

# **TENDER DOCUMENT**

**FOR**

**RENOVATION WORKS**

**OF**

**PTU's MOHALI CAMPUS**

**AT**

**C 102B, PHASE - VII**

**INDUSTRIAL AREA**

**MOHALI**

**REVISED FINANCIAL BID**

**PART - II**

**OCTOBER 2013**

**PUNJAB TECHNICAL UNIVERSITY**

**JALANDHAR-KAPURTHALA HIGHWAY**

**PUNJAB**

## **GUIDELINES FOR FILLING UP THE RATES**

- 1 The Bill of Quantities shall be read in conjunction with the Instructions to Tenderers, General conditions of Contract, Special Conditions of Contract, Technical Specifications and other documents forming part of the tender documents.
- 2 General directions and descriptions of work and materials are not necessarily repeated not summarized in the Bill of Quantities. References to the relevant sections of the contract documents shall be made before quoting rates in the Bill of Quantities.
- 3 The quantities given in the Bill of Quantities are estimated and provisional, and are given to provide a common basis for bidding. The basis of payment will be the actual quantities of work ordered and carried out, as measured by the Contractor and Verified by the Engineer and valued at the accepted rates, where applicable and otherwise at such rates and prices as the Engineer may fix within the terms of the Contract.
- 4 The rates and prices tendered in the priced Bill of Quantities shall, except in so far as it is otherwise provided under the Contract include all Construction Plant, Labour, supervision, materials, transportation, erection, maintenance, insurance, profit, taxes and duties together with general risks, liabilities and obligations set out or implied in the Contract.
- 5 Rates shall be entered by the tenderers in figures and words, in terms of percentage Above/at Par/Below the priced Bill of Quantities.

## REVISED FINANCIAL BID

Renovation works of PTU's Mohali campus at C-102B, Phase VII, Mohali

### ABSTRACT OF COST

DESCRIPTION	AMOUNT
Total cost	Rs. 3,08,99,653.00

I/We offer the rate\*\_\_\_\_\_ % (\_\_\_\_\_ %age) above/at par/below (strikeout which is not applicable) on the rates printed in the Bill of Quantities.

TOTAL QUOTED COST Rs.	
-----------------------	--

\* - %Age rates to be quoted in figures and words.

Stamp and Signature of the Tenderer

### Bill of Quantities

Item No.	Description of Items	Qty.	Unit	Rate	Amount
<b>A</b>	<b>CIVIL WORKS</b>				
<b>1</b>	<b>EARTH WORK</b>				
1.1	Earth work in <b>excavation</b> in foundations, trenches etc. in all kinds of soil where pick jumper work is not involved and not exceeding 2.0 metres depth including dressing of bottom and sides of trenches, stacking the excavated soil clear from the edge of excavation and subsequent filling around masonry in 15 cm. layers with compaction including disposal of all surplus soil as directed within a lead of 30 metres.	<b>98.00</b>	<b>cum</b>	<b>74.23</b>	<b>7,274.54</b>
1.2	<b>Filling available excavated</b> earth (excluding rock) in trenches, plinth, sides of foundations etc. in layers not exceeding 20cm in depth, consolidating each deposited layer by ramming and watering, lead up to 50 m and lift upto 1.5 m.	<b>66.00</b>	<b>cum</b>	<b>101.50</b>	<b>6,699.00</b>
<b>2</b>	<b>CONCRETE WORK</b>				
2.1	<b>Cement Concrete 1:4:8</b> with stone ballast of size.				
2.1.1	40 mm gauge.	<b>314.00</b>	<b>cum</b>	<b>2402.95</b>	<b>7,54,526.30</b>
2.2	<b>Damp proof course</b> 7.5 cm thick of cement concrete 1: 2: 4 with two coats of bitumen 20/30 penetration at 1.65 kg per Sq.m. laid hot and sanded.	<b>15.00</b>	<b>sqm</b>	<b>356.62</b>	<b>5,349.30</b>
<b>3</b>	<b>REINFORCED CEMENT CONCRETE</b>				
	<b>FORM WORK</b>				
3.1	<b>Centering and shuttering</b> including strutting, propping etc. and removal of form for :				
3.1.1	Shuttering for faces of concrete <b>foundations and foundation beams.</b> (Vertical and battering)	<b>39.00</b>	<b>sqm</b>	<b>134.86</b>	<b>5,259.54</b>
3.1.3	Centring and shuttering for flat surface such as <b>Suspended floors, Roofs,</b> Landing, Chhajjas, Shelves etc.	<b>436.00</b>	<b>sqm</b>	<b>173.79</b>	<b>75,772.44</b>
3.1.4	Centring and shuttering for sides and soffits of <b>beams haunching, girders, bressumers, lintels.</b>	<b>418.00</b>	<b>sqm</b>	<b>160.77</b>	<b>67,201.86</b>
3.1.5	Centring and shuttering for <b>columns</b> (square or rectangular or polygonal in plan)	<b>146.00</b>	<b>sqm</b>	<b>206.16</b>	<b>30,099.36</b>

Item No.	Description of Items	Qty.	Unit	Rate	Amount
3.1.6	Centring and shuttering for <b>stair cases</b> with sloping soffits including risers and stringers.	12.00	sqm	193.76	2,325.12
3.2	<b>Cold twisted deformed</b> (ribbed/ tor steel) Bars Fe 500 grade as per IS 1786-1985 for R.C.C. works, where not included in the complete rate of R.C.C. Including bending, binding, and placing in position Complete.	251.00	Qtl.	5993.65	15,04,406.15
3.3	<b>Reinforced cement concrete M-25</b> with cement @425/kg per cum mixed but excluding steel centreing and shuttering in foundation and plinth	35.00	cum	4323.79	1,51,332.65
3.4	<b>Reinforced cement concrete M-25</b> with cement @425/kg per cum mixed but excluding steel centreing and shuttering in <b>superstructure</b>	159.00	cum	4697.43	7,46,891.37
<b>4</b>	<b>BRICK WORK</b>				
4.1	First class burnt <b>brick work</b> laid in cement sand mortar 1:6 in foundation and plinth.	43.00	cum	3257.05	1,40,053.15
4.2	First class burnt <b>brick work</b> laid in cement sand mortar 1:6 in first storey upto 4 metres <b>above plinth level</b> .	54.00	cum	3503.56	1,89,192.24
4.2b	Burnt <b>brick work</b> laid in cement sand mortar 1:6 in first storey upto 4 metres <b>above plinth level</b> .(Using <b>brick available at site</b> )	170.00	cum	1340.44	2,27,874.80
4.3	115 mm thick <b>brick wall</b> laid in cement mortar 1:4 without reinforcement in foundation and plinth.	58.00	sqm	361.85	20,987.30
4.4	115 mm thick brick wall laid in cement sand mortar 1:4 without reinforcement in <b>super structure</b> .	188.00	sqm	374.44	70,394.72

Item No.	Description of Items	Qty.	Unit	Rate	Amount
<b>5</b>	<b>WOOD AND P. V. C. WORK</b>				
5.1	<b>Supply &amp; Fixing of pressed steel frames (Chowkats) consisting of 18 gauge (1.25mm) thick steel sheet of the specified section</b> (standred design latest) including iron lugs (hold fasts) iron hinges, confirming to P.W.D. Specifications including bolts for fixing stops, lock-notch provision for receiving tower bolts, Hydraulic spring and finished with one priming coat of approved quality, fixed in position, including the cost of cement concrete 1:3:6 for filling in the frame and cement concrete 1:2:4 for lugs complete.				
	Doors and windows frame of size 113mm x 60mm with 35 mm wide single rebate weighing 3.43 kg/m	<b>248.00</b>	<b>metre</b>	<b>355.08</b>	<b>88,059.84</b>
5.2	Factory manufactured <b>flush door</b> fixed in position iron hinges, etc (excluding the cost of any fittings other than specified above but including labour for fixing the same in position (Code :II Revision IS -20191 Part -I) 1973				
5.2.1	Commercial with elm or gurjan facing on both\sides with laminated core and lipped edged:-	<b>100.00</b>	<b>sqm</b>	<b>2808.32</b>	<b>2,80,832.00</b>
5.2.2	35mm thick				
5.3	Providing and fixing <b>sliding door bolts</b> ISI marked anodised (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 :				
5.3.1	250x16 mm	<b>41.00</b>	<b>each</b>	<b>107.02</b>	<b>4,387.82</b>
5.4	Providing and fixing <b>aluminium handles</b> ISI marked anodised (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 :				
5.4.1	125 mm	<b>43.00</b>	<b>each</b>	<b>66.95</b>	<b>2,878.85</b>
5.5	Providing and fixing <b>aluminium hanging floor door stopper</b> ISI marked anodised (anodic coating not less than grade AC 10 as per IS : 1868) transparent or dyed to required colour and shade with necessary screws etc. complete.				
5.5.1	Single rubber stopper	<b>59.00</b>	<b>each</b>	<b>33.75</b>	<b>1,991.25</b>

Item No.	Description of Items	Qty.	Unit	Rate	Amount
5.6	Providing and fixing M.S double action spring hinges with necessary screws etc. complete.				
5.6.1	100mm	170.00	each	210.84	35,842.80
5.7	Providing and fixing hydraulic <b>door closer</b> I.S.I mark with necessary screws etc. Complete.				
5.7.1	I.S.I Designation No. III (size of door 851mm to 1000mm)	59.00	each	1084.19	63,967.21
5.8	Providing and fixing bright finished brass 100mm <b>mortise latch</b> and lock with 6 levers and a pair of lever handles with necessary screws etc. Complete (best make of approved quality)	41.00	each	1409.53	57,790.73
5.9	Cost of Aluminium fittings ISI marked complete for doors, windows, such as tower bolts, handles and screws etc. for these fittings (excluding sliding bolts).				
5.9.1	For shutter area upto 0.50 xqm	110.00	sqm	205.89	22,647.90
	<b>GYPSUM BOARD PARTITIONS</b>				
5.10	Providing and fixing <b>partition</b> upto ceiling height consisting of G.I. frame and required board including providing and fixing of frame work made of special section power pressed/ roll form G.I. sheet with zinc coating of 120 gms/sqm(both side inclusive), consisting of floor and ceiling channel 50mm wide having equal flanges of 32 mm and 0.50 mm thick, fixed to the floor and ceiling at the spacing of 610 mm centre to centre with dash fastener of 12.5 mm dia meter 50 mm length or suitable anchor fastener or metal screws with nylon plugs and the studs 48 mm wide having one flange of 34 mm and other flange 36 mm and 0.50 mm thick fixed vertically within flanges of floor and ceiling channel and placed at a spacing of 610mm centre to centre by 6 mm dia bolts and nuts,				

Item No.	Description of Items	Qty.	Unit	Rate	Amount
	including fixing of studs along both ends of partition fixed flush to wall with suitable anchor fastener or metal screws with nylon plugs at spacing of 450 mm centre to centre, and fixing of boards to both side of frame work by 25 mm long dry wall screws on studs, floor and ceiling channels at the spacing of 300 mm centre to centre. The boards are to be fixed to the frame work with joints staggered to avoid through cracks, M.S. fixing channel of 99 mm width (0.9 mm thick having two flanges of 9.5 mm each) to be provided at the horizontal joints of two boards, fixed to the studs using metal to metal flat head screws, including jointing and finishing to a flush finish with recommended jointing compound, jointing tape, angle beads at corner (25 mm x 25 mm x 0.5 mm), joint finisher and two coats of primer suitable for board as per manufacture's specification and direction of engineer in charge all complete.				
5.10.1	75mm overall thickness partition with 12.5 mm thick double skin tapered edged plain Gypsum board conforming to IS: 2095: part I	1089.00	sqm	1090.75	11,87,826.75
5.11	Providing and fixing <b>Extra layer of tapered edge 13mm thick Gypboard® Duraline board</b> on both sides of partition.	190.00	sqm	1007.85	1,91,491.50
5.12	Kail wood wrought, planed and fixed in position.	0.65	cum	81184.11	52,769.67



Item No.	Description of Items	Qty.	Unit	Rate	Amount
<b>6</b>	<b>STEEL WORK</b>				
6.1	<b>Structural Steel work</b> in angles, tees and flats riveted or welded including cutting fixing all gusset plates, bolts, nuts rivets, welding rod, etc. With hoisting and erecting in position.				
	For roof trusses, well curbs, plates and trussed girders, etc. Of any span for buildings and bridges up to 15m span.	<b>36.00</b>	<b>Qtl.</b>	<b>7499.35</b>	<b>2,69,976.60</b>
6.2	Supplying and fixing <b>rolling shutters</b> of approved make, made of 80mm x 1.25mm M.S. Laths, interlocked together through their entire length, and jointed together, at the end by end locks, mounted on specially designed pipe shaft, with brackets, side guides 27.5 cm. long wire spring grade No. 2 and arrangement for inside and outside locking, with push and pull operation complete, including top cover 0.80mm thick (payment is to be made for the exact size of opening; where rolling shutter is to be fixed).	<b>30.00</b>	<b>sqm</b>	<b>2522.87</b>	<b>75,686.10</b>
6.2.1	Providing & fixing <b>ball bearing</b> , for push and pull type rolling shutters, from 9.20 to 12 sqm. Area.	<b>30.00</b>	<b>sqm</b>	<b>1228.93</b>	<b>36,867.90</b>
6.3	Extra for providing mechanical device, chain and crank operation, for operating rolling shutters, exceeding 11.20 Sqm. In area, of the rolling shutter.	<b>30.00</b>	<b>sqm</b>	<b>518.22</b>	<b>15,546.60</b>
6.4	Wrought iron and mild steel ladders, framed grills, grating etc. with ends of bars, rivetted or welded or forged, framed window guards, barred iron doors, stair case, iron railing including cost of bolts and nuts or screws or welding rod, complete fixed in Position.	<b>4.00</b>	<b>Qtl.</b>	<b>7950.12</b>	<b>31,800.48</b>
6.5	Providing and fixing stair case railing made out of M.S. square bars 20mm x 20mm as vertical part 0.70 metre high fixed with M.S. base plate of 40mm x 40mm x 6mm and flat iron 40mm x 6mm as hand rail complete in all respect.	<b>60.00</b>	<b>metre</b>	<b>847.16</b>	<b>50,829.60</b>
6.6	Sal wood wrought, pannelled and fixed in position	<b>1.50</b>	<b>cum</b>	<b>96249.15</b>	<b>1,44,373.73</b>

Item No.	Description of Items	Qty.	Unit	Rate	Amount
6.7	Providing and fixing marine plywood to existing hardwood partitions with nails, adhesive etc				
	9mm marine ply	30.00	sqm	1885.00	56,550.00
6.8	Providing & Fixing 1.0mm thk approved colour laminate(greenlam,merino,euro,century or equivalant)on existing base with fevicol adhesive .The groove between joints shall be as per drg issued at site.	30.00	sqm	938.00	28,140.00
6.9	Providing and fixing <b>wooden partition</b> with 50mm X 50mm Kail Wood section with frame grid of 600mm X 600mm including cost of screws/nails/adhesive etc. complete in all respects. The wood shall be treated with anti-termite treatment.	20.00	sqm	2293.25	45,865.00
6.10	Providing and fixing Commercial plywood 18mm thick.	27.00	sqm	1166.19	31,487.13
<b>7</b>	<b>FLOORING</b>				
7.1	Providing and laying <b>vitrified floor tiles 600mm x 600mm</b> size premium quality with water absorption less than 0.08% and conforming to IS: 15622 of approved make in all colours and shades, laid on either 20mm thick cement mortar 1:4 (1 cement: 4 coarse sand) for new flooring or laid with cement based high polymer modified quick set tile adhesive of approved make( water based) conforming to IS: 15477 marked using 5 Kg. adhesive per sqm of tile area in average 3 mm thickness over existing floor, including grouting the joints with white cement and matching pigments etc.,complete	2154.00	SQMT	1175.69	25,32,436.26
7.2	Providing and fixing 1st quality <b>ceramic glazed wall tiles</b> conforming to IS : 15622 (thickness to be specified by the manufacturer ) of approved make in all colours, shades except burgundy, bottle green, black of size 300x 600mm as approved by Engineer-in-Charge, in skirting, risers of steps and dados over 12 mm thick bed of cement Mortar 1:3 (1 cement : 3 coarse sand) and jointing with grey cement slurry @ 3.3kg per sqm including pointing in white cement mixed with pigment of matching shade complete.	265.00	Sqm	874.28	2,31,684.20

Item No.	Description of Items	Qty.	Unit	Rate	Amount
7.3	<b>Anti-Skid floor tiles</b> 10mm thick in flooring skirting and dado in 12.5mm thick cement plaster 1:3 in base and jointed with cement white cement slurry in joints including corners angles and beading.	<b>61.00</b>	<b>Sqm</b>	<b>902.59</b>	<b>55,057.99</b>
7.4	Providing and fixing 18mm thick gang saw cut mirror polished premoulded and prepolished) machine cut for <b>kitchen platforms</b> , vanity counters, window sills , facias and similar locations of required size of approved shade, colour and texture laid over 20mm 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, moulding and polishing to edges to give high gloss finish etc. complete at all levels.				
7.4.1	Granite of any colour and shade				
7.4.2	Area of slab upto 0.50 sqm	<b>8.00</b>	<b>sqm</b>	<b>3724.70</b>	<b>29,797.60</b>
7.5	Extra for providing <b>Edge moulding / Nosing</b> to 16-18mm thick marble/Granite stone counters, vanities etc. over above including machine polishing to edge to give high gloss finish etc. complete as per design approved by EIC.	<b>30.00</b>	<b>rmt</b>	<b>251.45</b>	<b>7,543.50</b>
	Granite work				
7.6	<b>Boaroda green marble</b> flooring 15mm to 20mm thick over 12.5mm thick base of cement mortar 1:3 laid and jointed with white cement slurry with pigment to mortar the shade of marble including rubbing & polishing.	<b>21.00</b>	<b>sqm</b>	<b>2011.55</b>	<b>42,242.55</b>
7.7	Providing and laying <b>60mm</b> thick factory made cement concrete interlocking paver block of M-35 grade made by block making machine with strong vibratory compaction and approved size and design/shape laid in dark fast colour over and including 50mm compacted bed of coarse sand, filling the joints with fine sand etc, all complete as per direction of engineer-in-charge for traffic areas such pedestrain plaza, car parks, office driveways etc.,	<b>3591.00</b>	<b>sqm</b>	<b>710.39</b>	<b>25,51,010.49</b>

Item No.	Description of Items	Qty.	Unit	Rate	Amount
7.8	<b>Clearing Grass and Removal of Rubbish</b>				
	Clearing a grass and Removal of Rubbish upto a distance of 50 metres outside the periphery of the area as per technical clause 201 of MORT&H specifications	1.17	ha	10453.44	12,230.52
7.9	<b>Excavation for Roadway (By Mechanical Means)</b>				
7.9.1	Excavation for roadway in soil by manual ,means including carrying of cut earth to embankment site with all lead and lifts upto 50m as per technical clause 301 of MORT&H specifications.	270.00	cum	78.79	21,273.30
7.10	<b>Granular Sub-Base (Close Graded Material Grading-I)</b>				
7.10.1	Construction of granular sub-base by providing close graded material grading-I, spreading in uniform layers with motor grader on prepared surface, mixed with rotavator at OMC, and compacting with vibratory roller to achieve the desired density, complete as per technical clause 401 of MORT&H specifications	539.00	cum	674.30	3,63,447.70
7.11	<b>Wet Mix Macadam</b>				
	Providing laying spreading and compacting graded aggregate to wet mix macadam specification including premixing the material with water at OMC in mechanical mix plant, laying in uniform layers paver in sub-base /base course on well prepared surface and compacting with vibratory roller to achieve the desired density complete as per technical clause 406 of MORT&H specifications	539.00	cum	945.85	5,09,813.15
7.12	<b>Precast Cement Concrete Kerb</b>				
	Plain Cement Concrete M-20 Grade precast kerb 250mm high with bottom width 165mm and top width 115mm fixed in position on earth base including carriage to site of work complete as per of MORT&H specifications	1050.00	metre	504.38	5,29,599.00

Item No.	Description of Items	Qty.	Unit	Rate	Amount
<b>8</b>	<b>ROOFING</b>				
8.1	<b>Terracing</b> consisting of tiles 22.86 cm x 11.43 cmx 3.81 cm laid over 25mm mud plaster, 75 mm mud filling on another layer of 25 mm mud plaster including two coats of bitumen laid hot @1.65 Kg. per Sqm. on top of R.C.C slab including grouting with cement sand mortar 1:4 and top .surface to be left clean after wire brushing etc.	<b>237.00</b>	<b>sqm</b>	<b>424.61</b>	<b>1,00,632.57</b>
8.2	<b>Khurra</b> on roof as per item 13.43 with C.I spouts and fixing in position.	<b>10.00</b>	<b>each</b>	<b>90.47</b>	<b>904.70</b>
8.3	Cement concrete 1:2:4 <b>gola</b> 10 cm. x 10 cm. quadrant along junction of roof with parapet wall finished smooth, where specially specified.	<b>57.00</b>	<b>metre</b>	<b>41.14</b>	<b>2,344.98</b>
8.4	Providing and fixing <b>false ceiling</b> at all height including providing and fixing of frame work made of special sections, power pressed from M.S. sheets and galvanized with zinc coating of 120 gms/sqm (both side inclusive) as per IS : 277 and consisting of angle cleats of size 25 mm wide x 1.6 mm thick with flanges of 27 mm and 37mm, at 1200 mm centre to centre, one flange fixed to the ceiling with dash fastener 12.5 mm dia x 50mm long with 6mm dia bolts other flange of cleat fixed to the angle hangers of 25x10x0.50 mm of required length with nuts & bolts of required size and other end of angle hanger fixed with intermediate G.I. channels 45x15x0.9 mm running at the rate of 1200 mm centre to centre to which the ceiling section 0.5 mm thick bottom wedge of 80 mm with tapered flanges of 26 mm each having lips of 10.5 mm, at 450 mm centre to centre, shall be fixed in a direction perpendicular to G.I. intermediate channel with connecting clips made out of 2.64 mm dia x 230 mm long G.I. wire at every junction, including fixing perimeter channels 0.5 mm thick 27 mm high having flanges of 20 mm and 30 mm long, the perimeter of ceiling fixed to wall/partition with the help of rawl plugs at 450 mm centre, with 25mm long dry wall screws @ 230 mm interval, including fixing of gypsum board to ceiling				

Item No.	Description of Items	Qty.	Unit	Rate	Amount
	section and perimeter channel with the help of dry wall screws of size 3.5 x 25 mm at 230 mm c/c, including jointing and finishing to a flush finish of tapered and square edges of the board with recommended jointing compound , jointing tapes , finishing with jointing compound in 3 layers covering upto 150 mm or both sides of joint and two coats of primer suitable for board, all as per manufacturer's specification and also including the cost of making openings for light fittings, grills, diffusers, cutouts made with frame of perimeter channels suitably fixed, all complete as per drawings, specification and direction of the Engineer in Charge but excluding the cost of painting with :				
	12.5mm thick tapered edge gypsum fire resistant board conforming to IS:2095-Part I	1640.00	sqm	849.95	13,93,918.00
8.5	Providing and laying <b>ARMSTRONG Mineral Fibre Sound Absorbing 15mm OPTRA Tile with Silhouette Grid</b> of durable with back of the tile duly sanded and finished with coat of protective paint suitable for grids size 600mmx600mm suspension system shall be armstrong prelude XL15 exposed grid T-section Flange exposed shall be powder coated white colour, Main runner size shall be 24mmx32mm cross runner 24x27mm, Perimeter 19mmx19mm. All section out of 0.45m thick G.I. Sheet.	420.00	sqm	2836.30	11,91,246.00
8.6	Providing and laying <b>Armstrong Metal Ceilings GI-Lay in Microperforated</b> for grids size 600mmx600mm suspension system shall be armstrong suprafine 38 exposed grid T-section Flange exposed shall be powder coated white colour, Main runner size shall be 24mmx32mm cross runner 24x27mm, Perimeter 19mmx19mm. All section out of 0.45m thick G.I. Sheet.	45.00	No.	3282.85	1,47,728.25
8.7	Strengthening of Existing Truss / Purlin Sections ( Tripod Section consisting of 3-ISA 75X75X6 braced with 10 dia rod ) by providing additional 16 mm plain MS Bars in conjunction with existing 10 mm dia bars without dismantling the original truss section ( 100 Truss Sections : Each of Length 9 m )	10.00	Mton	70000.00	7,00,000.00

<b>Item No.</b>	<b>Description of Items</b>	<b>Qty.</b>	<b>Unit</b>	<b>Rate</b>	<b>Amount</b>
8.8	Cleaning of Existing Trussed Sections with Wire Brushing / Grinding ( i/c application of Rust remover if required ) to remove dust, oil/grease and any loose adhered contaminants from surface to expose the base metal and repainting the same followed by two coats of Red Oxide Primer with 2 coats of Synthetic Enamel over one coat of Rust Converter (RUSEATER-RC 500)	<b>38.00</b>	<b>Mton</b>	<b>8000.00</b>	<b>3,04,000.00</b>
8.9	Erection of Truss / Purlin Sections as per their original placement or as per the revised layout of purlin spacing provided by the consultant matching with the sheeting layout i/c fixing of new connection plates wherever required with necessary fixing anchor fastners	<b>38.00</b>	<b>Mton</b>	<b>7000.00</b>	<b>2,66,000.00</b>
8.10	Supply and fixing of Galvalume sheeting in Roof Trusses and North Light Trusses. The sheeting shall be 0.5 mm TCT Color Coated Galvalume with Base Metal yeild strength of 550 Mpa and coating of 150 gsm ( Approved Make : JSW & Tata BlueScope )	<b>2064.00</b>	<b>Sqm.</b>	<b>575.00</b>	<b>11,86,800.00</b>
8.11	Supply and fixing of Flashing for proper closure of roof & vertical sheeting. The material for flashing shall be 0.5 mm TCT Color Coated Galvalume with Base Metal yeild strength of 550 Mpa and coating of 150 gsm ( Approved Make : JSW & Tata BlueScope )	<b>400.00</b>	<b>Rmt</b>	<b>320.00</b>	<b>1,28,000.00</b>
8.12	Supply and fixing of Insulation under the Roof Sheeting consisting of 50 Th. Glasswool (24 Kg Density ) fixed over Pulynum Insulation Substrate supported over purlins by fixing 16 SWG GI Wire @ 300 - 400 mm c/c	<b>1800.00</b>	<b>Sqm.</b>	<b>424.00</b>	<b>7,63,200.00</b>
8.13	Removing / Dismantling Asbestos Roof Sheeting including Ridges, Hips, Eave Curves etc. and disposing the material	<b>1765.00</b>	<b>Sqm.</b>	<b>85.00</b>	<b>1,50,025.00</b>
8.14	Dismantling of North Light Glasses and Disposal the same.	<b>270.00</b>	<b>Sqm.</b>	<b>104.00</b>	<b>28,080.00</b>
8.15	Dismantling of Truss / Purlin Members for strengthening without damaging the alignment / straightness of the same	<b>100.00</b>	<b>No.</b>	<b>1500.00</b>	<b>1,50,000.00</b>
8.16	Structural steelwork, riveted, bolted or welded in built up sections, trusses, and framed work including cutting, hoisting , fixing in position and applying a priming coat of approved steel primer all complete	<b>2500.00</b>	<b>kg</b>	<b>73.65</b>	<b>1,84,125.00</b>

Item No.	Description of Items	Qty.	Unit	Rate	Amount
<b>9</b>	<b>FINISHING</b>				
9.1	12.5 mm thick cement plaster 1:4	911.00	sqm	96.72	88,111.92
9.2	20mm thick cement plaster 1:4 in two coat work.	1822.00	sqm	131.35	2,39,319.70
9.3	Providing and applying birla / J.K wall care putty of average thickness 1 mm, of approved brand and manufacturer, over the plastered wall surface to prepare the surface even and smooth complete.	1502.00	sqm	85.40	1,28,270.80
9.4	6mm thick cement plaster 1:3	337.00	sqm	70.71	23,829.27
9.5	<b>Preparation</b> of concrete or plastered surfaces for distemper including surface, applying filling with approved quality filler, consisting of plaster of paris and chalk mitti including finishing the surface to the required finish complete.	911.00	sqm	28.77	26,209.47
9.6	Distemper with Acrylic washable <b>oil bond distemper</b> (of approved manufacture) two coats over one priming coat to give an even shade	2035.00	sqm	40.94	83,312.90
9.7	Finishing walls with <b>Premium Acrylic smooth exterior</b> paint with sislicon additives of required shade with two coats applied @1.43 litre/10 sqm over and including base coat of water proofing cement paint applied @ 2.20 kg/10 sqm	724.00	sqm	74.93	54,249.32
9.8	Applying priming coat on steel work consisting of red lead mixed with linseed oil and turpentine in equal proportions or with genuine red lead.				
9.8.1	With special quality paint	80.00	sqm	14.96	1,196.80
9.9	Painting two coats with readymixed paint for metallic surfaces in all shades on old steel or iron work.				
9.9.1	With special quality paint	80.00	sqm	47.61	3,808.80
9.10	Providing and applying special / <b>texture paint</b> / <b>Granular paint</b> / stone base paint of approved shade & make as per manufacturers specification and architects instructions.(The basic Price of Finish as shown below)				
9.10.1	Texture Paint Basic rate Rs. 250 /- Per Sqm applied	100.00	Sqm	362.25	36,225.00
9.10.2	Texture Paint Basic rate Rs.450 /- Per Sqm applied	188.00	Sqm	649.75	1,22,153.00



Item No.	Description of Items	Qty.	Unit	Rate	Amount
<b>10</b>	<b>DISMANTLING WORK</b>				
10.1	Dismantling and Dispose of cement conglomerate floors (25mm to 50mm) thick including concrete base.	<b>1600.00</b>	<b>sqm</b>	<b>44.37</b>	<b>70,992.00</b>
10.2	Dismantling and Dispose of concrete or precast concrete.				
10.2.1	Cement concrete plain 1:4:8 or 1:5:10	<b>25.00</b>	<b>cum</b>	<b>277.77</b>	<b>6,944.25</b>
10.2.2	Reinforced Cement concrete	<b>10.00</b>	<b>cum</b>	<b>896.99</b>	<b>8,969.90</b>
10.3	Removing doors and windows together with the dismantling of walls				
10.3.1	Doors	<b>15.00</b>	<b>Each</b>	<b>48.23</b>	<b>723.45</b>
10.3.2	Windows	<b>50.00</b>	<b>Each</b>	<b>32.15</b>	<b>1,607.50</b>
10.4	Scraping and Dispose of				
10.4.1	Cement Plaster.	<b>160.00</b>	<b>sqm</b>	<b>14.66</b>	<b>2,345.60</b>
10.5	Dismantling of brickwork in cement sand mortar / lime mortar including T&P scaffolding wherever necessary, sorting the dismantled material, disposal of unserviceable material and stacking serviceable material with all lifts and lead of 100m (By mechanical means)	<b>338.00</b>	<b>cum</b>	<b>238.44</b>	<b>80,592.72</b>
<b>11</b>	<b>ALUMINIUM WORK</b>				
11.1	Providing and fixing anodised aluminium work for doors, windows, ventilators and partitions with extruded built up standard tubular sections/ appropriate z sections and other sections conforming to IS: 733 and IS : 1285 of Jindal, Hindalco, Mahavir or equivalent make approved by Engineer-in-charge fixed with rawl plugs and screws or with fixing clips, or with expansion hold fasteners including necessary filling up of gaps at junctions, at top, bottom and sides with required PVC/neoprene felt etc. Aluminium sections shall be smooth, rust free, straight, mitred and jointed mechanically wherever required including cleat angle, Aluminium snap beading for glazing / panelling, C.P.brass/ stainless steel screws, all complete as per architectural drawings and the directions of Engineer-In-Charge. (Glazing and panelling to be paid for separately).				
11.1.1	For fixed portion	<b>1864.00</b>	<b>kg</b>	<b>383.41</b>	<b>7,14,676.24</b>

Item No.	Description of Items	Qty.	Unit	Rate	Amount
11.1.2	For shutters of doors, windows & ventilators including providing and fixing hinges/pivots and labour for fixing of fittings wherever required including the cost of PVC/neoprene gasket required in groove of meeting Style.	530.00	kg	397.74	2,10,802.20
11.2	Providing and fixing <b>glazing</b> in aluminium door, window, ventilator shutters and partitions etc. with PVC/ neoprene gasket etc. complete as per the architectural drawings and the directions of engineer-in-charge. (Cost of aluminium snap beading shall be paid in basic item).				
11.2.1	With float glass panes of 5.5 mm thickness.	186.00	sqm	935.89	1,74,075.54
11.3	<b>MALE SIGN</b> Supply of DORMA, Male sign plate 3020-M for WC application with fixing screws size 125 x 125mm, rounded corners in SS 304 satin stainless steel finish. Marking in black	2.00	Each	1195.43	2,390.86
11.4	<b>FEMALE SIGN</b> Supply of DORMA, Female sign plate 3030-F for WC application with fixing screws size 125 x 125mm, rounded corners in SS 304 satin stainless steel finish. Marking in black	2.00	Each	1195.43	2,390.86
<b>12</b>	<b>WATER SUPPLY</b>				
12.1	<b>Excavation for pipe</b> lines for trenches and pits including trimming and dressing sides levelling of beds of trenchesto correct grade, cutting joint holes, refilling consolidation and watering of refill in 15cm layers and restoration of unmettled or unpaved surface to its original condition incuding the cost of necessary shoring, timbering, dewatering of rain water, diversion for traffic, night signals, providing and fixing caution boards, watching fencing, etc. And removal of surplus spill out side/inside the town involving lead upto one kilometre				
	Earth Work upto 1.5m Depth for				
	All classes of soil except rocky.	25.00	cum	177.10	4,427.50

Item No.	Description of Items	Qty.	Unit	Rate	Amount
12.2	Providing , stringing out, cutting, jointing and testing of C.I. Double flanged pipes with casted flanged as per IS:7181, Class-B and laying the same in trenches to correct alignment and gradients, jointed with nut bolts and rubber insertion fitted complete including all cartage.				
i	80mm dia	25.00	metre	2239.65	55,991.25
ii	100mm dia	35.00	metre	2825.16	98,880.60
iii	150mm dia	75.00	metre	4365.58	3,27,418.50
iv	300mm dia	10.00	metre	10764.99	1,07,649.90
12.3	Providing and fixing <b>G.I. pipes</b> complete with G.I.fittings and clamps,includingcutting,Jointing,Accessories(like,bend,tee,scocket,elbow etc.) and making good the walls etc. (internal work)				
i	15mm dia nominal bore	120.00	rm	189.45	22,734.00
ii	20 mm dia nominal bore	85.00	rm	233.66	19,861.10
iii	25 mm dia nominal bore	65.00	rm	316.66	20,582.90
12.4	Providing, fixing and jointing <b>Union Couplings</b> in G.I. Pipe lines.				
i	15mm i/d G.I. Union	7.00	each	90.36	632.52
ii	20mm i/d G.I. Union	5.00	each	151.83	759.15
iii	25mm i/d G.I. Union	5.00	each	190.45	952.25
12.5	Providing, fixing and jointing <b>gun-metal peet valves</b> (Heavy Pattern) with hand wheels, on G.I. Pipe lines laid in the ground or inside buildings including all carriages complete.				
i	20mm i/d Gun Metal peet valve				
	heavy pattern.	16.00	each	667.58	10,681.28
ii	25mm i/d Gun Metal peet valve				
	heavy pattern.	5.00	each	1021.93	5,109.65
iii	40mm i/d Gun Metal peet valve				
	heavy pattern.	6.00	each	1926.14	11,556.84
12.6	Making connection with the existing G.I. branch main up to 40mm size including cutting and threading pipe etc. complete, but including all carriages complete.	3.00	each	298.58	895.74

Item No.	Description of Items	Qty.	Unit	Rate	Amount
12.7	Bailing out water from the trenches for making new connections in fully charged pipe lines including cleaning trimming and dressing the trenches to correct alignment and grade as required by the Engineer-in-charge. Size of the main with which connection is to be made.				
	Upto 200mm i/d	4.00	each	1082.43	4,329.72
12.8	Painting G.I. Pipes and Specials with synthetic enamel Paint in all shades as per I.S.I. specification on existing or new work, two coats paints including cleaning rubbing surface, etc.				
i	15mm & 20mm i/d G.I. Pipe	110.00	metre	3.82	420.20
ii	25mm & 32mm i/d G.I. Pipe	80.00	metre	4.97	397.60
iii	40mm & 50mm i/d G.I. Pipe	60.00	metre	7.76	465.60
12.9	Cutting holes upto 23cm square thorough B.B. in cement walls or stone masonry wall in cement for pipes, and making goo/d including repointing, replastering and finishing according to existing finish where required.				
	Through wall 22.86 cm thick	20.00	each	109.61	2,192.20
<b>13</b>	<b>SEWERAGE AND DRAINAGE</b>				
13.1	Supplying, lowering and fixing salt <b>glazed stone ware pipes</b> and specials in trenches, using cement sand mortar 1:1 and best white Italian Tarred Hemp Yarn including finishing and trowelling of each joint at and angle of 45 degree with the longitudinal axis of the pipes, watering, keeping the joints covered and wetted till the same are cured, testing the sewer lines for leakage and making all leakage and defects good, complete.				
13.1.1	150mm i/d	180.00	metre	358.63	64,553.40
13.1.2	200mm i/d	132.00	metre	417.35	55,090.20
13.2	<b>Excavation of trenches</b> in street, lanes or in open area for storm sewer and man holes to full depth as shown in drawing including shoring, timbering and removal of surplus soil from the site of work for all works upto a lead of 1 Km.				
13.2.1	For depth not exceeding 3 meters below ground level	185.00	metre	234.54	43,389.90

Item No.	Description of Items	Qty.	Unit	Rate	Amount
13.3	Constructing brick masonry <b>man hole</b> in cement mortar 1:5 (1 cement : 5 coarse sand) R.C.C top slab with 1:2:4 mix (1 cement : 2 coarse sand : 4 graded stone aggregate 20mm nominal size), foundation concrete , 1:4: mix (1 cement : 4 coarse sand : 8 graded stone aggregate 40mm nominal size) inside plastering 12mm thick with cement mortar 1:3 (1 cement : 3 coarse sand) finished with floating coat of neat cement and making benching in cement concrete 1:2:4 mix (1 cement : 2 coarse sand : 4 graded stone aggregate 20mm nominal size) finished with floating coat of neat cement, orange color PVC steps including FRCC cover with frame (light duty) 450x610mm internal dimensions. Complete as per standard design				
13.3.1	90x150 cm and 120cm deep	7.00	Each	20059.13	1,40,413.91
13.4	Construction of Brick masonry <b>Inspection Chambers</b> size as given below upto 0.60 mts average depth in 1:5 cement sand mortar , lime concrete with 40% lime mortar 2:3 in foundation , cement concrete, 1:2: 4 benching 12.5mm thick cement plaster 1:2 with floating coat of 1mm thick neat cement, RCC 1:2:4 slabs 100mm thick cement concrete topping 50mm thick 455x455x610mm inside light duty C.I. Inspection chamber cover and frame (Weight as per ISI specifications) painted with 3 coats of black bitumastic paint conforming to ISI complete as per standard design.				
13.4.1	450mm x600mm inside	4.00	Each	8087.12	32,348.48
13.5	<b>Making Connection</b> with sewer line with existing manhole including breaking into and making good the walls., floors, with cement concrete 1:2:4 mix (1 cement : 2 coarse sand : 4 graded stone aggregate 20mm nominal size) cement plaster on both sides with cement mortar 1:3 (1 cement : 3 coarse sand) finished with floating coat of neat cement and making necessary channels for the drain etc. complete				
13.5.1	for pipes 760mm dia	4.00	one Connection	8360.68	33,442.72

Item No.	Description of Items	Qty.	Unit	Rate	Amount
<b>14</b>	<b>SANITARY INSTALLATIONS</b>				
14.1	Providing and fixing in position Chinaware <b>European type water closet</b> P trap or S trap (to the approval of the Engineer-in-charge) suite-Consisting of 10 ltr. PVC flushing cistern supported on angle iron bracket, short bend 32 mm dia including cost of solid white cover complete in all respect and to the entire satisfaction of engineer in charge.	<b>13.00</b>	<b>each</b>	<b>4948.16</b>	<b>64,326.08</b>
14.2	Extra for providing and fixing 10 litres capacity <b>Chinaware low level flushing cistern</b> with PVC internal fitting, instead of 10 litres capacity PVC flushing cistern.	<b>13.00</b>	<b>each</b>	<b>1061.30</b>	<b>13,796.90</b>
14.3	Extra for providing and fixing C.P. Brass long <b>flush bend</b> 32mm instead of PVC long bend.	<b>13.00</b>	<b>each</b>	<b>509.80</b>	<b>6,627.40</b>
14.4	Providing and fixing <b>jet spray</b> with 2'-6" long PVC pipe.				
	With C.P. Brass nut	<b>13.00</b>	<b>each</b>	<b>525.10</b>	<b>6,826.30</b>
14.5	Providing and fixing <b>plastic hygenic seat</b> with lid complete.				
	White plastic hygenic seat with lid complete	<b>13.00</b>	<b>each</b>	<b>912.87</b>	<b>11,867.31</b>
14.6	Providing & fixing in position best Indian make vitreous Chinaware white stall <b>Urinal</b> 1140mm high consisting of C.P waste 32mm dia, C.P brass spreader, C.P. Brass flexible tube connection 450mm long.	<b>6.00</b>	<b>Each</b>	<b>9424.03</b>	<b>56,544.18</b>
14.7	Providing and fixing <b>partitions</b> for different type of Unrinals				
	Vitreous white chinaware partition				
	Large partitions size 835mm x 355mm	<b>5.00</b>	<b>Each</b>	<b>3664.39</b>	<b>18,321.95</b>
14.8	Providing and fixing <b>wash basin</b> with C.I. brackets, 15 mm C.P. brass pillar taps, 32 mm C.P. brass waste of standard pattern, including painting of fittings and brackets, cutting and making good the walls wherever require :				
	White Vitreous China Wash basin size 630x450 mm with a single 15 mm C.P. brass pillar tap.	<b>15.00</b>	<b>Each</b>	<b>1903.25</b>	<b>28,548.75</b>
14.8	Providing & fixing in position best quality <b>stainless steel sinks</b> with complete fittings.				
	Size 600mm x 450mm x 200mm (Net size excluding flat egde)	<b>3.00</b>	<b>Each</b>	<b>8718.71</b>	<b>26,156.13</b>
14.9	Providing & fixing 40mm i/d G.I <b>waste pipe</b> embedded in walls 3.00mm thick upto floor level as required by the Engineer-in-charge including cost on union.	<b>20.00</b>	<b>Each</b>	<b>628.43</b>	<b>12,568.60</b>

Item No.	Description of Items	Qty.	Unit	Rate	Amount
14.10	Providing and fixing in position <b>paper holders</b> fixed in to wall with C.P. Brass screws complete in all respects including cutting and making good the walls etc.	13.00	Each	746.94	9,710.22
14.11	Providing and fixing in position best indian make <b>soap dish</b> fixed into wall with C.P. Brass screws and complete in all respects including cutting and making good the walls etc.				
	C.P. Brass soap dish large	10.00	Each	525.02	5,250.20
14.12	Providing and fixing in position best indian make bevelled edge 5mm thcik <b>mirror</b> mounted on 4mm thick cardboard sheet groud fixed in position by means of 4 nos. Chromium plated brass svcrews and washers over rubber washers and rawl plugs embedded in the walls or chromium plated brass clamps with C.P. Brass screws (as required by the Engineer-in-charge) complete including cutting and making good the walls etc.				
	Size 600mmX450mm	13.00	Each	951.14	12,364.82
14.13	Providing and fixing in position C.P. Brass flange under various fixtures complete in all respects (as required by the Engineer-in-charge)	24.00	Each	51.35	1,232.40
14.14	Providing and fixing in position C.P. Brass extension piece 15mm dia, 15mm long of 25mm long or 40mm long with various fixtures complete in all respects (as required by the Engineer-in-charge)	46.00	Each	121.21	5,575.66
14.15	Providing and fixing in position 15mm i/d bib cock of best quality (as required by the Engineer-in-charge)				
i	C.P. Brass Bib Cock push type.	16.00	Each	482.46	7,719.36
ii	C.P. brass Bib cock <b>long nose</b>	6.00	each	916.39	5,498.34
iii	C.P. brass <b>Bib cock</b>	12.00	each	733.75	8,805.00
14.16	Providing & Fixing in postion <b>stop cock / Angle valve</b> (as approved by the Engineer-incharge).				
i	C.P.brass 15mm stop cock <b>Male and female end</b>	25.00	each	693.73	17,343.25
ii	C.P.brass 15mm <b>Concealed</b> stop cock with flange.	5.00	each	983.66	4,918.30

Item No.	Description of Items	Qty.	Unit	Rate	Amount
14.17	Providing & Fixing in position <b>liquid soap container</b> of best quality (as required by the Engineer-in-charge).				
	C.P. brass liquid soap container (Heavy type)	<b>3.00</b>	<b>each</b>	<b>697.10</b>	<b>2,091.30</b>
14.18	Providing and fixing in position <b>H.C.I.</b> soil waste vent or antisiphonage <b>pipes</b> to I.S.I. specification of E.L.C manufacture or of any other reputed firm including cutting, jointing, wastage, but excluding cost of lead jointing.				
i	100mm i/d H.C.I. pipe lines laid complete	<b>75.00</b>	<b>metre</b>	<b>967.19</b>	<b>72,539.25</b>
ii	75mm i/d H.C.I. pipe lines laid complete	<b>50.00</b>	<b>metre</b>	<b>809.43</b>	<b>40,471.50</b>
14.19	Providing <b>lead caulked joints</b> to H.C.I. pipes and specials conforming to I.S.I. Specification of E.L.C. manufacture or any other reputed firm including cost of lead yarn, fuel and tools etc.				
i	100mm i/d (1.36 kg.)	<b>75.00</b>	<b>each</b>	<b>414.57</b>	<b>31,092.75</b>
ii	75mm i/d (1.13 kg.)	<b>50.00</b>	<b>each</b>	<b>347.28</b>	<b>17,364.00</b>
14.20	Providing & Fixing in position <b>M.S</b> or heavy flat iron <b>clamps</b> made out of M.S flat iron not less than 5 mm of the approved design for fixing C.I. soil waste, vent or antisiphonage pipes to walls complete in all respects including cutting and making good the walls and floors etc. and painting.				
i	M.S. Holder bats clamps for 100mm i/d H.C.I. pipes	<b>10.00</b>	<b>each</b>	<b>206.43</b>	<b>2,064.30</b>
ii	M.S. Holder bats clamps for 75mm i/d H.C.I. pipes	<b>10.00</b>	<b>each</b>	<b>182.62</b>	<b>1,826.20</b>
14.21	Providing and fixing H.C.I. <b>Floor traps</b> conforming to I.S.I. Specification of reputed firm of the self cleaning design with C.P. brass hinged grating with frame with or without vent arm and including cement concrete 1:2:4 under and around the floor trap where required upto floor level complete in all respects including cutting and making good the walls and floors,etc. minimum depth of water should be 150mm with a minimum seal 50mm.				
	With 75mm i/d outlet deep seal	<b>32.00</b>	<b>each</b>	<b>1138.51</b>	<b>36,432.32</b>



Item No.	Description of Items	Qty.	Unit	Rate	Amount
14.22	Providing and fixing in position <b>H.C.I special</b> for soil waste vent or anti syphonage pipes to I.S.I specifications of E.L.C manufacture or any other reputed firm including cutting and wastage etc. cutting holes in walls roofs or floors etc. and making good to its original condition but excluding cost of lead joining.				
	For 100mm i/d pipes				
i	100mm i/d H.C.I. Heal Rest Bend	15.00	each	544.14	8,162.10
ii	100mm i/d Single junction with door 100mm x 100mm x 100mmx 100mm	8.00	each	831.25	6,650.00
iii	100mm i/d Bend with door	4.00	each	556.05	2,224.20
iv	100mm i/d Cowls	2.00	each	377.53	755.06
v	100mm i/d Door piece	2.00	each	579.85	1,159.70
vi	100mm i/d Collars	15.00	each	286.78	4,301.70
vii	For 75mm i/d pipes				
viii	75mm i/d H.C.I. Heal Rest Bend	10.00	each	431.09	4,310.90
ix	75mm i/d Single junction with door 100mm x 100mm x 100mmx 100mm	5.00	each	591.75	2,958.75
x	75mm i/d Bend with door	2.00	each	444.47	888.94
xi	75mm i/d Cowls	1.00	each	303.15	303.15
xii	75mm i/d Collars	10.00	each	249.59	2,495.90
14.23	Cutting chase in brick walls in cement or in floor for embedding G.I. or C.I pipes lines and making good the same to its original condition.				
	Size 75 mm x 75 mm	20.00	metre	68.25	1,365.00
14.24	Painting H.C.I soil waste and vent pipes and fitting with black bitumastic ISI marked paint of approved manufacture two coats on new work.				
i	100mm i/d H.C.I. Pipe	55.00	metre	18.21	1,001.55
ii	75mm i/d H.C.I. Pipe	45.00	metre	13.23	595.35
14.25	Providing & fixing in position best Indian make <b>PVC flexible tube connection.</b>				
	PVC tube connection of size 15 mm x 300 mm with C.P. Brass nut	16.00	each	142.71	2,283.36
14.26	Providing and fixing in position automatic brass <b>ball valves</b> in tanks.				
	20mm i/d Brass ball valve with copper ball	4.00	each	734.54	2,938.16

Item No.	Description of Items	Qty.	Unit	Rate	Amount
14.27	Providing and fixing in position <b>gully traps</b> fixed in cement concrete 1:4:8 complete with Grating 150mm x 150mm, cover and frame clear opening 300mm x 300mm and out of side size 330mm x 330mm and chamber including cost of all bricks work in cement mortar 1:5 cement concrete 1:2:4 in coping around cover and frame etc. with three coats of black bitumastic superior paint of approved manufacture on all C.I. work as per standard design minimum depth of water should be 150 mm with a minimum seal 50mm.				
	100mm internal Diametre H.C.I. Gully trap with H.C.I. grating and cast iron cover weighing approximately 7.26 kg. and frame clear opening 300mm x 300mm and out of side size 330mm x 330mm	<b>11.00</b>	<b>each</b>	<b>1695.53</b>	<b>18,650.83</b>
14.28	Providing & Fixing in position <b>PVC water storage Tanks</b> triple make as approves by Enginner-in-charge including and carriage of storr to site of work complete with providing and fixing 15mm or 20mm internal diametere tank nipple .(Excluding cost of platform)	<b>4000.00</b>	<b>Litre</b>	<b>7.66</b>	<b>30,640.00</b>
<b>15</b>	<b>MISC WORKS</b>				
15.1	Providing & Installing Letters " <b>PTU SCHOOL TQM &amp; ENTREPRENEURSHIP</b> " in prescribed font up to 150mm high made out of SS finish casted in machine routed.The Extrusion of Letters shall be up to 10mm Thk.	<b>1.00</b>	<b>L.S.</b>	<b>35000.00</b>	<b>35,000.00</b>
15.2	Providing & Installing <b>LOGO</b> of " <b>PTU SCHOOL TQM &amp; ENTREPRENEURSHIP</b> " 350x350 mm height made out of SS finish casted in machine routed.The Extrusion of Letters shall be up to 10mm Thk.	<b>1.00</b>	<b>L.S.</b>	<b>15000.00</b>	<b>15,000.00</b>
15.3	Providing & Installing Pictogrames & Signages for wayfinding on romark sheet	<b>120.00</b>	<b>Sq inch.</b>	<b>21.00</b>	<b>2,520.00</b>
15.4	Providing & Fixing VERTICAL Blinds(Hunter dougles) of approved colour ,complete in all finishing. Including 44mm x25mm Headchannel, Spline shaft, Slat Travellers of high grade plastic , Tilt Control with braided nylon cord, Traversign cord 2.0mm dia with Fabric Slats 100mm wide woven/nonwovern/fiber glass fabric	<b>30.00</b>	<b>Sqm</b>	<b>1560.00</b>	<b>46,800.00</b>
15.5	Providing & Fixing 3M Etching LUMAR FILM including Plotter cutting.	<b>25.00</b>	<b>Sqm</b>	<b>2205.80</b>	<b>55,145.00</b>

Item No.	Description of Items	Qty.	Unit	Rate	Amount
15.6	Providing & Fixing 4mm THK Looking glass fix with SS studs & screws on 8mm ply panellled surface of . The looking glass shall be duly polished, grinded with smooth edges.	5.00	Sqm	968.40	4,842.00
<b>16</b>	<b>RAIN WATER HARVESTING</b>				
16.1	<b>Boring/drilling bore well</b> of required dia for casing/ strainer pipe, by suitable method prescribed in IS: 2800 (part I), including collecting samples from different strata, preparing and submitting strata chart/bore log, including hire & running charges of all equipments, tools, plants & machineries required for the job, all complete as per direction of Engineer –in-charge, beyond 90 metre & upto 150 metre depth below ground level.				
16.1.1	All types of soil				
16.1.2	300 mm dia.	125.00	metre	464.60	58,075.00
16.2	Supplying, assembling, lowering and fixing in vertical position in bore well, unplasticized PVC medium well casing (CM) pipe of required dia, conforming to IS: 12818, including required hire and labour charges, fittings & accessories etc. all complete, for all depths, as per direction of Engineer –in-charge.				
16.2.1	150 mm nominal size dia.	96.00	metre	586.65	56,318.40
16.3	Supplying, filling, spreading & leveling stone boulders of size range 5 cm to 20 cm, in recharge pit, in the required thickness, for all leads & lifts, all complete as per direction of Engineer-in-charge.	8.00	cum	494.75	3,958.00
16.4	Supplying, filling, spreading & leveling gravels of size range 5 mm to 10 mm, in the recharge pit, over the existing layer of boulders, in required thickness, for all leads & lifts, all complete as per direction of Engineer-in-charge.	5.00	cum	901.25	4,506.25
16.5	Supplying, filling, spreading & leveling coarse sand of size range 1.5 mm to 2 mm in recharge pit, in required thickness over gravel layer, for all leads & lifts, all complete as per direction of Engineer –in-charge.	4.00	cum	843.20	3,372.80
<b>17</b>	<b>REPURCHSE OF EXISTING MATERIAL</b>				
17.1	Credit for dismantled of existing Steel Windows and Rolling shutters	-1150.00	kg	35.00	-40,250.00

Item No.	Description of Items	Qty.	Unit	Rate	Amount
<b>B. ELECTRICAL WORKS</b>					
Item No.	DETAIL OF WORK	QTY.	UNIT	RATE	AMOUNT
<b>18.0</b>	<b>WIRING</b>				
<b>18.1</b>	<b>RECESSED CONDUIT PIPE WIRING SYSTEM WITH MODULAR SWITCHES</b>				
	Wiring in PVC insulated Copper conductor single core FRLS (ISI marked), 1100volts grade to be laid in heavy gauge, uPVC, fire retardent conduit pipe 20mm/25mm dia (2 mm thick) ISI marked, recessed in wall etc , complete with powder coated/anodized concealed metal boxes required for suitable number of modules for having electronic fan regulators, bell push, electronic buzzer 3 pin 6 Amp, 3 pin 16/20 Amp sockets and 6 Amp, 16/20 Amp Switches ( Screw Type Modular Accessories ) etc. and covered with Frame Plate etc & including the cost of required number of modular Switches / Sockets step type Electronic fan Regulator 100 Watts. PVC connector ( For Fan Box and Electronic Buzzer ) PVC connector (for fan box & electronics buzzer), Steel Hooks, Circular inspection box ( Recessed Type and Deep Type ) uPVC conduit pipe & copper wire and other petty material etc including the cost of cutting and filling up of chases.				
i	Wiring fan point with sheet metal fan box (shape hexagonal & sheet thickness not less than 1.60 mm) in PVC insulated copper conductor single core FRLS cable (ISI marked) overall 1.5 sq. mm, 1100volts grade with step type electronic fan regulator 100watts (two module).	72	Each	982.59	<b>70,746.48</b>
ii	<b>ONE LIGHT POINT</b> Wiring light point in PVC insulated copper conductor single core FRLS cable (ISI marked) overall 1.5 sq. mm, 1100volts grade.(ONE LIGHT POINT CONTROLLED BY ONE 6a SWITCH)	80	Each	508.92	<b>40,713.60</b>
iii	<b>TWO LIGHT POINT</b> Wiring light point in PVC insulated copper conductor single core FRLS cable (ISI marked) overall 1.5 sq. mm, 1100volts grade.(TWO LIGHT POINT CONTROLLED BY ONE 6A SWITCH)	42	Each	636.15	<b>26,718.30</b>

Item No.	Description of Items	Qty.	Unit	Rate	Amount
iv	<b>THREE LIGHT POINT</b> Wiring light point in PVC insulated copper conductor single core FRLS cable (ISI marked) overall 1.5 sq. mm, 1100volts grade.(THREE LIGHT POINT CONTROLLED BY ONE 6A SWITCH)	62	Each	795.19	<b>49,301.78</b>
v	<b>FOUR LIGHT POINT</b> Wiring light point in PVC insulated copper conductor single core FRLS cable (ISI marked) overall 1.5 sq. mm, 1100volts grade.(FOUR LIGHT POINT CONTROLLED BY ONE 6A SWITCH)	6	Each	994.00	<b>5,964.00</b>
vi	<b>CALL BELL</b> Wiring call-bell point in PVC insulated copper conductor single core FRLS cable (ISI marked) overall 1.5 sq. mm, 1100volts grade with bell push and electronic buzzer 230 volts AC (including the cost of bell push, electronic buzzer & powder coated concealed metal box for electronic buzzer).	2	Each	590.61	<b>1,181.22</b>
viii	Wiring 3 pin 6 Amp. wall socket (Shuttered) point in PVC insulated copper conductor single core FRLS cable (ISI marked) overall 1.5 sq. mm, 1100volts grade complete with bonding to existing earth with PVC insulated copper conductor single core FRLS cable (ISI marked) overall 1 sq. mm, 1100volts grade.	27	Each	501.66	<b>13,544.82</b>
viii	Wiring 3 Pin 6 Amp. Plug control comprising wall socket (shuttered) and switch including bonding to existing earth with PVC insulated copper conductor single core FRLS cable (ISI marked) overall 1 sq. mm, 1100volts grade complete.	21	Each	340.28	<b>7,145.88</b>
ix	Wiring 3 pin 16/20 amp. power plug control (shuttered) and switch.	44	Each	399.97	<b>17,598.68</b>
x	<b>UPS SOCKETS</b> Supply and fixing suitable module metal box on recess mounting including providing and fixing three nos 3 pin 5/6 A modular socket outlet with shutters and one 6A modular type switch, base plate modular cover plate connections etc. and all civil works complete as per technical specifications and as required. ( for Computers)	84	Each	640.00	<b>53,760.00</b>
<b>18.2</b>	Supply & erection of PVC pipe (fire retardant) for wiring purposes including bends, inspection boxes etc., where necessary including painting as per PWD General Specifications 2010:-				

Item No.	Description of Items	Qty.	Unit	Rate	Amount
	<b>PVC PIPES</b>				
i	Heavy gauge PVC conduit pipe 20 mm dia (ISI marked 2mm thick) (Flushed)	270	Mtr	33.90	<b>9,153.00</b>
ii	Heavy gauge PVC conduit pipe 25 mm dia (ISI marked 2mm thick) (Flushed)	360	Mtr	40.90	<b>14,724.00</b>
iii	Heavy gauge PVC conduit pipe 32 mm dia (ISI marked 2mm thick) (Flushed)	210	Mtr	59.54	<b>12,503.40</b>
iv	Heavy gauge PVC conduit pipe 40 mm dia (ISI marked 2mm thick) (Flushed)	200	Mtr	77.47	<b>15,494.00</b>
<b>18.3</b>	<b>COPPER WIRES</b> Supply and erection of PVC insulated single core FRLS copper conductor cable ISI marked left bare in pipe or casing of suitable size excluding the cost of supply and erection of pipe or casing.				
i	PVC insulated copper conductor single core FRLS cable (ISI marked) overall 1.0 sq.mm, 1100volts grade	1300	Mtr	11.41	<b>14,833.00</b>
ii	PVC insulated copper conductor single core FRLS cable (ISI marked) overall 2.5 sq.mm, 1100volts grade	3000	Mtr	21.61	<b>64,830.00</b>
iii	PVC insulated copper conductor single core FRLS cable (ISI marked) overall 4 sq.mm, 1100volts grade	3000	Mtr	29.97	<b>89,910.00</b>
iv	S/I/T/C of PVC insulated FRLS copper armoured conductor cable ISI marked laid through pipe/tray of size 4 x 6 sq mm (for lighting DB & 3 Phase AC)	400	Mtr	260.00	<b>1,04,000.00</b>
v	S/I/T/C of PVC insulated FRLS copper armoured conductor cable ISI marked laid through pipe/tray of size 4 x 10 sq mm (for lighting PDB & 3 Phase AC 7.5TR)	300	Mtr	455.00	<b>1,36,500.00</b>

Item No.	Description of Items	Qty.	Unit	Rate	Amount
<b>18.4</b>	<b>MCB/RCBO</b> Supply and erection of Miniature Circuit Breakers/ RCBO's/ RCCB's in the existing MCB distribution board as per PWD General Specifications 2010 including connections with suitable size of thimbles/lugs.				
	<b>GROUP-A: SIEMENS (Beta Guard/Miniguard), LEGRAND (Ekinox), SCHNEIDER (Neo Break), L &amp; T (Hager Vision)</b>				
i	<b>MCB</b> Miniature circuit breaker single pole 6 to 32amp. (Breaking capacity 10kA, Curve-C) suitable for 240/415 volts 50cycles (for LDB, PDB & UPS DB, 6A SP MCB -54NOS, 20A SP MCB -54NOS & 10A SP MCB -36NOS REF SLD)	194	Each	173.26	<b>33,612.44</b>
ii	<b>MCB</b> Miniature circuit breaker double pole 40 amp. (Breaking capacity 10kA, Curve-C) suitable for 240 volts 50cycles (UPS MAIN DB O/G)	5	Each	729.07	<b>3,645.35</b>
iii	<b>MCB</b> Miniature circuit breaker double pole 63amp. (Breaking capacity 10kA, Curve-C) suitable for 240/415 volts 50cycles (As UPS Main DB I/C)	1	Each	852.37	<b>852.37</b>
iv	<b>MCB</b> Miniature circuit breaker four pole 50 amp. (Breaking capacity 10kA, Curve-C) suitable for 240/415 volts 50cycles (As I/C of UPS)	1	Each	1624.33	<b>1,624.33</b>
v	<b>RCBO</b> S/I/T/C of RCBO (Earth Leakage, Overload and Short circuit Protection device) double pole 40Amp. Sensitivity 300mA (Breaking capacity 10kA and as per standard IEC 61009)suitable for 240volts 50cycles AC supply. (for UPS DB)	3	Each	2730.42	<b>8,191.26</b>
vi	<b>RCBO</b> S/I/T/C of RCBO (Earth Leakage, Overload and Short circuit Protection device) four pole 40Amp. Sensitivity 100mA (Breaking capacity 10kA and as per standard IEC 61008)suitable for 240/415volts 50cycles AC supply. (for LDB)	4	Each	2382.57	<b>9,530.28</b>
vii	<b>RCBO</b> S/I/T/C of RCBO (Earth Leakage, Overload and Short circuit Protection device) four pole 63Amp. Sensitivity 300mA (Breaking capacity 10kA and as per standard IEC 61008)suitable for 240/415volts 50cycles AC supply. (for PDB)	3	Each	2767.85	<b>8,303.55</b>

Item No.	Description of Items	Qty.	Unit	Rate	Amount
<b>18.5</b>	<b>MCCB</b> Supply & erection of MCCB (Panel mounting cubicle type) in the existing cubicle panel (confirm to IEC:60947-II) and relevant PWD specifications 2010 complete with GI bolts, nuts and connections on both sides of MCCB with suitable size of thimbles.				
	<b>MCCB</b> <b>Adjustable</b> Thermal and Magnetic Protection Make : L&T (DH), ABB (T-MAX), Schneider (NSX), Seimens (3VTI/3VL)				
i	100 Amp. 415 volts, breaking capacity 35kA, four pole adjustable thermal and magnetic protection MCCB unit.	1	ach	7950.32	<b>7,950.32</b>
<b>18.6</b>	<b>SHEET METAL DOUBLE DOOR DISTRIBUTION BOARDS FOR MCB/RCBO/RCCB's</b> Supply and erection of sheet metal double door distribution boards of suitable size and of required number of ways for mounting MCB/RCBO/RCCB in the existing MCB DB as per PWD General Specification 2010 including connections with suitable sizes of thimbles and bondings to existing earth etc.				
	<b>GROUP - A SIEMENS (Beta Guard/Miniguard), LEGRAND (Ekinox), SCHNEIDER (Neo Break), L &amp; T (Hager Vision)</b>				
i	Sheet metal double door S.P. & N distribution board (dust protected) provided with bus-bar, neutral link and din bar, suitable for incorporating MCB/RCBO/RCCB's 4 way each (for I/C of UPS)	1	Each	935.54	<b>935.54</b>
ii	Sheet metal double door S.P. & N. distribution board (dust protected) provided with bus bar, neutral link and din bar, suitable for incorporating MCB's/ RCBO/ RCCB's, 8 way each (AS MAIN DB OF UPS OUTPUT & UPS O/G DB for PH-II)	2	Each	1567.03	<b>3,134.06</b>
iii	Sheet metal double door S.P. & N. distribution board (dust protected) provided with bus bar, neutral link and din bar, suitable for incorporating MCB's/ RCBO/ RCCB's, 16way each (AS UPS DB for UPS DISTRIBUTION)	3	Each	1567.03	<b>4,701.09</b>



Item No.	Description of Items	Qty.	Unit	Rate	Amount
iv	Sheet metal double door T.P. & N (Vertical design) distribution board (dust protected) provided with bus-bar neutral link and din bar, suitable for incorporating FP MCCB's for incoming and Single Pole MCB's for outgoing 6 way each (for PDB/ LDB - 3PDB & 3 LDB)	7	Each	8660.00	<b>60,620.00</b>
v	Sheet metal double door T.P. & N (Vertical design) distribution board (dust protected) provided with bus-bar neutral link and din bar, suitable for incorporating FP MCCB's for incoming and Single Pole MCB's for outgoing 12 way (MCCB+36) each Incomer as 100A MCCB (for PDB in phase -ii)	1	Each	14230.00	<b>14,230.00</b>
vi	Sheet metal plug and socket distribution board Single pole and earth enclosoer with a 3pin and earth plug and socket to incorporate one Single pole MCB 20 Amps. (16 nos for A. C.)	27	Each	954.51	<b>25,771.77</b>
vii	Sheet metal plug and socket distribution board Triple pole and earth enclosoer with a 3pin and earth plug and socket to incorporate one Triple pole MCB 30 Amps. (FOR 3 PHASE AC)	10	Each	1954.59	<b>19,545.90</b>
<b>19.0</b>	<b>EARTHING OF METALLIC CASES ETC.</b>				
i	Earthing with G.I. earth pipe 4.5 mtr. Long, 40 mm dia including accessories and providing masonry enclosure with cover plate having locking arrangement and watering pipe etc. with charcoal/coke and salt as required. (for LA's)	2	Each	3757.35	<b>7,514.70</b>
ii	Earthing with G.I. earth plate 600 x 600 x 3 mm thick including accessories, providing masonry enclosure with cover plate having locking arrangement and watering pipe of 2.7 mtr long etc. with charcoal/coke and salt as required. (for TR Body - 2, GEN Body - 2, Panel - 2, G.O. Switch - 2)	8	Each	3399.93	<b>27,199.44</b>
iii	Earthing with Copper earth plate 600 x 600 x 3 mm thick including accessories, providing masonry enclosure with cover plate having locking arrangement and watering pipe of 2.7 mtr long etc. with charcoal/coke and salt as required. (for TR Neutral - 2, GEN Neutral - 2, UPS - 2, )	6	Each	9500.49	<b>57,002.94</b>

<b>Item No.</b>	<b>Description of Items</b>	<b>Qty.</b>	<b>Unit</b>	<b>Rate</b>	<b>Amount</b>
iv	Supplying and fixing 25 x 5 mm copper strip on surface or in recess for connection etc. As required	10	Metre	850.26	<b>8,502.60</b>
v	Supplying and fixing 25 x 5 mm G.I. strip on surface or in recess for connection etc. As required	60	Metre	133.20	<b>7,992.00</b>
vi	Providing and fixing 6 SWG dia G.I. wire on surface or in recess for loop earthing as required. (for 3 phase Ac's)	150	Metre	33.30	<b>4,995.00</b>
vii	Providing and fixing 4 mm dia Copper wire on surface or in recess for loop earthing as required. (for UPS)	20	Metre	97.13	<b>1,942.60</b>

Item No.	Description of Items	Qty.	Unit	Rate	Amount
<b>20.0</b>	<b>LOW VOLTAGE PANELS</b>				
	<b>MAIN LT PANEL</b>				
<b>A</b>	Supply, installation and commissioning at site of cubical type panel fabricated out of 14swg/16swg rust inhibited steel sheet complete with in coming bus bar. Panel being free standing type shall be totally enclosed dust and vermin proof enclosed construction with rubber gasket wall mounted panel shall be provided with ISMC mounted channels. The panel shall also have GI earth bus-bar, bus-bar chamber inter connection with solid bars/PVC insulated wires made by CPRI approved manufacturer as per requirement. Panel shall be painted two coats of powder coated paint (Grey shade) over the primer. Panel shall also be provided with name plate, designation of in-coming and out going circuits and shall have hinged lockable doors. Panel shall be installed on the floor with suitable grouting bolt of suitable size for the following fittings / instruments. (REFER THE QUANTITY WITH THE SLD)	1	Each	203600.00	<b>2,03,600.00</b>
	<b>INCOMING</b>				
i	MCCB 4 pole 400 amp. Bc 50Ka 1 No.				
<b>B</b>	<b>BUS - COUPLER</b>				
i	4 pole power contactor 200A AC-1 duty 2 No.				
ii	Mechanical interlock with MCX 33 L&T 1Nos				
<b>C</b>	<b>METERING :</b>				
i	Set of RYB phase indicating LED lamps 2 set.				
ii	Multifunction Meter NOVA L&T WM30KFC3CRS 2 Nos.				

Page 33

iii	Single Core 400/5A, CL-0.5, 15VA 3 Nos.				
iv	Single Core 160/5A, CL-0.5, 15VA 3 Nos.				
v	Unshrouded PB actuator Green (with NO+NC) & Red (with NO+NC) of size 22mm dia 2Nos				
<b>D</b>	<b>OUT GOINGS</b>				
i	MCCB 4 pole 160 amp. Bc 50Ka 1 No.				
ii	MCB 4 pole 63A. Bc 10Ka, Cureve-C, 14No.				
iii	MCB 4 pole 63A. Bc 10Ka, Cureve-C, 8No.				

Item No.	Description of Items	Qty.	Unit	Rate	Amount
<b>E</b>	<b>BUS-BAR</b>				
i	Aluminium busbar 500 amp, TPN with colour coded sleeves, including bus-bar insulators, hardware, internal wiring, terminals of bolting type of suitable size,				
	<b>NOTE:- Panel shall be fabricated as per SLD.</b>				

Item No.	Description of Items	Qty.	Unit	Rate	Amount
	<b>TRANSFORMER PANEL</b>	1	Each	3,68,400.00	<b>3,68,400.00</b>
<b>A</b>	<b>INCOMING</b>				
i	MCCB 4 pole 500 amp. Bc 50Ka 1 No.				
<b>B</b>	<b>METERING :</b>				
i	Set of RYB phase indicating LED lamps 1 set.				
ii	Multifunction Meter NOVA L&T WM30KFC3CRS 1 Nos.				
iii	3Ph 4 Wire KWH Meter Direct base mounting . 240Volts, 10-60A, CT Operated 02Nos				
iv	Single Core 500/5A, CL-0.5, 15VA 4 Nos.				
v	Single Core 400/5A, CL-0.5, 15VA 3 Nos.				
vi	Single Core 160/5A, CL-0.5, 15VA 3 Nos.				
vii	Unshrouded PB actuator Green (with NO+NC) & Red (with NO+NC) of size 22mm dia 2Nos				
<b>C</b>	<b>OUT GOINGS</b>				
i	MCCB 4 pole 400 amp. Bc 50Ka 1 No.				
	MCCB 4 pole 250 amp. Bc 50Ka 1 No.				
	MCCB 4 pole 160 amp. Bc 50Ka 1 No.				
ii	MCB 4 pole 63A. Bc 10Ka, Cureve-C, 3No.				
iii	SP MCB 6-20A Bc 10Ka, Cureve-C, 4No.				
<b>D</b>	<b>BUS-BAR</b>				
i	Aluminium busbar 500 amp, TPN with colour coded sleeves, including bus-bar insulators, hardware, internal wiring, terminals of bolting type of suitable size,				
<b>E</b>	<b>CAPACITOR BANK 140KVAR</b>				
i	8 steps Intelligent microprocessor based Automatic Power factor Correction relay having measurment sensitivity of 1 %.				
<b>F</b>	<b>OUTGOINGS :</b>				
	<b>Cubicals for Capacitor bank as per following details/ specification:</b>				
i	63A, 415V, 16 KA TP MCB - 4Nos.				
ii	40A, 415V, 16 KA TP MCB - 2Nos.				
iii	25A, 415V, 16 KA TP MCB - 2Nos.				
iv	25kVAR rating Capacitor Duty contactor - 4Nos.				
v	10kVAR rating Capacitor Duty contactor - 1Nos.				
vi	5kVAR rating Capacitor Duty contactor - 2Nos.				

Item No.	Description of Items	Qty.	Unit	Rate	Amount
vii	ON/ OFF delay timers for switching capacitor circuit.				
viii	"ON" and "OFF" LED indicating lamp & push buttons with NO+NC ON/OFF element and 4AHRC control fuse - for each capacitor bank.				
ix	Auto / Manual Selector Switch. 08 Nos				
x	25kVAR super heavy duty mix dielectric low loss Capacitor bank suitable for non linear loads upto 20% - 4 Nos.				
xi	15kVAR super heavy duty mix dielectric low loss Capacitor bank suitable for non linear loads upto 20% - 2 No.				
xii	5kVAR super heavy duty mix dielectric low loss Capacitor bank suitable for non linear loads upto 20% - 2 Nos.				
<b>21.0</b>	<b>LIGHT FIXTURES AND FANS</b>				
<b>A</b>	<b>Light Fixtures</b>				
i	S/E of Philips Model GREEN LED BBS 170 1xDLED - 5000 PSU WH indoor down lighter recess mounted luminaire complete with all accessories or equivalent Wipro make as approved by the Engineer in charge complete including erection of the same direct on ceiling as per satisfaction of Engineer in charge.	128	Each	2,130.00	<b>2,72,640.00</b>
ii	S/E of Philips Model GREEN SPOT RANGE BBS 311 1xDLED -5000 WH fully adjustable indoor down lighter recess mounted luminaire complete with all accessories or equivalent Wipro make as approved by the Engineer in charge complete including erection of the same direct on ceiling as per satisfaction of Engineer in charge.	31	Each	3,130.00	<b>97,030.00</b>
iii	S/E of Philips Model FBS 440 4 X TL5 -14W indoor decorative, recwss mounted luminaire complete with all accessories or equivalent Wipro make as approved by the Engineer in charge complete with TL-S lamp 4x14 watt including erection of the same direct on wall/ceiling as per satisfaction of Engineer in charge.	165	Each	4,300.00	<b>7,09,500.00</b>

Item No.	Description of Items	Qty.	Unit	Rate	Amount
iv	S/E of Philips Model ADRENOV TWG 207 HF 1 x TL5 28W indoor, surface mounted light luminaire, including all accessories or equivalent Wipro make as approved by the Engineer in charge complete including erection of the same direct on wall/ceiling as per satisfaction of Engineer in charge.	14	Each	740.00	10,360.00
v	S/E of Wipro Model DUOLITE 1 X 14W CFL indoor, surface mounted luminaire with acrylic diffuser including all accessories or equivalent Philips make as approved by the Engineer in charge complete with 1 x 14W CFL Lamp including erection of the same direct on wall/ceiling as per satisfaction of Engineer in charge.	11	Each	990.00	10,890.00
vii	S/E of WIPRO - Flexible LED Strip light - L506-015-120-WW-50 as per satisfaction of Engineer in charge.	6	Each	7,640.00	45,840.00
<b>B</b>	<b>S/E of AC ceiling fan double ball bearing complete with petty material, canopy for erection as per satisfaction of Engineer in charge (make Crompton high speed / orient PSPO, Ortem, Hitech or equivalent brand as approved by Engineer in charge, white in colour without fan regulator)</b>				
i	Ceiling fan 48" (1200 mm)	52	Each	1,970.00	1,02,440.00
ii	Supplying and fixing of stepped type electronic fan regulator on the existing modular plate switch box including connections but excluding modular plate etc. as required.	52	Each	357.42	18,585.84
iii	Supplying and fixing modular blanking plate on the existing modular plate and switch box excluding modular plate etc as required.	55	Each	24.42	1,343.10
<b>C</b>	<b>Supply and erection of Heavy Duty Exhaust Fan totally enclosed heavy duty motor with die cast aluminium rotor mounted on 2 ball bearings, IP 65 range and available with ISI mark, Make Crompton Greaves or equivalent as required by the site Engineer - In - Charge complete in all respect.</b>				
i	Exhaust Fan 250mm sweep (900 rpm)	8	Each	1,550.00	12,400.00
ii	Exhaust Fan 300mm sweep (900 rpm)	7	Each	3,080.00	21,560.00
<b>D</b>	<b>Supply and erection of aluminium louver shutter for exhaust fan</b>				
i	250 mm,	8	Each	400.00	3,200.00
ii	300 mm,	7	Each	500.00	3,500.00

Item No.	Description of Items	Qty.	Unit	Rate	Amount
<b>22.0</b>	<b>SUBHEAD 1 - HT SUB STATION</b>				
<b>22.1</b>	<b>SUB STATION EQUIPMENTS</b>				
i	Supply/installation /commissining of 11 KV, 9 Pin GO Switch with lifting handle,. 1" G I pipe, B-Class as lifting pipe, lifting handle with lockable arrangement, with following accessories etc complete in all respect.				
ii	S/I/T/C of 11 KV DO Fuse Set				
iii	<b>LA`s</b> Supply & erection of 11 KV lightening arrestor confirming to ISI specifications. The item includes supply and erection of clamps of required size with nuts and bolts and a seprate earth to br provided to the lightening arrestor complete as approved by the Engineer-in-charge.	3	Each	3192.39	<b>9,577.17</b>
iv	<b>PIN INSULATOR</b> Supply & erection of 11 KV pin insulator with G.I. pin confirming to ISI specifications. The item includes supply & erection of nuts & bolts, and other accessories whatsoever required at site for fixing it to the structure pole. The job is to be completed as approved by Engineer-in-charge.	9	Each	215.74	<b>1,941.66</b>
v	<b>DISC INSULATOR</b> Supply & erection of 11 KV pin insulator with G.I. disc confirming to ISI specifications. The item includes supply & erection of nuts & bolts, and other accessories whatsoever required at site for fixing it to the structure pole. The job is to be completed as approved by Engineer-in-charge.	3	Each	438.70	<b>1,316.10</b>
<b>B</b>	<b>PCC Poles</b> Supply and erection of pre stressed cement concrete pole of suitable length with a given planting dep0th confirming to IS1678-1978 below ground level in excavated pit of suitable dimension complete in all respect as per satisfaction of Engineer-in-charge.				
i	PCC pole overall length 11 metre , planting depth 1.83 metre, top dimensions 152.4mm x 203.2mm, bottom diamensions 152.4mm x 368.3mm, load capacity 363kg and weight 1146kg.	2	Each	6882.95	<b>13,765.90</b>



Item No.	Description of Items	Qty.	Unit	Rate	Amount
ii	Supply/ instalation /commissioning of Galvanised C - Channel of size 75 x 40 x 2100 mm (7 NOS) , duly galvanised, making 2 holes on each end of channel of 2mm dia forr fixing of clamps with the help of G.I.nuts & bolts of size 16 x 100 mm etc. as required complete in all respect.	LOT	LOT	16180.50	16180.50
iii	Supply & erection of stay set consisting of 19/20mm dia 1.8 metre long G.I. stay rd duly threaded upto 300mm at one end and shaped on the other end. MS plate size 300 x 300 x 6 mm with 20 mm dia hole drilled in the centre of the plate. G.I. stay wire size 7/10 swg, G.I. thimble for stat, binding, egg/strain insulators, MS elbow made out of 16 mm plain sheet and a piece of 50 x 50 x 6 mm size 200 mm long angle iron made to the shape as approved by the Engineer-in-charge. Stay set complete shall be fixed to the pole by providing suitable size full clamps made out 50 x 6 mm size MS flat with required number nuts & bolts16 mm dia. on one end and shall be embedded in theon other end. The stay plate shall be covered with cement concrete not less than 0.042cum. The job shall include excavation of pit and back filling and after pouring concrete with excavated soil etc. as approved by the Engineer-incharge.	2	Each	447.95	895.90
<b>22.2</b>	<b>TRANSFORMER</b>				
i	Supply, erection, testing and commissioning of 315KVA, 11KV/415Volts, 3 Phase, 4 Wire, 50 Hz, Dyn11, ONAN transformer , copper wound, oil cooled, for out door duty with off load tap change switch with lockable arrangement on HV for HV Variation by an off circuit Tapping Switch in the range of +5% to -5% in step of 2.5% per step, with cable termination Box on LT side and bushing on the HT side. The No load and full load losses should be as per ECBC - 2012 Norms, transformer shall be complete with first fill of oil, Silica gel breather, complete with all fittings and accessories, The detailed technical specifications shall be fitted on the transformer. As approved by the Engineer in charge and as required.	1	Nos	693870.00	6,93,870.00

Item No.	Description of Items	Qty.	Unit	Rate	Amount
<b>22.3</b>	<b>H.T. CABLE</b>				
i	Supply & laying of Circular Aluminium conductor, conductor screened with extruded semiconducting compound, XLPE insulated, insulation screened with extruded semiconducting combination in combination with copper tape (0.3KA for 1sec.) cores laid up, FRLS PVC inner sheathed, galvanised steel strip armoured and overall FRLS PVC sheathed cable confirming to IS:7098/II/85 working voltage 11KV(UE) grade to be laid 1 m below ground level including excavation, sand cushioning, covering with sand & bricks and back filling the trench etc., of the required size:-				
ii	Circular Aluminium conductor, conductor screened with extruded semiconducting compound, XLPE insulated, insulation screened with extruded semiconducting combination in combination with copper tape (0.3KA for 1sec.) cores laid up, FRLS PVC inner sheathed, galvanised steel strip armoured and overall FRLS PVC sheathed cable confirming to IS:7098/II/85 working voltage 11KV(UE) grade 95sq.mm (Three Core)	30	Metre	1199.16	<b>35,974.80</b>
<b>22.4</b>	<b>TERMINATION 3C X 150 sq. mm</b>				
	Supplying and making end termination with heat shrinkable jointing kit complete with all accessories including Lugs suitable for following size 3 core XLPE aluminium conductor cable of 11 KV grade as required.				
II	95 sq. mm (Outdoor Type)	2	Nos	3961.80	<b>7,923.60</b>
<b>22.5</b>	<b>11KV CT/PT METERING UNIT</b>				
<b>A</b>	Supply, erection, testing & commissioning of CT/PT metering unit approved by PSPCL the CT ratio 75/5A, burden 15VA, Class - 0.2S and PT shall be 11KV/110V with star/star connection with class 0.2 accuracy and Trivector Meter as per PSPCL norms with metering box duly approved by PSPCL. Make :- L&T, Saraf, Vishal	1	Set	122000.0	<b>1,22,000.00</b>
	<b>NOTE:- Panel shall be fabricated as per SLD &amp; check the quantity also</b>				

Item No.	Description of Items	Qty.	Unit	Rate	Amount
<b>23.0</b>	<b>LT CABLES</b>				
<b>A</b>	Supply & laying of aluminium conductor XLPE/ P.V.C. insulated PVC sheathed armoured and served cable to be laid loose in the existing trench/pipe/cable tray etc., as required as per PWD General Specifications 2010:-				
<b>i</b>	Aluminium conductor XLPE insulated armoured and served cable working voltage 1100 volts grade 35 sqmm (3 ½ Core). For sub-Stn to LT Panel Mother and child Hospital, OPD Block	45	Mtr	219.43	<b>9,874.35</b>
ii	Aluminium conductor XLPE insulated armoured and served cable working voltage 1100 volts grade 95 sqmm (3 ½ Core). For sub-Stn to LT Panel Mother and child Hospital, OPD Block	30	Mtr	460.62	<b>13,818.60</b>
iii	Aluminium conductor XLPE insulated armoured and served cable working voltage 1100 volts grade 240 sqmm (3 ½ Core). For Gynae. Block	130	Mtr	1069.18	<b>1,38,993.40</b>
<b>C</b>	<b>END TERMINATION OF LT CABLE</b> S/E of heavy duty brass single compression gland for cable end termination duly complete with checknuts etc. including making necessary connections.				
<b>i</b>	Gland for XLPE Aluminium 1100 volts grade 35 sqmm (3 ½ Core).	2	Each	84.61	<b>169.22</b>
ii	Gland for XLPE Aluminium 1100 volts grade 95 sqmm (3 ½ Core).	2	Each	133.41	<b>266.82</b>
iii	Gland for XLPE Aluminium 1100 volts grade 400 sqmm (3 ½ Core).	2	Each	244.66	<b>489.32</b>
<b>D</b>	<b>THIMBLE</b> S/E of heavy duty Copper Thimbles / lugs for cables end terminations duly crimped including making necessary				
i	Thimble for 6 sqmm conductor	24	Each	17.64	<b>423.36</b>
ii	Thimble for 10 sqmm conductor	36	Each	22.31	<b>803.16</b>
	<b>THIMBLE</b> S/E of heavy duty Aluminium Thimbles / lugs for cables end terminations duly crimped including making necessary				
iii	Thimble for 35 sqmm conductor	6	Each	17.09	<b>102.54</b>
iv	Thimble for 50 sqmm conductor	2	Each	22.84	<b>45.68</b>
v	Thimble for 95 sqmm conductor	6	Each	31.36	<b>188.16</b>
vi	Thimble for 185 sqmm conductor	2	Each	53.47	<b>106.94</b>
vii	Thimble for 400 sqmm conductor	6	Each	139.87	<b>839.22</b>

Item No.	Description of Items	Qty.	Unit	Rate	Amount
<b>24.0</b>	<b>DOUBLE WALLED CORRUGATED (DWC) HDPE PIPES :</b>				
<b>24.1</b>	Supply and erection of double walled corrugated (DWC) HDPE pipe to be laid 1mtr. below ground level including excavation (making necessary trench), placing the pipe in position and back filling with excavated soil etc. of the required size.				
ii	Double walled corrugated (DWC) HDPE pipe 180/152mm (outer/ inner dia.)	140	Metre	298.77	<b>41,827.80</b>
<b>24.2</b>	<b>CHAMBERS</b>				
i	Inside size 75 x 120 cm and 120 cm deep	4	Each	13513.65	<b>54,054.60</b>
<b>25.0</b>	<b>TELEPHONE SYSTEM &amp; LAN</b>				
<b>25.1</b>	Supplying, installation, testing and commissioning of following sizes of telephone distribution board/tag block in MS hinged type lockable box duly painted complete with KRONE type tag block etc. including termination of cable as required.				
i	60 pair Tag Block	1	Each	3590.00	<b>3,590.00</b>
<b>25.2</b>	Supplying and drawing of following pairs 0.5 mm dia annealed bare copper conductor Polythene insulated, core twisted into pairs telephone cable through existing conduit etc. complete as required				
i	2 pair	850	metre	9.02	<b>7,667.00</b>
ii	10 pair	50	metre	81.82	<b>4,091.00</b>
<b>25.3</b>	<b>WIRING TELEPHONE POINT</b> wiring TV sockets and Telephone socket points in powder coated/anodized concealed metal boxes recessed in wall required for suitable number of modules, for having TV sockets, Telephone sockets RJ 11 & RJ 45 (one module) etc. and covered with Frame Plate etc. & including the cost of required number of modular TV sockets, Telephone sockets RJ-11 & RJ-45 (one module) and other petty material etc. including the cost of cutting & filling the up the chase.				
i	Wiring Telephone socket point with RJ-11 (one Module)	52	Each	231.75	<b>12,051.00</b>
ii	Wiring Telephone socket point with RJ-45 (one Module)	90	Each	459.53	<b>41,357.70</b>

Item No.	Description of Items	Qty.	Unit	Rate	Amount
iii	<b>LAN WIRE</b> Supplying/laying of DIGILINK G600 CAT-6 wire consists of 4Pair copper solid, twisted pair duly shielded with tinned copper braiding as well as alumimium foil to prevent electro magnetic interface. Cable must meet and axceed category 6/class E standard requirements in ISO/IEC 11801, CENELEC EN50173 & TIA 568-B2-1, LAN wire should be ferrulled on both ends and to crimped with RJ-45 (without RJ-45). The wire to be pulled through existing pipe/raceway etc.	1500	Metre	35.00	<b>52,500.00</b>
<b>25.4</b>	<b>RACEWAY</b>				
	S/I/T/C of raceway fabericated out of 1.6mm sheet steel having size 150 x 38 x 1.6mm thickness. The sheet shall be treated for anty corrison & duly anamel baked painted. The race way should have dual track for LAN/Tele. Wire & UPS supply. The raceway is to be installed in the floor under the floor tiles and top of the access box shall be in level with the floor tile. The job includes floor cutting, fixing of raceway/cross over box/verticle acess box/access outlet and making good with the help of cement mortar. Complete in all respect as required.				
i	RACEWAY DUAL TRACK MAKE MK MODEL NO. UMDX 150/2/6MM, SIZE 150X38X1.6MM	80	Metre	985.00	<b>78,800.00</b>
ii	VERTICAL ACCESS UNITS MAKE MK MODEL NO. EVB 250/2	2	Each	2990.00	<b>5,980.00</b>
	JOINT SLEEVES MAKE MK MODEL NO. UMSX150	60	Each	120.00	<b>7,200.00</b>
	CROSS OVER JUNCTION BOX MAKE MK SUITABLE FOR FOR 150 X 38 X 1.6MM RACEWAY.	6	Each	4825.00	<b>28,950.00</b>

Item No.	Description of Items	Qty.	Unit	Rate	Amount
<b>26.0</b>	<b>DG SET 82.5KVA/MISC. WORK</b>				
i	Lifting, shifting and placing on the existing Gen plat- from The DG SET 82.5KVA Shall be picked from Phase - VIII, Industrial Area and shifted to PTU Campus near crematio ground Mohali			5000.00	<b>5,000.00</b>
ii	<b>DG SET FOUNDATION SIZE L6000XW3150XH250MM</b>				
	Excavation of earth upto a depth of 150mm in the size of 5500 x 2650mm. The foundation should be 100mm above the G/L. 125mm foundation should be filled with concrete 1:3:6 mix (1 cement : 3 coarse sand : 68 graded stone aggregate 40mm nominal size) and 125mm on top the above must be concreted with 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20mm nominal size). The top of the foundation should be in level.	LS		20000.00	<b>20,000.00</b>
iii(a)	<b>LIASONING WORK</b> The contractor shall liason with the Govt. Deptt. for getting the electrical connection released from the concerned authority.	LS			<b>15,000.00</b>
iii(b)	<b>LIASONING WORK</b> The contractor shall liason with the Govt. Deptt. for getting the environment pollution clearance and from the concerned authority.	LS			<b>10,000.00</b>
<b>A</b>	Removing, Packing, Shifting, Loading/Unloading, Installation, Testing & Commissioning of following equipments to be removed from the existing site and required to be fitted in new site.				
i	Removing (from existing site) and Re-installation (at new site) of PA System including amplifier, speaker ceiling/wall mounted type, mike and any other accessories related to the said job, including installing material, 2Pair twisted 2.5 sq mm copper annealed wire (conduit will be provided by the client) etc complete in all respect as required.	JOB		15000.00	<b>15,000.00</b>

Item No.	Description of Items	Qty.	Unit	Rate	Amount
ii	Removing (from existing site) and Re-installation (at new site) of Water Cooler & Water Purifier any other accessories related to the said job, including installing material like flexible pipe,G.I. Tee, Elbow, Reducer, Nipple etc complete in all respect as required.		Each	5000.00	<b>5,000.00</b>

Item No.	Description of Items	Qty.	Unit	Rate	Amount
<b>27.0</b>	<b>FIRE FIGHTING</b>				
<b>A</b>	<b>HAND APPLIANCES</b>				
i	Supply & Fixing ISI marked (IS:13849) Portable Fire Extinguisher, ABC type capacity 5 kg, finished externally with red enamel paint, complete in all respects including initial fill and wall suspension. <b>Capacity 5 kg</b>	5.00	Each	5200.00	<b>26,000.00</b>
ii	Supply & Fixing ISI marked (IS:2878) Portable fire Extinguisher, Carbon-dioxide type flat base including valve, discharge hose of not less than 10 mm dia. min. 600 mm long & complete in all respects including initial fill with CO2 gas conforming to IS:307-1966 filled to a filling ratio of not more than 0.667 and wall suspension bracket. <b>Capacity 4.5 Kg.</b>	5.00	Each	9850.00	<b>49,250.00</b>
iii	Supply and fixing <b>Exit signage</b> with 9W CFL lamp with text size shall be in capital letters 6" in height, directional arrow as required & painted in green colour, luminous paint on white background complete with all necessary hardwares required for mounting / hanging the fixtures.	5.00	Each	3500.00	<b>17,500.00</b>



Item No.	Description of Items	Qty.	Unit	Rate	Amount
28.0	<b>HVAC WORKS</b>				
28.1	Dismantling transporting to a distance of upto 5km servicing and reinstalling Window Airconditing unit upto 2T capacity	10	Each	1,240.00	12,400.00
28.2	Dismantling transporting to a distance of upto 5km servicing and reinstalling Hi wall unit including recharging of refrigerant (Ducting and piping to be paid separately)				
	Voltas / Hitachi/Samsung 2T	3	Each	3,600.00	10,800.00
	Voltas /Samsung 1.5T	4	Each	3,600.00	14,400.00
28.3	Dismantling transporting to a distance of upto 5km servicing and reinstalling Ceiling mounted cassette unit including recharging of refrigerant. (Ducting and piping to be paid separately)				
	<b>Carrier 4T</b>	2	Each	4,160.00	8,320.00
28.4	Dismantling transporting to a distance of upto 5km servicing and reinstalling ductable split airconditioning unit including recharging of refrigerant. (Ducting and piping to be paid separately)				
a	<b>Hitachi 7.5T</b>	2	Each	16,850.00	33,700.00
b	<b>Hitachi 5 T</b>	1	Each	12,360.00	12,360.00
28.5	Providing and installing new <b>3 star</b> rated unit of following type and capacity				
	<b>Hi wall split 1.0T capacity</b>	1	Each	26,500.00	26,500.00
	<b>Hi wall split 1.5T capacity</b>	4	Each	29,500.00	1,18,000.00
	<b>Hi wall split 2.0T capacity</b>	8	Each	44,500.00	3,56,000.00
28.6	Providing and installing new 1 star rated unit of following type and capacity				
	<b>Window 2.0 T capacity</b>	4	Each	28,850.00	1,15,400.00
28.7	Providing and fixing voltage stabalizers for above A.C. Units.	18	Each	2,500.00	45,000.00
28.8	Providing and installing ceiling mounted cassette unit of 4T capacity	1	Each	1,30,350.00	1,30,350.00
28.9	Copper piping & electrical wire for split airconditioning between indoor and outdoor units.				
a	For upto 2.0 Tr capacity	150	mtr	700.00	1,05,000.00
c	<b>For 4Tr Cassette</b>	65	mtr	1,000.00	65,000.00

Item No.	Description of Items	Qty.	Unit	Rate	Amount
	<b>DUCTED SPLITS</b>				
28.10	Air Cooled Ductable Split Units with motorated hermetically sealed Scroll Compressors 3 row/ 6 row DX coil having aluminium fins, synthetic filter, blower section with motor and drive air cooled condensor, initial charge of gas high low pressure cut outs thermostatic control, with equipment encased in a metallic cabinet having powder coated finish. Complete job with canvass connections, micro processor controls of normal capacity of Daikin, Hitachi, Blue Star, O'General make only. <b>8.5TR</b>	<b>1</b>	<b>Each</b>	<b>1,57,250.00</b>	<b>1,57,250.00</b>
28.11	Air Cooled Ductable Split Units with motorated hermetically sealed Scroll Compressors 3 row/ 6 row DX coil having aluminium fins, synthetic filter, blower section with motor and drive air cooled condensor, initial charge of gas high low pressure cut outs thermostatic control, with equipment encased in a metallic cabinet having powder coated finish. Complete job with canvass connections, micro processor controls of normal capacity of Daikin, Hitachi, Blue Star, O'General make only. <b>11.0TR</b>	<b>1</b>	<b>Each</b>	<b>1,90,500.00</b>	<b>1,90,500.00</b>
28.12	Refrigerant copper pipe & electrical cable between indoor & outdoor units suitable for above Ductable split	<b>30</b>	<b>rmt.</b>	<b>750.00</b>	<b>22,500.00</b>
28.13	Suitable Condensor frame structurally suitable for outdoor unit made of structural steel and painted with one coat of primer & two coats of synthetic enamel paint with V.I. pads	<b>26</b>	<b>Each</b>	<b>2,750.00</b>	<b>71,500.00</b>
28.14	Factory Fitted Ducts made of G.S Sheet of SAIL/TATA/ISPAT				
	Complete job as per approved drawing including suspension from RCC ceiling with MS hangers, MS angle, Steel rawl plugs, fasteners & painting of MS structure with primer				
	24 Gauge	<b>275</b>	<b>Sqm.</b>	<b>550.00</b>	<b>1,51,250.00</b>
	22Gauge	<b>15</b>	<b>Sqm.</b>	<b>600.00</b>	<b>9,000.00</b>

Item No.	Description of Items	Qty.	Unit	Rate	Amount
28.15	Thermal Insulation of duct (complete) with 9mm Nitrile Insulation (armacell/Aflex)	275	Sqm.	450.00	1,23,750.00
28.16	Acoustic Lining of Supply Air Duct for first 4mts. Length from fan outlet with 12mm thick fibre glass rigid board(CR-300 having a density of 48.0kg per cum covered with 0.5mm thick RP Tissue paper,Gl flymesh, nuts & bolts	50	sqm	475.00	23,750.00
28.17	Providing fixing, testing & commissioning of fresh air louver with propeller type fan make ALSHTOM KHAITAN/USHA(300mm dia 900 RPM) MS fresh air louver (20/24 gauge VCD) volume control damper for fresh air arrangement	5	Each	3,500.00	17,500.00
28.18	Aluminium powder coated grills and screwless appearance of CARYAIRE/PINEAIR/ make only with VCDs	11	sqmt	7,500.00	82,500.00
	<b>MISC ITEMS</b>				
28.20	Providing and fixing Polyethelene-Aluminium-Polyethelene (PE-AL-PE) Composite Pressure Pipes conforming to IS - 15450 U.V. stabilized with carbon black having thermal stability for hot & cold water supply, capable to withstand temperature up to 80o C including all special fittings of composite material (engineering plastic blend and brass inserts wherever required) e.g. elbows, tees, reducers, couplers & connectors etc of Brass. with clamps at 1.00 metre spacing. This includes the costs of cutting chases and including testing of joints complete as per direction of the engineer in charge.				
	<b>Concealed work</b> including cutting chases and making good the wall etc.				
	1620 (20 mm OD) pipe	255	rmt.	379.25	96,708.75
28.21	Minor Civil Works e.g. creating opening in walls / floor/false ceiling etc. and making good of all openings	1	job	2,500.00	2,500.00
<b>TOTAL (C/O to the abstract)</b>					<b>3,08,99,653.00</b>