO FLOORS.					
	PCC 1:1.5:3	Cum	3.20			

Item No	Description	Units	Quantity	Rate in figure	Rate in words	Amount in figure
6	Providing and constructing RANDOM RUBBLE MASONRY using hard granite stones obtained from approved quarry with bond stones at every 0.50sqm of wall surface in cement mortar in mixes stipulated below without pinning on face, but including raking out joints and pointing flush in same mortar including curing, etc; complete as per specifications in FOUNDATION AND PLINTH. (Rate includes cost of bond stones wherever provided). (Mix ratio specified is for cement : coarse river sand)					
	With CM 1:6	Cum	4.00			
7	Providing and constructing Solid Cement Concrete Block masonry in cement mortar 1:6 (cement : coarse river sand) using factory made, load bearing, approved quality cement concrete blocks of specified size, Grade C (4.0), as per IS 2185 (Part 1), density of blocks not less than 1800kg/cum, minimum average compressive strength of units is 4.0N/mm ² and minimum strength of individual unit is 3.2N/mm ² , setting in position, curing, raking out joints wherever required etc., complete all leads and all as per specifications and directions of engineer-in-charge in FOUNDATION AND PLINTH.					
	For 150mm thick walls using (400x150x200)mm size blocks	Cum	1.20			
8	Steel reinforcement for all RCC items including decoiling, cutting, hooking, bending, cranking, fabricating to required shape, placing in position and tying the system with soft drawn annealed GI binding wire of diameter not less than 1.00mm with 2 strands etc; complete all as per specifications at all heights (binding wire will not be measured for payment).					
	Thermo-Mechanically Treated (TMT) bars - Fe500	Mt	0.013			
9	Providing and laying cement concrete using graded hard granite stone aggregate of 20mm nominal size obtained from approved quarry including formwork, compaction, finishing, plastering the concrete surface in CM 1:2 - 12mm thick, curing, etc; IN BED BLOCKS, ANCHOR BLOCKS, WINDOW CILLS, COPING BLOCKS, etc; up to floor five level complete all as per specifications. Mix ratio specified is for cement : coarse river sand : graded stone aggregate. The work includes providing throating/ drip mould wherever required as per standard engineering practice of size not be less than 40mm X 15mm. The rate is inclusive for making drip mould & no extra cost will be paid for.					
	PCC 1:2:4	Cum	0.50			

Item No	Description	Units	Quantity	Rate in figure	Rate in words	Amount in figure
10	Filling available excavated approved earth (excluding rock) in trenches, sides of foundations, plinth, etc; in layers not exceeding 15cm depth breaking clods, consolidating each deposited layer by ramming, watering and dressing, etc; complete for lead up to 50m and all lifts etc., complete as per specifications.	Cum	13.10			
11	Providing and constructing BRICK MASONRY in cement mortar as per mixes stipulated below using approved well burnt bricks of class designation (Classification as per IS 1077-1986) as specified below including raking out joints 10mm deep, scaffolding, curing, etc; complete as per specifications IN SUPERSTRUCTURE UPTO FLOOR FIVE LEVEL. (The mix ratio specified is for cement : coarse river sand)					
	Using MACHINE PRESSED WIRE CUT BRICKS of class designation NOT LESS THEN 10 (Minimum average compressive strength not less than 10N/sqmm) in cement mortar 1:4	Cum	6.00			
12	Supplying, fabricating, assembling, hoisting / erecting and fixing in position at all heights and with all leads, structural steel works of welded built-up sections, all as per structural drawings and as per detailed specifications (for materials and workmanship) in the situations described hereinafter including a) cutting of components to required lengths / widths and shapes/profiles, b) smooth machining of edges / faces, c) welding (electric arc welding) at joints of built-up sections/ single sections for required weld lengths and sizes and d) painting all over with two coats of Synthetic enamel paint of approved quality, make and colour/shade over one coat of red oxide zinc chromate primer with surfaces duly prepared to receive painting etc., complete all as directed by the engineer-in-charge.					

Item No	Description	Units	Quantity	Rate in figure	Rate in words	Amount in figure
	NOTE : The contractor shall submit fabrication shop drawings for work involved based on construction drawings (that may be issued during construction period) for approval by engineer-in-charge. The fabrication work shall start only after approval to the fabrication drawings. Any change required in the fabrication drawings shall be carried out at no extra cost over the quoted rates. Fabrication shall be in a perfectly workmanship like manner and as provided in Section V and VI of IS 800 and IS 7215. Welding shall be carried out by qualified welders. Electrodes for welding, the procedure, selection, test and inspection shall conform to provisions in IS 816, IS 818, IS 822, and IS 833. Erection/hoisting shall commence only after passing of fabricated parts by the engineer-in-charge.					
12.1	Structural steel works and welded built up sections in items 11 but with MS Plates of any thickness	MT	0.25			
12.2	Structural steel works in welded built-up sections of roof purlins, side cladding supports, roof purlins/ truss bracings and tie runners, gutter supports, glazing supports and the like fabricated with MS Flats of any thickness and size and MS rods as in sag rods/ tie rods of any diameter	Mt	0.25			
12.3	Structural steel works as in item 11 above but with medium class MS pipes of any diameter, including bending the pipes	Mt	0.50			
12.4	Structural steel works of built up and framed Stanchions / Columns / Trusses / Girders / Portals etc., in welded built up sections fabricated with RS Joists (ISMB/ ISWB/ ISHB)	Mt	0.90			
13	Design and engineering, supply and fixing of tensile membrane of high tensile strength, primary and secondary steel ,hardware and accessories, including the fabrication of steel structure made out of MS structural steel tubular section of high yield strength as per relevant IS codes. The tensile membrane roof cover shall be of PVC coated polyester composite membrane of approved make and quality including membrane cutting, seaming and HF welding as per manufacturer standards. The membrane shall be fixed to MS structural members with necessary SS plates, lugs, clamping plates as required. The membrane shall be stretched and tensioned as per the design approved. The Membrane shall be flame resistant, fungicide finish, high tear out force and continued tear out force, well wieldable, good UV resistance, high water pressure resistance and very low maintenance. This work to be executed with specialized agency.	SQm	145.00			

Item No	Description	Units	Quantity	Rate in figure	Rate in words	Amount in figure
	All structural steel members shall be treated with anti corrosion treatment followed by two coats of priming epoxy primer followed by two coats of epoxy paint of approved colour. All cables used shall be dry hot dip galvanised and terminated with SS 304 grade terminals. The cost shall include necessary anchoring system, anchor bolts, base plates for foundation etc., lead and lift of material, Scaffolding., etc all complete as directed by engineer in charge.					
	Fabrication shall be as per IS:7215. The end termination and joints in pipes shall be as per details or contractor can suggest suitable alternative in order to achieve design intent.					
	The contractor shall submit shop drawings and erection forces if any before execution to the consultants and obtain the approval.					
	Contractor shall take adequate knowledge and constraints at site and shall submit a scheme for erection along with equipment used to erect and fix it in position					
	The rate quoted shall be not limited to above and shall include all other conditions at the site and power etc., The rate shall include necessary scaffolding required for the same.					
	Tensile membrane make: Ferrari or equivalent of 570 GSM (G/Sqm), detailed specification of the material shall be submitted. Design analysis of membrane shall be submitted for verification.					
	Stad drawings and design calculation for structural membes shall be submitted for verification.					

Item No	Description	Units	Quantity	Rate in figure	Rate in words	Amount in figure
14	Providing and laying cement concrete Paver blocks flooring using 70mm thick blocks approved shade/color/pattern manufactured by M/s. BASANT BETONS or M/s. Nitco or M/s.Pebbalio, close jointed over bed of 50mm thick river sand to a tight pattern, laid to proper line and level including bedding down the completed surface with a plate vibrator or by firmly topping level with mallet and a large flat piece of timber, finishing by brushing clean dry sand over the surface to fill all the joints thoroughly including fixing the edge restraint laying blocks etc., complete all as per manufacturers specifications and directions of engineer-in-charge. (Rate to include cost of paver blocks, sand and labour etc.). The arrangement of pattern of blocks shall be as per architectural drawings. Basic cost of paver block Rs.1600/- per Sqm.[Basic rate means - Cost of pavers includes GST].	Sqm	145.00			
15	Providing and laying cement concrete interlocking paver blocks flooring using 60mm thick blocks of approved shape, size and colours with required combination of colours of blocks having load bearing strength not less than M20 grade manufactured by M/s. Besser Blocks / M/s. Nitco / M/s. Malu Group or equivalent, close jointed over bed of 75mm thick river sand to a tight pattern, laid to proper line and level including bedding down the completed surface with a plate vibrator or by firmly topping level with mallet and a large flat piece of timber, finishing by brushing clean dry sand over the surface to fill all the joints thoroughly including fixing the edge restraint laying blocks etc., complete all as per manufacturers specifications and directions of engineer-in-charge. (Rate to include cost of paver blocks, sand and labour etc.). The arrangement of pattern of blocks shall be as per architectural drawings.	Sqm	75.00			
16	Providing and laying gang saw cut 30 mm thick, mirror polished pre moulded and pre polished machine cut granite stone of required size and shape of approved shade, colour and texture in footpath, flooring in road side plazas and similar locations, laid over 20mm thick base of cement mortar 1:4 (1 cement : 4 coarse sand) including grouting the joints with white cement mixed with matching pigment, epoxy touch ups etc. complete as per direction of Engineer-in-Charge					
	With granite stone of area less than 0.50 sqm	Sqm	14.50			
17	Chamfering	Rmt	70.00			

Item No	Description	Units	Quantity	Rate in figure	Rate in words	Amount in figure
18	Providing and fixing two line dressed 200X200mm X up to 1000mm height granite stone post embedded in concrete etc., complete as per specification, drawing and as directed by EIC.(Concrete will be measured in separate item).	No	2.00			
19	Providing and laying CUDDAPAH STONE flooring / dado / on platforms with 20mm to 25mm thick polished cuddapah stone slab, machine cut to required size laid over a bed of 20mm thick cement mortar 1:4 close jointed and pointed with cement mortar (cement slurry at the rate of 4.4kg /sqm for bedding and 2kg /sqm for joints), mixed with approved pigment to match the shade of stone slab, finishing, etc; to required level and slopes, curing, polishing, cleaning with oxalic acid and wax polishing etc; complete all as per specifications.					
	In plat forms/Shelves	Sqm	4.00			
20	Providing and fixing of Stain less Steel Nirali sink of Glister super series of Jumbo model of over all size 685mmX535mm and bowl size of 610X460X254mm with glossy/Matt finish, with provision of kohinoor waste pipe, complete all as per specification and as directed by EIC., etc complete.	No	1.00			
21	Extra for providing opening of required size & shape for wash basins / kitchen sink in kitchen platform, vanity counters and similar location in marble / stone work including necessary holes for pillar taps etc. including rubbing and polishing of cut edges etc. complete, per opening.	Each	3.00			
22	Providing and Fixing Indian make wash hand basin (with CP bottle trap) comprising of fallowing parts and all as per specification and as directed by EIC, etc complete.	No	2.00			
	A) wash basin of Hind ware make of approved model no - Basic rate Rs.2270/-					
	B) 15mm NB CP brass angle-cock/stop cock conforming to IS:781 of approved make with a minimum weight of 400gm.					
	C) Waste coupling					
	D) Kohinoor waste pipe from waste coupling to drain point					
	E) CI bracket for fixing wash basin					

Item No	Description	Units	Quantity	Rate in figure	Rate in words	Amount in figure
23	Providing and fixing in position cast Iron sand cast traps of self cleansing design with outlet size and minimum approximate weight as follows conforming to IS:1729 including connection with CI soil/waste, necessary 150mm thick CC 1:2:4 for embedding the trap, fixing CP brass hinged grating on top, inner annular surfaces between floor finish and top of trap shall be finished smooth with neat cement etc., complete as specified and directed. (Ref. Fig. No. CED:PH1.8 of PH Engineering Specification)					
	Floor trap with 75mm dia Outlet (Min wt 4.8KG)	No	2			
24	Providing and Fixing in position best quality salt stoneware gully trap of size 100mm square with 100mm outlet; conforming to IS:651 embedded in plain cement concrete 1:4:8 (20mm Metal), providing and fixing 100mm square CI grating on top of the trap, all the above encased in a chamber of 300X300mm built with 115mm thick brick masonry using first class country bricks in CM 1:3, over a bed of CC 1:4:8 using 40mm size metal 100mm thick, plastering with CM 1:3, 13mm thick inside, outside, exposed top surfaces and Internal and top exposed surfaces finished smooth with a floating coat of neat cement, Providing and fixing CI frame and cover of size 300X300mm weighing not less than 7kg fixing the frame in PCC 1:2:4 using 20mm stone metal including painting the frame and cover with 3-coats of anticorrosive black bitumastic painting etc. Complete all as specified and directed.	No	1			
25	Supply, Laying and Fixing in position under floor, against wall in chases PVC SWR Drainage pipes and specials, rubber rings conforming to Type 'B' of IS:13592 'Supreme' or equivalent approved make as per manufacturers specification including cutting the pipes to required lengths, necessary excavation, chasing and restoring to original conditions, testing etc. complete. (Specials at junction of lateral pipe and vertical stack must have access door for inspection)					
a	75mm dia (min wall thickness 3.2mm)	Rmt	10.00			
b	110mm dia (min wall thickness 3.2mm)	Rmt	42.00			

Item No	Description	Units	Quantity	Rate in figure	Rate in words	Amount in figure
26	Construction of Inspection chamber of internal clear dimensions as mentioned below in 230mm thick brick masonry using first class country brick walls in CM 1:3 over a bed of 150mm thick 1:2:4(20mm metal) cement concrete, plastering with CM 1:2, 12mm thick on internal, external, top surfaces and internal and exposed top surfaces finished smooth with a floating coat of neat cement, Plain cement concrete 1:2:4 for benching, channelling, providing and fixing light single seal CI frame and cover as mentioned below conforming to IS 1726, CC 1:2:4 for fixing the CI frame and cover, painted with 3-coats of anticorrosive black bitumastic paint, encasing sewers connection to chamber in CC 1:2:4 etc. Complete all as specified and directed. (Ref. Fig. No. CED:PH8.6 of PH Engineering Specification) NOTE: CC 1:2:4 in the above Item is by using 20mm graded granite aggregate obtained from approved quarry.					
	450X450X450mm with frame and cover of size 450X450mm weighing not less than 25kg.	No	2			
27	Providing and fixing Chlorinated Polyvinyl Chloride (CPVC) pipes (SDR 13.5) conforming to IS:15778, having thermal stability for hot and cold water supply including all CPVC plain & brass threaded fittings including fixing the pipe with clamps at 1.00m spacing. This includes jointing of pipes and fittings with one step CPVC solvent cement and testing of joints complete as per direction of engineer-in-charge etc., for INTERNAL WORKS EXPOSED ON WALLS with:					
	CPVC pipes, 40mm dia	Rmt	60.00			
28	Providing and fixing Chlorinated Polyvinyl Chloride (CPVC) pipes (SDR 13.5) conforming to IS:15778, having thermal stability for hot and cold water supply including all CPVC plain & brass threaded fittings including jointing of pipes and fittings with one step CPVC solvent cement, trenching, refilling and testing of joints complete as per direction of engineer-in-charge etc. for EXTERNAL WORKS with:					
a	CPVC pipes, 40mm dia	Rmt	15			
b	CPVc pipes, 20mm dia	Rmt	20			
29	Providing and Fixing in position high pressure best quality gun metal ball valves with polythene float conforming to IS:1703 and bearing ISI mark of size mentioned below including testing, making good the leakages etc., all as specified and directed.-40mm dia	No	2			

Item No	Description	Units	Quantity	Rate in figure	Rate in words	Amount in figure
30	Providing and Fixing in position approved make 15mm NB CP brass stop cock conforming to IS:781 with a minimum weight of 400gm.	No	2			
31	Providing and fixing pillar cock of Jaquar continental series PRS-031, etc., as directed by EIC.	No	2			
32	Providing and Fixing in position approved make 15mm NB CP brass screw down bib tap conforming to IS:781 with a minimum weight of 400gm	No	2			
33	Disposing of debris/ unserviceable materials out side the premeses where not objectionable by the public or civic or other athourities.	Cum	21.20			
34	Construction of valve chamber of size 300X300mm, 450mm deep comprising of 230mm thick brick walls using first class country brick walls in CM 1:5 over a bed of 150mm thick PCC 1:4:8 (using 40mm size metal) with 75mm projections all-round beyond the masonry face, plastered with CM 1:3, 12mm thick mixed with waterproofing compound as per manufacturer's specifications on internal, external, top exposed surface and internal, top surfaces finished smooth with a floating coat of neat cement, providing and fixing painted CI frame and cover of size 300X300 weighing not less than 7kg with locking arrangement fixing the frame in CC 1:2:4 including form work, curing, etc, complete all as specified and directed. NOTE: CC 1:2:4 in the above Item is by using 20mm graded granite aggregate obtained from approved quarry.	No	1.00			
35	Providing and fixing M-20 grade Precast Reinforced Cement Concrete using graded hard Granite stone aggregate of 20mm nominal size obtained from approved quarry including mechanical mixing, centering and shuttering, compaction, simultaneously finishing smooth with 6mm thick cement plaster 1:3 (cement : fine sand) on exposed surfaces and fixing in position with same CM 1:3, curing etc., complete all as per specifications but excluding cost of steel reinforcement UP TO FLOOR FIVE LEVEL.					
	Kerbs, edging and the like	Cum	10.10			

Item No	Description	Units	Quantity	Rate in figure	Rate in words	Amount in figure
36	Providing and fixing at all heights / in all floors with all leads Colour Anodised Aluminium doors / windows / partitions manufactured from best extruded Aluminium sections conforming to ISI, cut to length, joints mitred and corners grinded with joints water proof the outer frame and shutter frame stiffened with corner angle strips or provided for in the frame for fixing the frame to RCC Columns / masonry on sides, RCC lintels on top and PCC cills or floor at bottom, the frame work fixed with standard approved fastenings all generally as per details shown in drawings and specification with all the sections pre-treated for removal of any rust and prevention of further rust formation and coated with greasy materials for non-adherence of mortar or any other sticky materials and this coat to be removed after installations of the sub-dividing frames by tenoned and riveted into frames all aluminium surface be thoroughly cleaned free of rust scale or dirt and mill scale by pickling surfaces finished with colour anodised dull matt finishing					
	10 MICRON thick including cost of pull and push plates and fixtures for hinged openings (arrangement with steel bearings wherever necessary), cost of labour for fixing of mortice lever locks, aluminium handles, door fittings like tower bolts etc., supplied free for fixing including screws / bolts (or these materials measured separately elsewhere) where shutters are involved etc., complete, cost of providing and fixing of glass of selected glazing quality of thickness and type of glass specified hereinafter or panel boards including nylon or PVC or rubber lining of approved quality wooden grounds, rubber gasket, aluminium glazing clips, mastic etc., and fixing with aluminium glazing clips and also snap-on type with holes as per drawing and specifications provided for separately in the sub items following the main items of frame work for partition and door shutters as below:					
	NOTE: All fitting works shall be carried out as per I.S specifications including necessary rivets, screws, lugs, scaffolding, etc., complete all generally as per drawings. The sizes of the components should confirm as per details in drawings.					
36.a	Providing and fixing of Colour Anodised Aluminium (Matt finish) frame work (horizontal and verticals) for partitions Doors / Windows with required sections of JINDAL / INDAL make or equivalent including all items and contingencies described above complete (Aluminium beadings and glazing clips measured under this item only).	KG	27.00			

Item No	Description	Units	Quantity	Rate in figure	Rate in words	Amount in figure
36.b	Providing and fixing of frame work (styles and rails) for doors shutters / window shutters with required sections of JINDAL / INDAL make or equivalent including providing all items and hinged / pivoted / sliding arrangements for operation of shutters and labour cost for fixing of door fittings and locks (which shall be free issues for fixing or paid separately) etc., complete. (Aluminium beadings and glazing clips measured under this item only.)	KG	37.00			
37	Providing and fixing seasoned wooden framework using first class country wood (Hollock / Badam / Malaysian Belli) scantling of required sizes including providing and fixing TW wedge shaped gutties.	Cum	0.08			
38	Providing and fixing ACP sheet of 5mm thick Exterior Grade for partition/shutter infill/flush with gasket on both sides, including with necessary self tapping screws, necessary cutting, hire charges for machinery, tools, labour., etc complete and as directed by EIC., etc complete.	Sqm	8.00			
39	Tower bolts (Barrel type) as per IS 204:1974, Barrel dia 11mm, bolt dia 10mm					
	100mm	No	12.00			
40	Aluminium Handles D type					
	100mm plate size x 62mm grip size	No	12.00			
41	Butt hinges					
	(75 x 22.25 x 2.5)mm and dia 6.35mm	No	24.00			
	Total Amount					

Note:- The contractor shall quote his rates in this schedule of quantities. Submission of tender in any other format is liable for rejection.

Total Amount in Words

Signature of the contractor

Date

Address