

HSCC (India) Limited
for and on behalf of
SHYAM SHAH MEDICAL COLLEGE, REWA
TENDER

FOR

Redevelopment works including extension of Maternity Wing, Pediatric Department, Toilet Block, etc., landscaping, external development and other Renovation works at Shyam Shah Medical College, Rewa and associated Gandhi Memorial and Sanjay Gandhi Memorial Hospitals, Rewa (M.P.) including Civil, Plumbing, HVAC, Lift, internal electrification & OT Works

VOLUME – V

Bill of Quantities

June 2018

Consultant



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Tender No. HSCC/Rewa/SSMC/2018/10498

Project Name: Redevelopment at GMH Rewa- Construction of Maternity ward, Eye Ward, Geriatric Block, Pediatric Waiting, public toilet, renovation of existing blocks and external development works.

Item No	Ref. No.	Description Of Item	Total Qty	Unit	Rates as per DSR 2016	NS Item Rate	Amount DSR 2016	Amount NS Items
1.00	1A	2	3	4	5	6	7	8
1.00		Earth work						
1.01	2.6	Earth work in excavation by mechanical means (Hydraulic excavator)/manual means over areas (exceeding 30 cm in depth, 1.5 m in width as well as 10 sqm on plan) including getting out and disposal of excavated earth lead upto 500 m and lift upto 1.5 m, as directed by Engineer-in-charge.						
a)	2.6.1	All kinds of soil including building rubbish/debris etc.	1602.00	Cum	125.95		201771.90	
1.02	2.8	Earth work in excavation by mechanical means (Hydraulic excavator) /manual means in foundation trenches or drains (not exceeding 1.5 m in width or 10 sqm on plan), including dressing of sides and ramming of bottoms, lift upto 1.5 m, including getting out the excavated soil and disposal of surplus excavated soil as directed, within a lead of 500 m.						
a)	2.8.1	All kinds of soil.	1880.00	Cum	166.40		312832.00	
1.03	2.25	Filling available excavated earth (excluding rock) in trenches, plinth, sides of foundations etc. in layers not exceeding 20cm in depth, consolidating each deposited layer by ramming and watering, lead up to 500 m and all lifts.	3313.00	Cum	125.75		416609.75	
1.04	2.26	Extra for every additional lift of 1.5 m or part thereof in excavation /banking excavated or stacked materials.						
a)	2.26.1	All kinds of soil.	2201.00	Cum	51.75		113901.75	
1.05	2.27	Supplying and filling in plinth with Zone V sand under floors, including watering, ramming, consolidating and dressing complete.	187.00	Cum	917.75		171619.25	
1.06	2.2/H&L	Supplying and stacking of good earth at site including royalty and carriage up to 1 Km (earth measured in stacks will be reduced by 20% for payment).	333.00	Cum	332.55		110739.15	
		Total of sub-head					1327473.80	
2.00		CONCRETE WORK						

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1.00	1A	2	3	4	5	6	7	8
2.01	4.1	Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering - All work up to plinth level :						
a)	4.1.3	1:2:4 (1 cement : 2 coarse sand (zone-III) : 4 graded stone aggregate 20 mm nominal size).	4.00	Cum	5481.95		21927.80	
b)	4.1.8	1:4:8 (1 Cement : 4 coarse sand (zone-III) : 8 graded stone aggregate 40 mm nominal size)	106.00	Cum	4478.15		474683.90	
c)	4.1.10	1:5:10 (1 cement : 5 coarse sand (zone-III): 10 graded stone aggregate 40 mm nominal size).	285.00	Cum	4209.05		1199579.25	
2.02	4.1	Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering - All work up to plinth level :						
a)	Based on 4.1.11	1:5:10 (1 Cement : 5 fine sand : 10 broken brick bats 40 mm nominal size.	199.00	Cum	3105.76		618046.14	
2.03	4.2	Providing and laying cement concrete in retaining walls, return walls,walls (any thickness) including attached pilasters, columns, piers, abutments, pillars, posts, struts, buttresses, string or lacing courses,parapets, coping, bed blocks, anchor blocks, plain window sills, fillets,sunken floor etc., up to floor five level, excluding the cost of centering,shuttering and finishing :						
a)	4.2.3	1:2:4 (1 Cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size).	11.00	Cum	6547.70		72024.70	
2.04	4.10	Providing and laying damp-proof course 40mm thick with cement concrete 1:2:4 (1 cement : 2 coarse sand (zone-III): 4 graded stone aggregate 12.5mm nominal size).	206.00	Sqm	263.10		54198.60	
2.05	4.12	Extra for providing and mixing water proofing material in cement concrete work in doses by weight of cement as per manufacturer's specification	56.00	per 50 kg cement	47.95		2685.20	

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1.00	1A	2	3	4	5	6	7	8
2.06	4.13	Providing & applying a coat of residual petroleum bitumen of grade of VG-10 of approved quality using 1.7kg per square metre on damp proof course after cleaning the surface with brushes and finally with a piece of cloth lightly soaked in kerosene oil.	206.00	Sqm	91.90		18931.40	
Total of sub-head							2462076.99	
3.00		REINFORCED CEMENT CONCRETE						
3.01	5.33	Providing and laying in position machine batched and machine mixed design mix M-25 grade cement concrete for reinforced cement concrete work, using cement content as per approved design mix, including pumping of concrete to site of laying but excluding the cost of centering, shuttering, finishing and reinforcement, including admixtures in recommended proportions as per IS: 9103 to accelerate, retard setting of concrete, improve workability without impairing strength and durability as per direction of Engineer-in-charge						
		.(Note :- Cement content considered in this item is @ 330 kg/cum."Excess/ less cement used as per design mix is payable/recoverable separately).						
a)	5.33.1	All works upto plinth level.	678.00	Cum	6446.45		4370693.10	
b)	5.33.2	All works above plinth level upto floor V level.	661.00	Cum	7250.05		4792283.05	
3.02	5.9	Centering and shuttering including strutting, propping etc. and removal of form for all heights :						
a)	5.9.1	Foundations, footings, bases of columns, etc. for mass concrete	421.00	Sqm	193.95		81652.95	
b)	5.9.2	Walls (any thickness) including attached pilasters, buttresses,plinth and string courses etc.	1053.00	Sqm	378.60		398665.80	
c)	5.9.3	Suspended floors, roofs, landings, balconies and access platform	2033.00	Sqm	422.30		858535.90	
d)	5.9.4	Shelves (Cast in situ)	108.00	Sqm	422.30		45608.40	
e)	5.9.5	Lintels, beams, plinth beams, girders, bressumers and cantilevers	1927.00	Sqm	342.90		660768.30	
f)	5.9.6	Columns, Pillars, Piers, Abutments, Posts and Struts	1874.00	Sqm	467.85		876750.90	
g)	5.9.7	Stairs, (excluding landings) except spiral-staircases	43.00	Sqm	419.35		18032.05	
h)	5.9.15	Small lintels not exceeding 1.5 m clear span, moulding as in cornices, window sills, string courses, bands, copings, bed plates, anchor blocks and the like	92.00	Sqm	193.95		17843.40	

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1.00	1A	2	3	4	5	6	7	8
i)	5.9.19	Weather shade, Chajjas, corbels etc., including edges	91.00	Sqm	521.75		47479.25	
3.03	5.11	Extra for additional height in centering, shuttering where ever required with adequate bracing, propping etc., including cost of de-shuttering and decentering at all levels, over a height of 3.5 m, for every additional height of 1 metre or part thereof (Plan area to be measured).						
a)	5.11.1	Suspended floors, roofs, landing, beams and balconies (Plan area to be measured)	2183.00	Sqm	171.50		374384.50	
3.04	5.22	Steel reinforcement for R.C.C. work including straightening, cutting,bending, placing in position and binding all complete level.						
a)	5.22.6	Thermo-Mechanically Treated bars.	205230.00	kg	56.60		11616018.00	
3.05	5.35	Add for using extra cement in the items of design mix over and above the specified cement content therein.	268.00	Quintal	672.75		180297.00	
		Total of sub-head					24339012.60	
4.00	6.00	Walls and Partitions						
4.01	6.1	Brick work with common burnt clay F.P.S. (non modular) bricks of class designation 7.5 in foundation and plinth in:						
a)	6.1.2	Cement mortar 1:6 (1 cement : 6 coarse sand)	155.00	Cum	4751.65		736505.75	
4.02	6.34	Brick work with non modular fly ash bricks conforming to IS:12894, class designation 10 average compressive strength in super structure above plinth level up to floor V level in :						
a)	6.34.2	Cement mortar 1:6 (1 cement : 6 Coarse sand)	549.00	Cum	6167.20		3385792.80	
4.03	6.4	Brick work with common burnt clay F.P.S. (non modular) bricks of class designation 7.5 in superstructure above plinth level up to floor V level in all shapes and sizes in :						
a)	6.4.2	Cement mortar 1:6 (1 cement : 6 coarse sand)	11.00	Cum	5582.85		61411.35	
4.04	6.45	Half brick masonry with non modular fly ash bricks of class designation 10, conformingio IS :12894, in super structure above plinth and upto floor V level.						

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a)	6.45.2	Cement mortar 1 : 4 (1 cement : 4 coarse sand)	1345.00	Sqm	769.50		1034977.50	
4.05	6.44	Brick edging 7cm wide 11.4 cm deep to plinth protection with common burnt clay F.P.S. (non modular) bricks of class designation 7.5 including grouting with cement mortar 1:4 (1 cement : 4 fine sand).	22.00	metre	39.20		862.40	
Total of sub-head							5219549.80	
5.00	DOORS & WINDOWS							
5.01	21.1	Providing and fixing aluminium work for doors, windows, ventilators ,louvers and partitions with extruded built up standard tubular sections/ appropriate Z sections/channels for sliding window and other sections of approved make conforming to IS: 733 and IS: 1285, fixing with dash fasteners of required dia and size, including necessary filling up the gaps at junctions, i.e. at top, bottom and sides with required EPDM rubber/neoprene gasket etc. Aluminium sections shall be smooth, rust free, straight, mitred and jointed mechanically wherever required including cleat angle, Aluminium snap beading for glazing / paneling, C.P. brass / stainless steel screws, all complete as per architectural drawings and the directions of Engineer-in-charge. (Glazing and paneling to be paid for separately)						
a)	21.1.1	For fixed portion						
i)	21.1.1.3	Polyester powder coated aluminium (minimum thickness of polyester powder coating 50 micron)	9584.00	Kg	391.80		3755011.20	
b)	21.1.2	For shutters of doors, windows & ventilators and louvers including providing and fixing hinges/ pivots/sliding channel and making provision for fixing of fittings wherever required including the cost of EPDM rubber / neoprene gasket required (Fittings shall be paid for separately)						
i)	21.1.2.3	Polyester powder coated aluminium (minimum thickness of polyester powder coating 50 micron)	5532.00	Kg	452.40		2502676.80	

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1.00	1A	2	3	4	5	6	7	8
5.02		Providing and fixing 12 mm thick prelaminated particle board flat pressed three layer or graded wood particle board conforming to IS: 12823 Grade I Type II, in panelling fixed in aluminum doors, windows shutters and partition frames with C.P. brass / stainless steel screws etc. complete as per architectural drawings and directions of Engineer-in-charge.						
a)	21.2.2	Pre-laminated particle board with decorative lamination on both sides	77.00	sqm	866.60		66728.20	
5.03	21.3	Providing and fixing glazing in aluminium door, window, ventilator shutters and partitions etc. with EPDM rubber / neoprene gasket etc. complete as per the architectural drawings and the directions of Engineer-in-charge . (Cost of aluminium snap beading shall be paid in basic item):						
a)	21.3.2	With float glass panes of 5.50 mm thickness	1031.00	Sqm	1003.95		1035072.45	
5.04	21.17	Providing and fixing anodised aluminium grill (anodised transparent or dyed to required shade according to IS: 1868 with minimum anodiccoating of grade AC 15) of approved design/pattern, with approved standard section and fixed to the existing window frame with C.P.brass/ stainless steel screws @ 200 mm centre to centre, including cutting the grill to proper opening size for fixing and operation of handles and fixing approved anodised aluminium standard section around the opening, all complete as per requirement and direction of Engineer-in-charge. (Only weight of grill to be measured for payment).	518.00	kg	408.85		211784.30	
5.05	Based on DSR	Extra for polyester powder coating 50 micron on Aluminium Grill instead of anodising vide item no.5.06 above	518.00	kg	35.00		18130.00	
5.06	9.21	Providing and fixing ISI marked flush door shutters conforming to IS :2202 (Part I) non-decorative type, core of block board construction with frame of 1st class hard wood and well matched commercial 3 ply veneering with vertical grains or cross bands and face veneers on both faces of shutters:						
a)	9.21.2	30 mm thick including ISI marked Stainless Steel butt hinges with necessary screws	546.00	Sqm	1559.75		851623.50	

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1.00	1A	2	3	4	5	6	7	8
5.07	Based on DSR 9.23	Extra for providing lipping with 2nd class teak wood battens 6 mm depth on all edges of flush door shutters (over all area of door shutter to be measured).including polishing etc complete.	542.00	Sqm	88.00		47696.00	
5.08	9.24	Extra for providing vision panel not exceeding 0.1 sqm in all type of flush doors (cost of glass excluded) (overall area of door shutter to be measured):						
a)	9.24.1	Rectangular or square.	304.00	Sqm	162.60		49430.40	
5.09	9.12	Extra for providing frosted glass panes 4 to 6 mm thick instead of ordinary float glass panes of same thickness in doors, windows and clerestory window shutters. (Area of opening for glass panes excluding portion inside rebate shall be measured).	112.00	Sqm	74.35		8327.20	
5.10	9.26	Extra for cutting rebate in flush door shutters (Total area of the shutter to be measured).	171.00	Sqm	127.75		21845.25	
5.11	14.6	Providing and fixing glass panes, with wooden fillets wherever necessary:						
a)	14.6.1	Float glass panes of thickness 4 mm	13.00	Sqm	852.60		11083.80	
5.12	9.127	Providing & Fixing decorative high pressure laminated sheet of plain / wood grain in gloss / matt / suede finish with high density protective surface layer and reverse side of adhesive bonding quality conforming to IS : 2046 Type S, including cost of adhesive of approved quality.						
a)	9.127.2	1.0 mm thick.	1087.00	Sqm	518.00		563066.00	
5.13	9.84	Providing and fixing aluminium extruded section body tubular type universal hydraulic door closer (having brand logo with IS : 3564, embossed on the body, door weight upto 36 kg to 80 kg and door width from 701 mm to 1000 mm), with double speed adjustment with necessary accessories and screws etc. complete.	144.00	Each	388.40		55929.60	
5.14	9.96	Providing and fixing aluminium sliding door bolts, 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 :						

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1.00	1A	2	3	4	5	6	7	8
a)	9.96.2	250x16 mm	122.00	Each	189.20		23082.40	
5.15	9.97	Providing and fixing aluminium tower bolts, 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 :						
a)	9.97.2	250x10 mm	974.00	Each	88.10		85809.40	
b)	9.97.4	150x10 mm	568.00	Each	64.30		36522.40	
5.16	9.100	Providing and fixing aluminium handles, 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 :						
a)	9.100.1	125 mm	413.00	Each	51.10		21104.30	
b)	9.100.3	75 mm	460.00	Each	38.95		17917.00	
5.17	9.101	Providing and fixing aluminium hanging floor door stopper, 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.						
a)	9.101.2	Twin rubber stopper	172.00	Each	38.00		6536.00	
5.18	9.103	Providing and fixing bright finished brass 100 mm mortice latch and lock, ISI marked, with six levers and a pair of anodised (anodic coating not less than grade AC 10 as per IS : 1868) aluminium lever handles of approved quality with necessary screws etc. complete.	129.00	Each	622.15		80257.35	
5.19	21.11	Providing and fixing stainless steel (SS 304 grade) adjustable friction windows stays of approved quality with necessary stainless steel screws etc. to the side hung windows as per direction of Engineerin- charge complete.						
a)	21.11.2	255 X 19 mm	491.00	Each	269.65		132398.15	
5.20	21.15	Providing and fixing aluminium casement windows fastener of required length for aluminium windows with necessary screws etc. complete.						
a)	21.15.3	Polyester powder coated minimum thickness 50 micron aluminium	286.00	Each	54.35		15544.10	

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1.00	1A	2	3	4	5	6	7	8
5.21	21.4	Providing and fixing double action hydraulic floor spring of approved brand and manufacture conforming to IS : 6315, having brand logo embossed on the body / plate with double spring mechanism and door weight upto 125 kg, for doors, including cost of cutting floors, embedding in floors as required and making good the same matching to the existing floor finishing and cover plates with brass pivot and single piece M.S. sheet outer box with slide plate etc. complete as per the direction of Engineer-in-charge.						
a)	21.4.1	With stainless steel cover plate minimum 1.25 mm thickness	107.00	Each	2054.40		219820.80	
5.22	21.12	Providing and fixing aluminium tubular handle bar 32 mm outer dia,3.0 mm thick & 2100 mm long with SS screws etc .complete as per direction of Engineer-in-Charge.						
a)	21.12.3	Polyester powder coated minimum thickness 50 micron aluminium tubular handle bar	67.00	Each	520.70		34886.90	
5.23	21.16	Providing and fixing aluminium round shape handle of outer dia 100 mm with SS screws etc. complete as per direction of Engineer-incharge						
a)	21.16.3	Polyester powder coated minimum thickness 50 micron aluminium	169.00	Each	74.10		12522.90	
5.24	9.113	Providing and fixing bright finished 100 mm mortice lock with 6 levers without pair of handles of approved quality for aluminium door, with necessary screws etc complete as per direction of Engineer- in-charge.	63.00	Each	473.65		29839.95	
5.25	9.125	Providing and fixing PVC rigid foam sheet 1 mm thick on door shutters (bathroom and W.C. doors) using synthetic rubber based adhesive	92.00	Sqm	846.40		77868.80	
		Sensor Sliding Door						

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1.00	1A	2	3	4	5	6	7	8
5.26	NS	Providing and fixing automatic sliding door operator of approved brand and manufacture for a door of clear passage width ranging from 2500-3000 mm consisting of 6.25 mtr long operator with track profiles, glass clamping rails, floor guide, Radar eagle 6 sensors, 5 programme switch with knob, light barrier EM lock and cable for programme switch all complete of approved brand and quality, complete to the satisfaction of engineer in charge. nothing extra is payable if some civil work is required for fixing of the system.(Cost of door/ glass to be paid seperately)	1.00	Each		295074.86		295074.86
5.27	9.147f	Providing and fixing factory made uPVC white colour sliding glazed door comprising of uPVC multi-chambered frame with in-built roller track and sash extruded profiles duly reinforced with 1.60 ± 0.2 mm thick galvanized mild steel section made from roll forming process of required length (shape & size according to uPVC profile), appropriate dimension uPVC extruded glazing beads, uPVC extruded interlock and uPVC extruded Inline sash adaptor (if required), EPDM gasket, wool pile, zinc alloy (white powder coated) handle with key on one side of extreme panels along with zinc plated mild steel multi point locking having transmission gear with keeps, zinc alloy (white powder coated) crescent lock (if required), stainless steel (SS 304 grade) body with adjustable double nylon rollers (weight bearing capacity to be 120 kg), G.I fasteners 100 x 8 mm size for fixing frame to finished wall and necessary stainless steel screws etc. Profile of frame & sash shall be mitred cut and fusion welded at all corners, including drilling of holes for fixing hardware's and drainage of water etc. After fixing frame the gap between frame and adjacent finished wall shall be filled with weather proof silicon sealent over backer rod of required size and of approved quality, all complete as per approved drawing & direction of Engineer-in-Charge. (Single / double glass panes, wire mesh and silicon sealent shall be paid separately).						
		Note: For uPVC frame and sash extruded profiles minus 5% tolerance in dimension i.e. in depth & width of profile shall be acceptable.						
a)	9.147f.1	Two track two panels sliding door made of (big series) frame 67 x 50 mm & sash 46 x 82 mm both having wall thickness of 2.3 ± 0.2 mm and single glazing bead / double glazing bead of appropriate dimension. (Area of door above 2.00 sqm upto 5.00 sqm)	10.00	Sqm	5062.15		50621.50	

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		Total of sub-head					10043136.65	295074.86
6.00		STEEL WORK						
6.01	10.25	Steel work welded in built up sections/ framed work, including cutting, hoisting, fixing in position and applying a priming coat of approved steel primer using structural steel etc. as required.						
a)	10.25.2	In gratings, frames, guard bar, ladder, railings, brackets, gates, signage and similar works.	100.00	kg	85.95		8595.00	
6.02	10.26	Providing and fixing hand rail of approved size by welding etc. to steel ladder railing, balcony railing, staircase railing and similar works, including applying priming coat of approved steel primer.						
a)	10.26.1	M.S. tube	153.00	kg	92.00		14076.00	
6.03	9.48	Providing and fixing M.S. grills of required pattern in frames of windows etc. with M.S. flats, square or round bars etc. including priming coat with approved steel primer all complete.						
a)	9.48.1	Fixed to steel windows by welding.	28.00	kg	104.65		2930.20	
6.04	10.28	Providing and fixing stainless steel (Grade 304) railing/ window grill made of Hollow tubes, channels, plates etc., including welding, grinding, buffing, polishing and making curvature (wherever required) and fitting the same with necessary stainless steel nuts and bolts complete, i/c fixing the railing/ grill with necessary accessories & stainless steel dash fasteners , stainless steel bolts etc., of required size, on the top of the floor or the side of waist slab or window openings with suitable arrangement as per approval of Engineer-in-charge, (for payment purpose only weight of stainless steel members shall be considered excluding fixing accessories such as nuts, bolts,fasteners etc.).	2738.00	Kg	472.40		1293431.20	
6.05		Providing & fixing fly proof wire gauze to windows, clerestory windows & doors with M.S. Flat 15x3 mm /Aluminum bedding and nuts & bolts complete.						
a)	10.29.2	Stainless steel (grade 304) wire gauze of 0.5 mm dia wire and 1.4 mm aperture on both sides	53.00	Sqm	1041.55		55202.15	

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		Total of sub-head					1374234.55	
7.00		FLOORING						
7.01	11.3	Cement concrete flooring 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate) finished with a floating coat of neat cement, including cement slurry, but excluding the cost of nosing of steps etc. complete.						
a)	11.3.1	40mm thick with 20mm nominal size stone aggregate.	32.00	Sqm	362.60		11603.20	
7.02	11.6	Cement plaster skirting up to 30 cm height, with cement mortar 1:3 (1 cement : 3 coarse sand), finished with a floating coat of neat cement.						
a)	11.6.1	18 mm thick	3.00	Sqm	350.05		1050.15	
7.03	11.23	Marble stone flooring with 18 mm thick marble stone, as per sample of marble approved by Engineer-in-charge, over 20 mm (average) thick base of cement mortar 1:4 (1 cement : 4 coarse sand) laid and jointed with grey cement slurry, including rubbing and polishing complete with :						
a)	11.23.2	Raj Nagar plain	26.00	Sqm	1522.60		39587.60	
b)	11.23.5	Udaipur green/Jaiselmer marble	184.00	Sqm	1589.40		292449.60	
7.04		Providing and fixing machine cut, mirror / eggshell polished , Marble stone work for wall lining (vener work) including dado, skirting, risers of steps etc., in required design and pattern wherever required, stones of different finished surface texture, on 12 mm (average) thick cement mortar 1:3 (1 cement : 3 coarse sand) laid and jointed with white cement slurry @ 3.3 kg/sqm including pointing with white cement slurry admixed with pigment of matching shade, including rubbing, curing, polishing etc. all complete as per Architectural drawings, and as directed by the Engineer-in-Charge.						
a)	Based on DSR item 8.11	18 mm thick Flamed/polished granite stone slab Jet Black, Cherry Red, Elite Brown, Cat Eye or equivalent	960.00	Sqm	4696.00		4508160.00	

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Item No	Ref. No.	Description Of Item	Total Qty	Unit	Rates as per DSR 2016	NS Item Rate	Amount DSR 2016	Amount NS Items
1.00	1A	2	3	4	5	6	7	8
7.05	8.13	Providing and laying Polished / flamed finish Granite stone flooring in required design and patterns, in linear as well as curvilinear portions of the building, all complete as per the architectural drawings, with 18 mm thick stone slab over 20 mm (average) thick base of cement mortar 1:4 (1 cement : 4 coarse sand), laid and jointed with cement slurry and pointing with white cement slurry admixed with pigment of matching shade, including rubbing, curing and polishing etc. all complete as specified and as directed by the Engineer-in-Charge.						
a)	8.13.1	Granite stone slab jet Black, Cherry Red, Elite Brown, Cat Eye or equivalent.	2884.00	Sqm	2937.70		8472326.80	
7.06		Kota stone slab flooring over 20 mm (average) thick base laid over and jointed with grey cement slurry mixed with pigment to match the shade of the slab, including rubbing and polishing complete with base of cement mortar 1 : 4 (1 cement : 4 coarse sand) :						
a)	11.26.1	25 mm thick.	328.00	Sqm	1158.10		379856.80	
7.07	11.27	Kota stone slabs 20 mm thick in risers of steps, skirting, dado and pillars laid on 12 mm (average) thick cement mortar 1:3 (1 cement: 3 coarse sand) and jointed with grey cement slurry mixed with pigment to match the shade of the slabs, including rubbing and polishing complete.	13.00	Sqm	1238.20		16096.60	
7.08	Based on DSR ITEM 11.26	Kota stone flooring for repairing excluding floor including cutting & taking out of broken pieces & fixing new kota stone to match with existing floor over 20 mm 20 mm (average) thick base laid over and jointed with grey cement slurry mixed with pigment to match the shade of the slab, including rubbing and polishing complete with base of cement mortar 1 : 4 (1 cement : 4 coarse sand) :	98.00	Sqm	1267.45		124210.10	

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Item No	Ref. No.	Description Of Item	Total Qty	Unit	Rates as per DSR 2016	NS Item Rate	Amount DSR 2016	Amount NS Items
1.00	1A	2	3	4	5	6	7	8
7.09	11.36	Providing and fixing 1st quality ceramic glazed wall tiles conforming to IS: 15622 (thickness to be specified by the manufacturer), of approved make, in all colours, shades except burgundy, bottle green, black of any size 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.	941.00	Sqm	744.80		700856.80	
7.10	11.40	Providing and laying rectified Glazed Ceramic floor tiles of size 300x300 mm or more (thickness to be specified by the manufacturer), of 1st quality conforming to IS : 15622, of approved make, in all colours, shades, except White, Ivory, Grey, Fume Red Brown, laid on 20 mm thick Cement Mortar 1:4 (1 Cement : 4 Coarse sand), jointing with grey cement slurry @ 3.3kg/sqm including pointing the joints with white cement and matching pigments etc., complete.	122.00	Sqm	901.05		109928.10	
7.11		Providing and laying vitrified floor tiles in different sizes (thickness to be specified by the manufacturer) with water absorption less than 0.08% and conforming to IS: 15622, of approved make, in all colours and shades, laid on 20mm thick cement mortar 1:4 (1 cement : 4 coarse sand), jointing with grey cement slurry @ 3.3kg/sqm including grouting the joints with white cement and matching pigments etc., complete.						
a)	11.41.2	Size of Tile 600x600 mm	1247.00	Sqm	1119.40		1395891.80	
7.12		Providing and laying Vitrified tiles in different sizes (thickness to be specified by manufacturer), with water absorption less than 0.08 % and conforming to I.S. 15622, of approved make, in all colours & shade, in skirting, riser of steps, dado etc over 12 mm thick bed of cement mortar 1:3 (1 cement: 3 coarse sand), jointing with grey cement slurry @ 3.3kg/sqm including grouting the joint with white cement & matching pigments etc. complete.						
a)	11.46.2	Size of Tile 600x600 mm	9239.00	Sqm	1135.20		10488112.80	

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1.00	1A	2	3	4	5	6	7	8
7.13		Providing and fixing 18 mm thick gang saw cut, mirror polished, premoulded and prepolished, machine cut for kitchen platforms, vanity counters, window sills, facias and similar locations of required size, approved shade, colour and texture laid over 20 mm thick base cement mortar 1:4 (1 cement : 4 coarse sand), 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.						
a)		Granite of any colour and shade						
i)	8.2.2.1	Area of slab upto 0.50 sqm	46.00	Sqm	3351.95		154189.70	
ii)	8.2.2.2	Area of slab over 0.50 sqm.	343.00	Sqm	3113.30		1067861.90	
7.14	8.4	Extra for fixing marble /granite stone, over and above corresponding basic item, in facia and drops of width upto 150 mm with epoxy resin based adhesive, including cleaning etc. complete.	128.00	Metre	266.25		34080.00	
7.15	8.5	Extra for providing opening of required size & shape for wash basin/kitchen sink in kitchen platform, vanity counter and similar location in marble/ Granite/ stone work, including necessary holes for pillar taps etc. including moulding, rubbing and polishing of cut edges etc. complete.	70.00	Each	427.95		29956.50	
7.16	11.19	Chequered terrazo tiles 22 mm thick with graded marble chips of size up to 6 mm in floors, jointed with neat cement slurry mixed with pigment to match the shade of the tiles, including rubbing and polishing complete, on 20 mm thick bed of cement mortar 1:4 (1 cement :4 coarse sand) :						
a)	11.19.2	Medium shade pigment using 50% white cement, 50% ordinary cement	239.00	Sqm	957.50		228842.50	
7.17	NS	Providing & fixing 2 mm thick homogeneous jointless, scratch resistant, chemical resistant, anti fungal and anti bacterial class A clean room certified, Pthalate free PVC Vinyl flooring and skirting/ coving good for laboratories of approved quality including the cost of suitable adhesive of approved quality and manufacture.Cost of coving to be paid seperately)	32.00	Sqm		1810.85		57947.27
7.18	8.6	Mirror polishing on marble work/Granite work/stone work where ever required to give high gloss finish complete.	4223.00	Sqm	231.50		977624.50	

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1.00	1A	2	3	4	5	6	7	8
		Total of sub-head					29032685.45	57947.27
8.00		ROOFING						
8.01	26.27	Providing and fixing mineral fibre false ceiling tiles at all heights of size 595X595mm of approved texture, design and pattern. The tiles should have Humidity Resistance (RH) of 99%, Light Reflectance > 85%, Thermal Conductivity k = 0.052 - 0.057 w/m K, Fire Performance as per (BS 476 pt - 6 &7) in true horizontal level suspended on interlocking T-Grid of hot dipped all round galvanized iron section of 0.33 mm thick (galvanized @120 gsm) comprising of main T runners of 15x32 mm of length 3000 mm, cross T of size 15x32mm of length 1200 mm and secondary intermediate cross T of size 15x32 mm of length 600 mm to form grid module of size 600x600 mm suspended from ceiling using galvanized mild steel item (galvanised @80gsm) 50 mm long 8mm outer diameter M-6 dash fasteners, 6 mm diameter fully threaded hanger rod upto 1000mm length and L-shape level adjuster of size 85x25x2 mm, spaced at 1200 mm centre to centre along main 'T'. The system should rest on periphery walls /partitions with the help of GI perimeter wall angle of size24x24X3000 mm made of 0.40 mm thick sheet, to be fixed to the wall with help of plastic rawl plug at 450 mm centre to centre & 40 mm long dry wall S.S. screws. The exposed bottom portion of all T-sections used in false ceiling support system shall be pre-painted with polyester baked paint, for all heights. The work shall be carried out as per specifications, drawings and as per directions of the engineer-in-charge.						
a)	26.27.3	With 16 mm thick beveled tegular mineral fibre Antimicrobial false ceiling tile	2780.00	Sqm	1621.60		4508048.00	

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Item No	Ref. No.	Description Of Item	Total Qty	Unit	Rates as per DSR 2016	NS Item Rate	Amount DSR 2016	Amount NS Items
1.00	1A	2	3	4	5	6	7	8
8.02	12.45	Providing and fixing false ceiling 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 1 200 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 length with nuts & bolts of required size and other end of angle at the spacing of 1200 mm centre to centre, to which the ceiling section 0.5 mm thick bottom wedge of 80 mm with tapered flanges section 0.5 mm thick bottom wedge of 80 mm with tapered flanges 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 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 on 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 :						
a)	12.45.1	12.5 mm thick tapered edge gypsum plain board conforming to IS: 2095-Part I	928.00	Sqm	806.20		748153.60	

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1.00	1A	2	3	4	5	6	7	8
8.03	12.53	Providing and Fixing 15 mm thick densified tegular edged eco friendly light weight calcium silicate false ceiling tiles of approved texture of size 595 x 595 mm in true horizontal level, suspended on inter locking metal grid of hot dipped galvanised steel sections (galvanising @ 120 grams per sqm including both side) consisting of main 'T' runner suitably spaced at joints to get required length and of size 24x38 mm made from 0.33 mm thick (minimum) sheet, spaced 1200 mm centre to centre, and cross "T" of size 24x28 mm made out of 0.33 mm (Minimum) sheet, 1200 mm long spaced between main'T' at 600 mm centre to centre to form a grid of 1200x600 mm and secondary cross 'T' of length 600 mm and size 24 x28 mm made of 0.33 mm thick (Minimum) sheet to be inter locked at middle of the 1200x 600 mm panel to from grid of size 600x600 mm, resting on periphery walls /partitions on a Perimeter wall angle pre-coated steel of size(24x24X3000 mm made of 0.40 mm thick (minimum) sheet with the help of rawl plugs at 450 mm centre to centre with 25						
		mm long dry wall screws @ 230 mm interval and laying 15 mm thick densified edges calicum silicate ceiling tiles of approved texture in the grid, including, cutting/ making opening"for services like diffusers, grills, light fittings, fixtures, smoke detectors etc., wherever required. Main 'T' runners to be suspended from ceiling using G.I. slotted cleats of size 25x35x1.6 mm fixed to ceiling with 12.5 mm dia and 50 mm long dash fasteners, 4 mm G.I. adjustable rods with galvanised steel level clips of size 85 x 30 x 0.8 mm, spaced at 1200 mm centre to centre along main 'T', bottom exposed with 24 mm of all Tsections shall be pre-painted with polyster baked paint,for all heights, as per specifications, drawings and as directed byEngineer-in-Charge.						
a)		Note :- Only calcium silicate false ceiling area will be measured from wall to wall. No deduction shall be made for exposed frames/ opening (cut outs) having area less than 0.30 sqm.The calcium silicate ceiling tile shall have NRC value of 0.50 (Minimum), light reflection > 85%, non- combustible as per B.S. 476 part IV, 100% humidity resistance and also having thermal conductivity <0.043 w/mK.	101.00	Sqm	1497.90		151287.90	
8.04	22.5	Providing and laying water proofing treatment in sunken portion of WCs, bathroom etc., by applying cement slurry mixed with water proofing cement compound consisting of applying :						

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1.00	1A	2	3	4	5	6	7	8
	(a)	First layer of slurry of cement @ 0.488 kg/sqm mixed with water proofing cement compound @ 0.253 kg/ sqm. This layer will be allowed to air cure for 4 hours.						
	(b)	Second layer of slurry of cement @ 0.242 kg/sqm mixed with water proofing cement compound @ 0.126 kg/sqm. This layer will be allowed to air cure for 4 hours followed with water curing for 48 hours. The rate includes preparation of surface, treatment and sealing of all joints, corners, junctions of pipes and masonry with polymer mixed slurry.	737.00	Sqm	298.30		219847.10	
8.05	22.7	Providing and laying integral cement based water proofing treatment including preparation of surface as required for treatment of roofs, balconies, terraces etc consisting of following operations:						
		Applying a slurry coat of neat cement using 2.75 kg/sqm of cement admixed with water proofing compound conforming to IS. 2645 and approved by Engineer-in-charge over the RCC slab including adjoining walls upto 300 mm height including cleaning the surface before treatment.						
		Laying brick bats with mortar using broken bricks/brick bats 25 mm to 115 mm size with 50% of cement mortar 1:5 (1 cement : 5 coarse sand) admixed with water proofing compound conforming to IS : 2645 and approved by Engineer-in-charge over 20 mm thick layer of cement mortar of mix 1:5 (1 cement :5 coarse sand) admixed with water proofing compound conforming to IS : 2645 and approved by Engineer-in-charge to required slope and treating similarly the adjoining walls upto 300 mm height including rounding of junctions of walls and slabs.						
		After two days of proper curing applying a second coat of cement slurry using 2.75 kg/ sqm of cement admixed with water proofing compound conforming to IS : 2645 and approved by Engineerin-charge.						
		Finishing the surface with 20 mm thick jointless cement mortar of mix 1:4 (1 cement :4 coarse sand) admixed with water proofing compound conforming to IS : 2645 and approved by Engineerin- charge including laying glass fibre cloth of approved quality in top layer of plaster and finally finishing the surface with trowel with neat cement slurry and making pattern of 300x300 mm square 3 mm deep.						

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1.00	1A	2	3	4	5	6	7	8
		The whole terrace so finished shall be flooded with water for a minimum period of two weeks for curing and for final test. All above operations to be done in order and as directed and specified by the Engineer-in-Charge :						
a)	22.7.1	With average thickness of 120 mm and minimum thickness at khurra as 65 mm.	8606.00	Sqm	1034.65		8904197.90	
		Total of sub-head					14531534.50	
9.00		FINISHING						
9.01	13.1	12 mm cement plaster of mix :						
a)	13.1.2	1:6 (1 cement: 6 fine sand)	3100.00	Sqm	160.35		497085.00	
9.02	13.2	15 mm cement plaster on the rough side of single or half brick wall of mix:						
a)	13.2.1	1:4 (1 cement: 4 fine sand)	335.00	Sqm	200.25		67083.75	
b)	13.2.2	1:6 (1 cement : 6 fine sand)	3701.00	Sqm	185.20		685425.20	
9.03	13.3	20 mm cement plaster of mix :						
a)	13.3.1	1:4 (1 cement: 4 fine sand)	9982.00	Sqm	240.15		2397177.30	
9.04	13.16	6 mm cement plaster of mix :						
a)	13.16.1	1:3 (1 cement : 3 fine sand)	1522.00	Sqm	143.80		218863.60	
9.05	13.22	Extra for plastering exterior walls of height more than 10 m from ground level for every additional height of 3 m or part thereof.	124.00	Sqm	40.65		5040.60	
9.06	13.29	18 mm thick plain cement mortar band in cement mortar 1:4 (1 cement : 4 fine sand):						
a)	13.29.3	Raised Band	2903.00	cm per metre	5.25		15240.75	
9.07	14.1	Repairs to plaster of thickness 12 mm to 20 mm in patches of area 2.5 sq. meters and under, including cutting the patch in proper shape, raking out joints and preparing and plastering the surface of the walls complete, including disposal of rubbish to the dumping ground, all complete as per directions of Engineer-In-Charge.						

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1.00	1A	2	3	4	5	6	7	8
a)	14.1.1	With cement mortar 1:4 (1 cement : 4 fine sand)	500.00	sqm	274.8		137400.00	
9.08	13.26	Providing and applying plaster of paris putty of 2 mm thickness over plastered surface to prepare the surface even and smooth complete.	50285.00	Sqm	118.70		5968829.50	
9.09	13.37	White washing with lime to give an even shade :						
a)	13.37.1	New work (three or more coats)	50.00	Sqm	17.25		862.50	
9.10	13.80	Providing and applying white cement based putty of average thickness 1 mm, of approved brand and manufacturer, over the plastered wall surface to prepare the surface even and smooth complete.	16433.00	Sqm	87.35		1435422.55	
9.11	13.81	Distempering with 1st quality acrylic distemper, having VOC (Volatile Organic Compound) content less than 50 grams/ litre, of approved brand and manufacture, including applying additional coats wherever required, to achieve even shade and colour.						
a)	13.81.2	Two Coats	604.00	Sqm	49.65		29988.60	
9.12	13.47	Finishing walls with Premium Acrylic Smooth exterior paint with Silicone additives of required shade :						
a)	13.47.1	New work (Two or more coats applied @ 1.43 ltr/ 10 sqm over and including priming coat of exterior primer applied @ 2.20 kg/ 10 sqm)	329.00	Sqm	96.80		31847.20	
9.13	13.85	Applying priming coats with primer of approved brand and manufacture, having low VOC (Volatile Organic Compound) content.						
a)	13.85.2	With ready mixed red oxide zinc chromatic on steel / iron works having VOC content less than 250 grams/ litre	6.00	Sqm	32.55		195.30	
b)	13.85.3	With water thinnable cement primer on wall surface having VOC content less than 50 grams/litre	50369.00	Sqm	36.95		1861134.55	
9.14	13.45	Finishing walls with textured exterior paint of required shade:						
a)	13.45.1	New work (Two or more coats applied @ 3.28 ltr/10 sqm) over and including base coat of water proofing cement paint applied @ 2.20kg/1 0 sqm.	19075.00	Sqm	150.65		2873648.75	

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1.00	1A	2	3	4	5	6	7	8
9.15	13.83	Wall painting with premium acrylic emulsion paint of interior grade, having VOC (Volatile Organic Compound) content less than 50 grams/ litre of approved brand and manufacture, including applying additional coats wherever required to achieve even shade and colour.						
a)	13.83.2	Two Coats	50369.00	Sqm	71.00		3576199.00	
9.16	13.84	Painting with synthetic enamel paint, having VOC (Volatile Organic Compound) content less than 150 grams/ litre, of approved brand and manufacture, including applying additional coats wherever required to achieve even shade and colour.						
a)	13.84.2	Two Coats	8.00	Sqm	75.00		600.00	
9.17	Based on DSR	Providing and fixing 150 mm wide, 22 gauge and 18mm square chicken wiremesh at junctions of concrete and brick work and other locations at all heights placed symmetrically on the joint, including cutting to required size, fixing in position with cement and nails etc complete in all respects as per specifications/drawings and to the entire satisfaction of the Engineer in Charge.	225.00	Sqm	90.00		20250.00	
Total of sub-head							19822294.15	
10.00		MISCELLANEOUS						
10.01	25.1	Providing and supplying aluminium extruded tubular and other aluminium sections as per the architectural drawings and approved shop drawings , the aluminium quality as per grade 6063 T5 or T6 as per BS 1474,including super durable powder coating of 60-80 microns conforming to AAMA 2604 of required colour and shade as approved by the Engineer-in-Charge. (The item includes cost of material such as cleats, sleeves, screws etc. necessary for fabrication of extruded aluminium frame work. Nothing extra shall be paid on this account).	313.00	Kg	338.25		105872.25	
10.02	25.2	Designing, fabricating, testing, protection, installing and fixing in position semi (grid) unitized system of structural glazing (with open joints) for linear as well as curvilinear portions of the building for all heights and all levels, including:						

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1.00	1A	2	3	4	5	6	7	8
		Structural analysis & design and preparation of shop drawings for the specified design loads conforming to IS 875 part III (the system must passed the proof test at 1.5 times design wind pressure without any failure), including functional design of the aluminum sections for fixing glazing panels of various thicknesses, aluminium cleats, sleeves and splice plates etc. gaskets, screws, toggles, nuts, bolts, clamps etc., structural and weather silicone sealants, flashings, fire stop (barrier)-cum-smoke seals, microwave cured EPDM gaskets for water tightness, pressure equalisation & drainage and protection against fire hazard including:						
		Fabricating and supplying serrated M.S. hot dip galvanised /Aluminium alloy of 6005 T5 brackets of required sizes, sections and profiles etc. to accommodate 3 Dimensional movement for achieving perfect verticality and fixing structural glazing system rigidly to the RCC/ masonry/structural steel framework of building structure using stainless steel anchor fasteners/bolts, nylon seperator to prevent bimetallic contacts with nuts and washers etc. of stainless steel grade 316, of the required capacity and in required numbers.						
		Providing and filling, two part pump filled, structural silicone sealant and one part weather silicone sealant compatible with the structural silicone sealant of required bite size in a clean and controlled factory / work shop environment , including double sided spacer tape, setting blocks and backer rod, all of approved grade, brand and manufacture, as per the approved sealant design, within and all around the perimeter for holding glass.						
		Providing and fixing in position flashings of solid aluminium sheet 1 mm thick and of sizes, shapes and profiles, as required as per the site conditions, to seal the gap between the building structure and all its interfaces with curtain glazing to make it watertight.						

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1.00	1A	2	3	4	5	6	7	8
		<p>Making provision for drainage of moisture/ water that enters the curtain glazing system to make it watertight, by incorporating principles of pressure equalization, providing suitable gutter profiles at bottom (if required), making necessary holes of required sizes and of required numbers etc. complete. This item includes cost of all inputs of designing, labour for fabricating and installation of aluminium grid, installation of glazed units, T&P, scaffolding and other incidental charges including wastages etc., enabling temporary structures and services, cranes or cradles etc. as described above and as specified. The item includes the cost of getting all the structural and functional design including shop drawings checked by a structural designer, dully approved by Engineer-in-charge. The item also includes the cost of all mock ups at site, cost of all samples of the individual components for testing in an approved laboratory, field tests on the assembled working structural glazing as specified, cleaning and protection till the handing over of the building for occupation. In the end, the Contractor shall provide a water tight structural glazing having all the performance characteristics etc. all complete as required, as per the Architectural drawings, as per item description, as specified, as per the approved shop drawings and as directed by the Engineer- in-Charge.</p>						
		<p>Note:- 1. The cost of providing extruded aluminium frames,shadow boxes, extruded aluminium section capping for fixing in the grooves of the curtain glazing and vermin proof stainless steel wire mesh shall be paid for separately under relevant items under this sub- head. However, for the purpose of payment, only the actual area of structural glazing (including width of grooves) on the external face shall be measured in <u>sqm. up to two decimal places.</u></p>						
		<p>Note:- 2. The following performance test are to be conducted on structural glazing system if area of structural glazing exceeds 2500 Sqm from the certified laboratories accredited by NABL(National Accreditation Board for Testing and Calibration Laboratories), Department of Science & Technologies, India. Cost of testing is payable separately. The NIT approving authority will decide the necessity of testing on the basis of cost of the work, cost of the test and importance of the work. Performance Testing of Structural glazing system Tests to be conducted in the NBL Certified laboratories</p>						

Project Name: Redevelopment at GMH Rewa- Construction of Maternity ward, Eye Ward, Geriatric Block, Pediatric Waiting, public toilet, renovation of existing blocks and external development works.

Item No	Ref. No.	Description Of Item	Total Qty	Unit	Rates as per DSR 2016	NS Item Rate	Amount DSR 2016	Amount NS Items
1.00	1A	2	3	4	5	6	7	8
		1. Performance Laboratory Test for Air Leakage Test (-50pa to -300pa) & (+50pa to +300pa) as per ASTM E-283-04 testing method for a range of testing limit 1 to 200 mVhr"						
		2. Static Water Penetration Test. (50pa to 1500pa) as per ASTME-331-09 testing method for a range up to 2000 ml."						
		3. Dynamic Water Penetration (50pa to 1500pa) as per AAMA 501.01-05 testing method for a range upto 2000 ml"						
		4. Structural Performance Deflection and deformation by static air pressure test (1.5 times desing wind pressure without any failure) as per ASTME-330-10 testing method for a range upto 50 mm"						
		5. Seismic Movement Test (upto 30 mm) as per AAMA 501.4-09 testing method for Qualitative test" Tests to be conducted on site						
		6. Onsite Test for Water Leakage for a pressure range 50 kpa to 240 kpa (35psi) upto 2000ml"	42.00	Sqm	2409.90		101215.80	
10.03	25.3	Providing, assembling and supplying vision glass panels (IGUs) comprising of hermetically-sealed 6-12- 6 mm insulated glass (double glazed) vision panel units of size and shape as required and specified,comprising of an outer heat strengthened float glass 6mm thick, of approved colour and shade with reflective soft coating on surface # 2 of approved colour and shade, an inner Heat strengthned clear float glass 6mm thick, spacer tube 12mm wide, dessicants, including primary seal and secondary seal (structural silicone sealant) etc. all complete for the required performances, as per the Architectural drawings, as per the approved shop drawings, as specified and as directed by the Engineer-in-Charge. The IGUs shall be assembled in the factory/ workshop of the glass processor. "(Payment for fixing of IGU Panels in the curtain glazing is included in cost of item No.26.2)"For payment, only the actual area of glass on face # 1 of the glass panels (excluding the areas of the grooves and weather silicone sealant) provided and fixed in position, shall be measured in sqm."						

Project Name: Redevelopment at GMH Rewa- Construction of Maternity ward, Eye Ward, Geriatric Block, Pediatric Waiting, public toilet, renovation of existing blocks and external development works.

Item No	Ref. No.	Description Of Item	Total Qty	Unit	Rates as per DSR 2016	NS Item Rate	Amount DSR 2016	Amount NS Items
1.00	1A	2	3	4	5	6	7	8
		Coloured tinted float glass 6mm thick substrate with reflective soft coating on face # 2, + 12mm Airgap + 6mm Heat Strengthened clear Glass of approved make having properties as visible Light transmittance (VLT) of 25 to 35 %, Light reflection internal 10 to 15%, light reflection external 10 to 20 %, shading coefficient (0.25- 0.28) and U value of 3.0 to 3.3 W/m2 degree K etc. The properties of performance glass shall be decided by technical sanctioning authority as per the site requirement.	42.00	Sqm	3730.70		156689.40	
10.04	25.4	Extra for openable side / top hung vision glass panels (IGUs) including providing and supplying at site all accessories and hardwares for the openable panels as specified and of the approved make such as heavy duty stainless steel friction hinges, min 4 -point cremone locking sets with stainless steel plates, handles, buffers etc. including necessary stainless steel screws/ fasteners, nuts, bolts, washers etc. all complete as per the Architectural drawings, as per the approved shop drawings, as specified and as directed by the Engineer- in-Charge.	4.00	Sqm	2941.60		11766.40	
10.05	NS	Proving and fixing glass Reinforced Concrete (G.R.C) Screens in approved size, pattern design, thickness and color of approved make .The Screen should be made from White Portland cement ,Quartz, Fine Silica Sand, Alkali Resistant Glass Fibre Super Plasticizer Polymer and U.V resistant Synthetic inorganic pigment for pigmentation. The material casting should take place in Synthetic Rubber /FRP moulds of approved make & shape. The fixing of screens to be done with Stainless Steel (SS-304) 'L' shaped Clamps, dash fasteners and pins, as required at site.						
		Technical specification of GRC Screens.						
		Internal member thickness 30 mm and border thickness 50 mm Dry Density: 1800 kg/m3 (min) Water absorption: Less than 6% of dry weight by immersion over a period of 24 hours. Compressive strength: (M-40 Grade) Wet Transverse Strength: 7 N/mm (min) Abrasion Resistance: Less than 2.0 for E.H.D Thermal Conductivity: 1.63 W/MK at 3% moisture content : 1.80W/MK at 5% moisture content	205.00	Sqm		5701.00		1168705.00

Project Name: Redevelopment at GMH Rewa- Construction of Maternity ward, Eye Ward, Geriatric Block, Pediatric Waiting, public toilet, renovation of existing blocks and external development works.

Item No	Ref. No.	Description Of Item	Total Qty	Unit	Rates as per DSR 2016	NS Item Rate	Amount DSR 2016	Amount NS Items
1.00	1A	2	3	4	5	6	7	8
10.06	4.17	Making plinth protection 50mm thick of cement concrete 1:3:6 (1 cement : 3 coarse sand : 6 graded stone aggregate 20 mm nominal size) over 75mm thick bed of dry brick ballast 40 mm nominal size, well rammed and consolidated and grouted with fine sand, including necessary excavation, levelling & dressing & finishing the top smooth.	335.00	Sqm	450.35		150867.25	
10.07		Providing and applying integral crystalline slurry of hydrophilic in nature for waterproofing treatment to the RCC structures like retaining walls of the basement, water tanks, roof slabs, podiums, reservoir, sewage & water treatment plant, tunnels/ subway and bridge deck etc., prepared by mixing in the ratio of 5 : 2 (5 parts integral crystalline slurry : 2 parts water) for vertical surfaces and 3 : 1 (3 parts integral crystalline slurry : 1 part water) for horizontal surfaces and applying the same from negative (internal) side with the help of synthetic fiber brush. The material shall meet the requirements as specified in ACI212-3R-2010 i.e by reducing permeability of concrete by more than 90% compared with control concrete as per DIN 1048 and resistant to 16 bar hydrostatic pressure on negative side. The crystalline slurry shall be capable of self-healing of cracks up to a width of 0.50mm. The work shall be carried out all complete as per specification and the direction of the engineer-in-charge. The product performance shall carry guaranteed for 10 years against any leakage.						
a)	22.23.1	For vertical surface two coats @0.70 kg per sqm per coat	226.00	Sqm	468.10		105790.60	
b)	22.23.2	For horizontal surface one coat @1.10 kg per sqm.	223.00	Sqm	362.35		80804.05	
		Total of sub-head					713005.75	1168705.00
11.00		ROAD WORK & HORTICULTURE						
11.01	16.1	Preparation and consolidation of sub grade with power road roller of 8 to 12 tonne capacity after excavating earth to an average of 22.5 cm depth, dressing to camber and consolidating with road roller including making good the undulations etc. and re-rolling the sub grade and disposal of surplus earth with lead upto 50 metres.making good the undulations etc. and re-rolling the sub grade and disposal of surplus earth lead upto 50 metres.	1025.00	Sqm	90.10		92352.50	

Project Name: Redevelopment at GMH Rewa- Construction of Maternity ward, Eye Ward, Geriatric Block, Pediatric Waiting, public toilet, renovation of existing blocks and external development works.

Item No	Ref. No.	Description Of Item	Total Qty	Unit	Rates as per DSR 2016	NS Item Rate	Amount DSR 2016	Amount NS Items
1.00	1A	2	3	4	5	6	7	8
11.02	16.78	Construction of granular sub-base by providing close graded Material conforming to specifications, mixing in a mechanical mix plant at OMC, carriage of mixed material by tippers to work site, for all leads & lifts, spreading in uniform layers of specified thickness with motor grader on prepared surface and compacting with vibratory power roller to achieve the desired density, complete as per specifications and directions of Engineer-in-Charge.						
a)	16.78.1	With material conforming to Grade-I (size range 75 mm to 0.075 mm) having CBR Value-30	257.00	Cum	2089.70		537052.90	
11.03	16.80	Construction of dry lean cement concrete sub base over a prepared sub-grade with coarse and fine aggregate conforming to IS:383, the size of coarse aggregate not exceeding 25 mm, aggregate cement ratio not to exceed 15:1, aggregate gradation after blending to be as per specifications, cement content not to be less than 150 Kg/cum, optimum moisture content to be determined during trial length construction, concrete strength not to be less than 10 Mpa at 7 days, mixed in a batching plant, transported to site, for all leads & lifts, laid with a mechanical paver, compacting with 8-10 tonne vibratory roller, finishing and curing etc. complete as per direction of Engineerin-charge.	362.00	Cum	3331.95		1206165.90	
11.04	16.43	"Providing and laying design mix cement concrete of M-30 grade, in roads/ taxi tracks/ runways, using cement content as per design mix, using coarse sand and graded stone aggregate of 40 mm nominal size in appropriate proportions as per approved & specified design criteria, providing dowel bars with sleeve/ tie bars wherever required,laying at site, spreading and compacting mechanically by using needle and surface vibrators, levelling to required slope/ camber,finishing with required texture, including steel form work with sturdy M.S. channel sections, curing, making provision for contraction/expansion, construction & longitudinal joints (10 mm wide x 50 mmdeep) by groove cutting machine, providing and filling joints with approved joint filler and sealants, complete all as per direction of Engineer-in-charge (Item of joint fillers, sealants, dowel bars with sleeve/ tie bars to be paid separately).						

Project Name: Redevelopment at GMH Rewa- Construction of Maternity ward, Eye Ward, Geriatric Block, Pediatric Waiting, public toilet, renovation of existing blocks and external development works.

Item No	Ref. No.	Description Of Item	Total Qty	Unit	Rates as per DSR 2016	NS Item Rate	Amount DSR 2016	Amount NS Items
1.00	1A	2	3	4	5	6	7	8
		Note:- Cement content considered in M-30 is @ 340 kg/cum. Excess/less cement used as per design mix is payable/ recoverable separately.						
a)	16.43.1	Cement concrete prepared with batch mixing machine	543.00	Cum	6893.25		3743034.75	
11.05	16.44	Extra for providing and mixing hardening compound of approved quality as per manufacturer's specification in cement concrete.	2714.00	litre	46.45		126065.30	
11.06	16.45	Providing and fixing in position pre-moulded joint filler in expansion per cm joints.	18092.00	Per cm depth per cm width per m length	2.20		39802.40	
11.07	16.91	Providing and laying factory made chamfered edge Cement Concrete paver blocks In foot path, park & lawns driveway or light & traffic parking etc. of required strength, thickness & size/ shape, made by table vibratory method using PU mould, laid in required colour & pattern over 50mm thick compacted bed of course sand, compacting and proper embedding/laying of inter locking paver blocks into the sand bedding layer through vibratory compaction by using plate vibrator, filling the joints with sand and cutting of paver blocks as per required size and pattern, finishing and sweeping extra sand, all complete as per manufacturer's specifications & direction of Engineerin-Charge.						
a)	16.91.1	60mm thick Cement concrete paver block of M-35 grade with approved colour, design & pattern.	1134.00	Sqm	756.15		857474.10	

Project Name: Redevelopment at GMH Rewa- Construction of Maternity ward, Eye Ward, Geriatric Block, Pediatric Waiting, public toilet, renovation of existing blocks and external development works.

Item No	Ref. No.	Description Of Item	Total Qty	Unit	Rates as per DSR 2016	NS Item Rate	Amount DSR 2016	Amount NS Items
1.00	1A	2	3	4	5	6	7	8
11.08	16.69	Providing and laying at or near ground level factory made kerb stone of M-25 grade cement concrete in position to the required line, level and curvature, jointed with cement mortar 1:3 (1 cement: 3 coarse sand), including making joints with or without grooves (thickness of joints except at sharp curve shall not to more than 5mm), including making drainage opening wherever required complete etc. as per direction of Engineer-in-charge (length of finished kerb edging shall be measured for payment). (Precast C.C. kerb stone shall be approved by Engineer-in-charge).	91.00	Cum	5012.65		456151.15	
11.09	16.63	Providing, laying and making kerb channel 30 cm wide and 50 mm thick with cement concrete 1:3:6 (1 cement: 3 coarse sand:6 graded stone aggregate 20 mm nominal size) over 75mm bed of dry brick ballast 40 mm nominal size, well rammed and consolidate and grouted with fine sand, including finishing the top smooth etc. Complete and as per direction of Engineer-in-charge.	300.00	Sqm	382.05		114615.00	
11.10	2.1/H&L	Trenching in ordinary soil upto a depth of 60cm including removal and stacking of serviceable materials and then disposing surplus soil, by spreading and neatly levelling with in a lead of 50m and making up the trenched area to proper levels by filling with earth or earth mixed with sludge or/and manure before and after flooding trench with water (excluding cost of imported earth, sludge or manure).	615.00	Cum	45.85		28197.75	
11.11	2.3/H&L	Supplying and stacking sludge at site including royalty and carriage complete (sludge measured in stacks will be reduced by 8% for payment).	103.00	Cum	235.55		24261.65	
11.12	2.4.2/H&L	Supplying and stacking at site dump manure from approved source, including carriage complete (manure measured in stacks will be reduced by 8% for payment).						
a)		Screened through sieve of I.S. designation 16 mm	103.00	Cum	192.05		19781.15	
11.13	2.5+2.6/H&L	Rough dressing the trenched ground including breaking clods & Uprooting weeds from the trenched area after 10 to 15 days of its flooding with water including disposal of uprooted vegetation.	2050.00	Sqm	3.80		7790.00	

Project Name: Redevelopment at GMH Rewa- Construction of Maternity ward, Eye Ward, Geriatric Block, Pediatric Waiting, public toilet, renovation of existing blocks and external development works.

Item No	Ref. No.	Description Of Item	Total Qty	Unit	Rates as per DSR 2016	NS Item Rate	Amount DSR 2016	Amount NS Items
1.00	1A	2	3	4	5	6	7	8
11.14	2.7/H&L	Fine dressing the ground	2050.00	Sqm	2.15		4407.50	
11.15	2.8+2.9/H&L	Spreading of sludge, dump manure or/and good earth in required thickness including mixing earth and sludge or manure in the required proportion specified or directed by the Officer in Charge (Cost of sludge, dump manure or/ and good earth to be paid separately).	718.00	Cum	52.30		37551.40	
11.16	2.34	Proving & fixing Selection no.1 grass turf with earth 50 mm to 60 mm thickness of existing ground prepared with proper level and ramming with required tools wooden (Dhurmos) and than rolling the surface with light roller make the surface smoothening and watering.	2050.00	Sqm.	77.00		157850.00	
11.17	NS	Providing and Plantation of trees of required species (Base rate Rs 150 per tree without GST) at site i/c watering and removal of unserveiceable material's as per direction of officer in charge (including cast of plant)	100.00	Each	212.00		21200.00	
11.18		Digging holes in ordinary soil and refilling the same with the excavated earth mixed with manure or sludge in the ratio of 2:1 by volume (2 parts of stacked volume of earth after reduction by 20% : 1part of stacked volume of manure after reduction by 8%) flooding with water, dressing including removal of rubbish and surplus earth, if any with all leads and lifts (cost of manure, sludge or extra good earth if needed to be paid for separately):						
a)	2.14.3/H&L	Holes 60 cm dia, and 60 cm deep.	100.00	Each	31.15		3115.00	
		Total of sub-head					7476868.45	
12.00		DISMANTLING						
12.01	15.2	Demolishing cement concrete manually/ by mechanical means including disposal of material within 50 metres lead as per direction of Engineer - in - charge.						
a)	15.2.2	Nominal concrete 1:4:8 or leaner mix (i/c equivalent design mix)	667.00	Cum	615.15		410305.05	

Project Name: Redevelopment at GMH Rewa- Construction of Maternity ward, Eye Ward, Geriatric Block, Pediatric Waiting, public toilet, renovation of existing blocks and external development works.

Item No	Ref. No.	Description Of Item	Total Qty	Unit	Rates as per DSR 2016	NS Item Rate	Amount DSR 2016	Amount NS Items
1.00	1A	2	3	4	5	6	7	8
12.02	15.3	Demolishing R.C.C. work manually/ by mechanical means including stacking of steel bars and disposal of unserviceable material within 50 metres lead as per direction of Engineer - in- charge.	11.00	Cum	1454.55		16000.05	
12.03	15.7	Demolishing brick work manually/ by mechanical means including stacking of serviceable material and disposal of unserviceable material within 50 metres lead as per direction of Engineer-in-charge.						
a)	15.7.4	In cement mortar	214.00	Cum	842.75		180348.50	
12.04	15.12	Dismantling doors, windows and clerestory windows (steel or wood) shutter including chowkhats, architrave, holdfasts etc. complete and stacking within 50 metres lead :						
a)	15.12.1	Of area 3 sq. metres and below	122.00	each	157.85		19257.70	
b)	15.12.2	Of area beyond 3 sq. metres	259.00	each	216.40		56047.60	
12.05	15.17	Dismantling steel work in single sections including dismembering and stacking within 50 metres lead in:						
	15.17.2	Channels, angles, tees and flats	11811.00	kg	0.95		11220.45	
12.06	15.23	Dismantling tile work in floors and roofs laid in cement mortar including stacking material within 50 metres lead.						
a)	15.23.1	For thickness of tiles 10 mm to 25 mm	2433.00	Sqm	31.55		76761.15	
12.07	15.25	Dismantling stone slab flooring laid in cement mortar including stacking of serviceable material and disposal of unserviceable material within 50 metres lead.	452.00	Sqm	109.35		49426.20	
12.08	15.1	Demolishing lime concrete manually/ by mechanical means and disposal of material within 50 metres lead as per direction of Engineer-in-charge.	1000.00	Cum	348.30		348300.00	
12.09	15.26	Demolishing brick tile covering in terracing including stacking of serviceable material and disposal of unserviceable material within 50 metres lead.	6663.00	Sqm	45.70		304499.10	

Project Name: Redevelopment at GMH Rewa- Construction of Maternity ward, Eye Ward, Geriatric Block, Pediatric Waiting, public toilet, renovation of existing blocks and external development works.

Item No	Ref. No.	Description Of Item	Total Qty	Unit	Rates as per DSR 2016	NS Item Rate	Amount DSR 2016	Amount NS Items
1.00	1A	2	3	4	5	6	7	8
12.10	15.56	Dismantling old plaster or skirting raking out joints and cleaning the surface for plaster including disposal of rubbish to the dumping ground within 50 metres lead.	21582.00	sqm	22.40		483436.80	
12.11	14.46	Removing dry or oil bound distemper, water proofing cement paint and the like by scrapping, sand papering and preparing the surface smooth including necessary repairs to scratches etc. complete.	53068.00	Sqm	10.80		573134.40	
12.12	15.60	Disposal of building rubbish / malba / similar unserviceable, dismantled or waste materials by mechanical means, including loading, transporting, unloading to approved municipal dumping ground or as approved by Engineer-in-charge, beyond 50 m initial lead, for all leads including all lifts involved.	2730.00	Cum	120.55		329101.50	
12.13	NS	Dismantling of existing buildings and other structures/ Roads, footpaths etc coming in plot of construction comprising of concrete, RCC, brick/stone masonry work, flooring, finishes, pavement, external services etc.including taking out all doors, windows and ventilators,roofing, electrical,water supply, sanitary installations, rain water pipe with all fittings and fixtures etc. complete. The job also include all excavations, fillings, levelling and stacking of all servicable material at desired location and including the cost of transportation and disposal of all the unservicable materials to the nearest dumping ground complete . The entire site of dismantled buildings/ structures shall be cleared and levelled as directed. Payment shall be made on covered area of building in sqm, however no claim is admissible on variation in the area.						
		All servicable and unserviceable material shall be the property of the bidder except all inventories like electrical fittings, fans, air-conditioners, furniture, and other loose articles belonging to the owner which shall be deposited by the bidder to the owner's store at no extra cost, after due claeing and in stacked manner.						
		Regarding condition of the building and building materials used in the construction, the bidders may actually verify the detail from the site. No claim on this shall be entertained. The bidder shall be held responsible for any damage done to the adjacent property due to the demolition activities.						

Project Name: Redevelopment at GMH Rewa- Construction of Maternity ward, Eye Ward, Geriatric Block, Pediatric Waiting, public toilet, renovation of existing blocks and external development works.

Item No	Ref. No.	Description Of Item	Total Qty	Unit	Rates as per DSR 2016	NS Item Rate	Amount DSR 2016	Amount NS Items
1.00	1A	2	3	4	5	6	7	8
		All malba and unserviceable materials obtained as a result of dismantling/ demolition shall be disposed off by the bidder outside the premises to the nearest dumping ground or at the bidder's place, for which nothing extra is payable.						
		The bidder has to quote the credit rate for demolition and disposal by sale, the rate should include all costs involved in dismantling/ demolition of the existing structures as shown in the enclosed drawing, disposal of unserviceable materials, cost of serviceable materials, clearing of site and taking all precautions so as not to harm the adjacent buildings and mankind in the premises.(credit rate should have minus (-) sign with it.)	616.00	Sqm		-500.00		-308000.00
Total of sub-head							2857838.50	-308000.00

Project Name: Redevelopment at GMH Rewa- Construction of Maternity ward, Eye Ward, Geriatric Block, Pediatric Waiting, public toilet, renovation of existing blocks and external development works.

ABSTRACT OF COST (CIVIL)			
S.No	DESCRIPTION OF WORK	DSR-2016 Items	NS Items
1	EARTHWORK	1327473.80	0.00
2	CONCRTE WORK	2462076.99	0.00
3	RCC WORK	24339012.60	0.00
4	WALLS AND PARTITIONS	5219549.80	0.00
5	DOORS & WINDOWS	10043136.65	295074.86
6	STEEL WORK	1374234.55	0.00
7	FLOORING	29032685.45	57947.27
8	CEILING & ROOFING	14531534.50	0.00
9	FINISHING	19822294.15	0.00
10	MISCELLANEOUS	713005.75	1168705.00
11	ROAD Work	7476868.45	0.00
12	DISMANTLING	2857838.50	-308000.00
	Sub-total	119199711.19	1213727.14
	Total	120413438.32	



Name of Work : Renovation & New Construction works of Gandhi Memorial Hospital at Rewa

Sl. No.	Item no. (DSR-16)	Description of Item	Unit	Total QTY.	DSR 16 Rate (Rs)	DSR Amount	Market Rate	Market Amount
1	2.00	3	4	5	6	7	8	9
		Note: Based on the tender drawing the agency has to prepare the internal & external plumbing shop drawing and obtain the approval of the same before execution						
1.00		SANITARY FIXTURES						
1.01	17.10	Providing&fixing water closet squatting pan(Indian W.C.Pan) with 100 mm sand cast iron P or S strap,10 Litre low level white P.V.C flushing cistern with manually controled device(handle lever) conforming to IS:7231 with all fittings & fixture complete including cutting and making good the walls & floors wherever required.(Parryware model no. C0117 or other equivalent model as per approved make)						
a)	17.1.1	White vitreous china orissa pattern W.C. pan of size 580 x 440 mm with integral type foot rests.	Each	10	3,494.20	34,942.00		-
				-		-		-
1.02	17.30	Providing and fixing white vitreous china Pedestal type water closet (European type) with seat and lid, 10 litre low level white vitreous flushing cistern and C.P. flush bend with fittings & C.I. brackets, 40mm flush bend, overflow arrangement with specials of standard make and mosquito proof coupling of approved municipal design complete including painting of fittings and brackets, cutting and making good the walls and floors wherever required:(Parryware model no. C0271 or other equivalent as per approved make						
a)	17.3.2	W.C. pan with ISI black solid plastic seat & lid.	Each	40	4,570.50	182,820.00		-
				-		-		-
1.03	17.70	Providing and fixing wash basin with C.I. brackets, 15mm C.P. brass pillar taps , 32mm C.P. brass waste of standard pattern, including painting of fittings and brackets, cutting and making good the walls wherever required:(Jaquar or other equivalent approved make.						
a)	17.7.4	White Vitreous China Flat back wash basin size 550x 400 mm with single 15 mm C.P. brass pillar tap	Each	53	1,817.35	96,319.55		-
				-		-		-
1.04	17.7A	Providing and fixing wash basin with C.I. brackets, 15 mm dia CP Brass single hole basin mixer of approved quality and make, including painting of fittings and brackets, cutting and making good the walls wherever required:- (a) White Vitreous China Wash basin size 550x400 mm with a 15 mm CP Brass single hole basin mixer. (Roca model no RT5A3127CA1 &RS325463 OR other equivalent model as per approved make						
a)		White Vitreous China Wash basin size 550x400 mm with a 15 mm CP Brass single hole basin mixer	Each	5	2,984.20	14,921.00		-
				-		-		-

Name of Work : Renovation & New Construction works of Gandhi Memorial Hospital at Rewa

Sl. No.	Item no. (DSR-16)	Description of Item	Unit	Total QTY.	DSR 16 Rate (Rs)	DSR Amount	Market Rate	Market Amount
1	2.00	3	4	5	6	7	8	9
1.05	17.80	Providing and fixing white vitreous china pedestal for wash basin completely recessed at the back for the reception of pipes and fittings.	Each	4	975.25	3,901.00		-
				-		-		-
1.06	17.10	Providing and fixing Stainless Steel A ISi 304 (18/8) kitchen sink as per IS: 13983 with C.I. brackets and stainless steel plug 40 mm, including painting of fittings and brackets, cutting and making good the walls wherever required :		-		-		-
	17.10.1	Kitchen sink with drain board		-		-		-
a)	17.10.1.2	510x1040 mm bowl depth 225 mm	Each	1	3,830.40	3,830.40		-
	17.10.2	Kitchen sink without drain board		-		-		-
	17.10.2.2	610x460 mm bowl depth 200 mm	Each	1	2,186.25	2,186.25		-
				-		-		-
				-		-		-
1.07	17.16A	Providing and fixing 8 mm dia C.P. / S.S. Jet with flexible tube upto 1 metre long with S.S. triangular plate to European type W.C. of quality and make as approved by Engineer - in -charge.code RF9061A1 From Roca or other equivalent make.	Each	34	254.80	8,663.20		-
				-		-		-
1.08	17.22A	Providing and fixing CP Brass 32mm size Bottle Trap of approved quality & make and as per the direction of Engineerin- charge.RF 9066A1 From Roca or other equivalent make.	Each	52	795.15	41,347.80		-
				-		-		-
1.09	17.28	Providing and fixing P.V.C. waste pipe for sink or wash basin including P.V.C. waste fittings complete.		-		-		-
	17.28.1	Semi rigid pipe		-		-		-
	17.28.1.1	32 mm dia	Each	52	75.60	3,931.20		-
	17.28.1.2	40 mm dia	Each	16	81.40	1,302.40		-
				-		-		-
				-		-		-
1.10	17.32	Providing and fixing superior glass mirror (of approved quality) and of required shape and size with plastic moulded frame of approved make and shape with 6 mm thick hard board backing.		-		-		-
a)	17.32.2	Rectangular shape 453x357 mm	Each	24	752.80	18,067.20		-
	17.32.4	Rectangular shape 1500x450 mm	Each	10	1,323.10	13,231.00		-
				-		-		-
1.11	17.33	Providing and fixing 600x120x5 mm glass shelf with edges round of supported and anodised aluminium angle frame with C.P. brass brackets and guard rail complete fixed with 40 mm long screws, rawl plugs etc., complete. Code no RA816708001 from Roca or othe equivalent make)	Each	7	573.30	4,013.10		-
				-		-		-
1.12	17.34	Providing and fixing toilet paper holder . (Roca model no. or other equivalent model as per approved make) code RA816713001 from roca or other equivalent make		-		-		-
a)	17.34.1	C.P. brass	Each	46	385.35	17,726.10		-
				-		-		-

Name of Work : Renovation & New Construction works of Gandhi Memorial Hospital at Rewa

Sl. No.	Item no. (DSR-16)	Description of Item	Unit	Total QTY.	DSR 16 Rate (Rs)	DSR Amount	Market Rate	Market Amount
1	2.00	3	4	5	6	7	8	9
1.13	17.78	Providing and fixing white vitreous china extended wall mounting water closet of size 780x370x690 mm of approved shape including providing & fixing white vitreous china cistern with dual flush fitting, of flushing capacity 3 litre/ 6 litre (adjustable to 4 litre/ 8 litres), including seat cover, and cistern fittings, nuts, bolts and gasket etc complete.(Roca model no.RS342617460 & RA80N612001 or other equivalent model as per approved make	Each	1	9,685.70	9,685.70		-
1.14	17.80	Providing and fixing white vitreous china battery based infrared sensor operated urinal of approx. size 610 x 390 x 370 mm having pre & post flushing with water (250 ml & 500 mlconsumption), havingwater inlet from back side, including fixing to wall with suitablebrackets all as per manufacturers specification and direction of Engineer-in-charge ROCA model no. RS35945E000 or other equivalent model as per approved make.	Each	15	5,162.20	77,433.00		-
1.15	17.81	Providing and fixing floor mounted , white vitreous china single piece, double traps syphonic water closet of approved brand/ make, shape, size and pattern including integrated white vitreous china cistern of capacity 10 litres with dual flushing system, including all fittings and fixtures with seat cover, cistern fittings, nuts, bolts and gasket etc including making connection with the existing P/S trap, complete in all respect as per directions of Engineer-in-Charge.(ROCA model no. RS349467000 & RE80P467001 or other equivalent model as per approved make)	Each	1	12,612.65	12,612.65		-
1.16	NS-1	Extra for Providing and fixing wall hung water closet with seat cover of approved model and slim concealed flushing cistern of 9 litre capacity, body with floor mounted frame and installation kit with SS actuating panel with dual flush with fittings in place of pedestal type water closet 10 lits. & vitreous china cistern ,complete of Roca make & model RS 34630346S,RA80P396461 & RA890031410 respectively or equivalent model of other approved make as approved by Engineer-in-charge.	Each	40			5,307.73	212,309.20
1.17	NS -2	Poviding and fixing health faucet with pipe and hook complete (Roca model no. RF9060A1 or other equivalent model as per approved make)	Each	17			2,682.00	45,594.00
1.18	NS -3	Extra for providing and fixing white vitreous china oval shape wash basin in place of normal wash basin of size 580x440						
a)		under Counter oval shape wash basin size 600x390mm approx. (centre tap hole) along with , single 15 mm CP brass pressmatic type pillar tap.(Roca mopedl no. RS327893000 and RT5A4277C00 or other equivalent model as per approved make)	Each	21			7,817.00	164,157.00

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Sl. No.	Item no. (DSR-16)	Description of Item	Unit	Total QTY.	DSR 16 Rate (Rs)	DSR Amount	Market Rate	Market Amount
1	2.00	3	4	5	6	7	8	9
1.19	NS-6	Providing and fixing white vitreous china urinal of approx. size 797x 425 mm having top inlet urinal with CP brass pressmatic urinal valve auto closing system with built in control cock & wall flanged complete including fixing to wall with suitable brackets all as per manufacturers specification and direction of Engineer-in-charge.(roca model no. RS35945H000 & Jaquar model no.PRS-077 or other equivalent model as per approved make)	Each	8		-	20,634.00	165,072.00
				-		-		-
1.20	NS-7	Extrafor providing and fixing Sentronic Concealed Urinal Sensor Powered by 220 volts-AC. Concealed box dimension: 110x110x92 mm Front plate dimension :120 x120 mm in place of pressmatic urinal valve. code RT5X9215E00 from roca or other equivalent make.	Each	8		-	5,347.50	42,780.00
				-		-		-
1.21	NS -9	P&F wall Soap Holder with brackets' , complete fittings of roca or other equivalent approved make (Jaquar or other equivalent model as per approved make)	Each	12		-	1,200.00	14,400.00
				-		-		-
1.22	NS-10	Providing and fixing Liquid Soap Dispenser all complete (Roca model No. RA 816070105 or equivalent model approved make)	Each	52		-	2,579.00	134,108.00
				-		-		-
1.23	NS -11	Providing and fixing CP brass towel rail complete of approve quality and colour .(Jaquar or other equivalent make.)						
		600 mm long towel rail	Each	46		-	750.00	34,500.00
				-		-		-
1.24	NS-13	providing and fixing CP Brass bottle trap for sink and urinal basin including CP waste fittings complete 40 mm dia complete in all respect of approved quality.	Each	12		-	1,211.00	14,532.00
				-		-		-
1.25	NS -14	providing & fixing double robe hook with all complete fittings(Jaquar or other equivalent model as per approved make)	Each	24		-	850.00	20,400.00
				-		-		-
				-		-		-
1.26	NS-16	Providing and fixing beveled edge mirror 6 mm thick of superior glass(of approved quality) complete with 6 mm thick hard board ground fixed to woen cleats with ss studs complete	Sqm	10		-	1,620.00	16,200.00
				-		-		-
1.27	NS -17	Supply and instaling of Grab Bar S type-304,18-gauge(1mm) stainless steel tubing with satin-finish.1-1/2"(25.4 mm) outside dia.Concealed mounting flanges- 18-8 S,type-304, stainless steel palte: end flanges with two holes for attachments to wall. stainless steel with satin-finish. Each cover snaps over mounting flange to conceal mounting screws.make Euronics or equivalent-600 mm(L)	Each	8		-	1,166.10	9,328.80
				-		-		-

Name of Work : Renovation & New Construction works of Gandhi Memorial Hospital at Rewa

Sl. No.	Item no. (DSR-16)	Description of Item	Unit	Total QTY.	DSR 16 Rate (Rs)	DSR Amount	Market Rate	Market Amount
1	2.00	3	4	5	6	7	8	9
1.28	NS-19	Providing & fixing SS body solid state fully hygienic no touch Hand Drier of approved make rated for continuous repeat usage with solid state time delay LSF protection, with independent ambient light level & seasonal control temperatures including providing necessary C.I./M.S. brackets painted with two or three coats of enamel paint of approved shade over a coat of primer, wiring cables from drier to plug, plug tops etc. complete including cutting and making good the walls wherever required.	Each	21		-	13,780.00	289,380.00
1.29	NS-20	Providing and fixing Hospital S S 304 -18 SWG(thickness 1.2 mm) bed pan sink with P trap, size 850W x 600Dx300Hmm + SPL with 10 litres PVC. flushing cistern , 32 mm dia flush pipe cpvc , C.I./M.S. bracket with painting with 3 coats of white paint complete with accessories, C.P. brass long body bib cock and health fucet fittings (CMP.METAL) or equivalent approved make as approved by Engineer-in-charge.	Each	1		-	37,685.00	37,685.00
				-		-		-
1.30	NS-21	Supply , installation, testing and commissioning of compact floor mounted pedestal base surgical scrub sink tailor made to suit the site available compatiabile with all the regular and standard plumbing system, with inbuilt geyser designed for use in operation theatre fabricated from thickness 1.6 mm 304 type stainless steel seamless 304 welded,polished to satain finish including connecting to drainage and water points and making good cutting of walls and floor surface all complete and as directed (CMP.METAL ,MPS) or equivalent approved make as approved by Engineer-in-charge.		2		-	216,172.00	432,344.00
		Tailor made surgical scrub sink (2 bay) Approximate size 1.4 mX0.54mX0.84m with 1 user elbow operated mixture tap, soap dispensers, drain outlet ,thermostatic control of water temperature	Each	-		-		-
		SUB TOTAL(SANITARY FIXTURES)		-		546,933.55		1,632,790.00
				-		-		-
2.00		SOIL, WASTE AND VENT PIPES		-		-		-
2.01	17. 35	Providing and fixing soil, waste and vent pipes- Hubless centrifugally cast (spun) iron pipes epoxy coated inside & outside IS:15905 (make: NECO, HEPSCO & SANT GOVIND/SKF)		-		-		-
a)	17.35.1.3	100 mm dia-Hubless centrifugally cast (spun) iron pipes epoxy coated inside & outside IS:15905	Metre	470	925.55	435,008.50		-
b)	NS	150 mm dia-Hubless centrifugally cast (spun) iron epoxy coated inside & outside as per IS:15905	Metre	60		-	1,144.00	68,640.00
				-		-		-
2.02	17. 38	Providing and fixing bend of required degree with access door , insertion rubber washer 3 mm thick, bolts and nuts complete.		-		-		-
a)	17.38.1.3	100 mm dia-Hubless centrifugally cast (spun) iron epoxy coated inside & outside as per IS:15905	Each	43	489.45	21,046.35		-

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Sl. No.	Item no. (DSR-16)	Description of Item	Unit	Total QTY.	DSR 16 Rate (Rs)	DSR Amount	Market Rate	Market Amount
1	2.00	3	4	5	6	7	8	9
b)	NS	150 mm dia-Hubless centrifugally cast (spun) iron epoxy coated inside & outside as per IS:15905	Each	-	-	-	666.00	-
2.03	17. 39	Providing and fixing plain bend of required degree.		-	-	-	-	-
a)	17.39.1.3	100 mm -Hubless centrifugally cast (spun) iron pipes epoxy coated inside & outside IS:15905	Each	70	307.10	21,497.00	-	-
b)	NS	150 mm dia-Hubless centrifugally cast (spun) iron pipes epoxy coated inside & outside	Each	-	-	-	378.00	-
2.04	17.42	Providing and fixing double equal plain junction of required degree.		-	-	-	-	-
a)	17.42.1.3	100x100x100x100 mm Hubless centrifugally cast (spun) iron pipes epoxy coated inside & outside	Each	40	645.10	25,804.00	-	-
2.05	17. 43	Providing and fixing single equal plain junction of required degree with access door , insertion rubber washer 3mm thick, bolts and nuts complete.		-	-	-	-	-
a)	17.43.1.2	100x100x100mm - H.L.C.C.I	Each	40	623.00	24,920.00	-	-
b)	NS	150x 150x 150 mm-H.L.C.C.I	Each	-	-	-	850.00	-
2.06	17. 44	Providing and fixing single equal plain junction of required degree		-	-	-	-	-
a)	17.44.1.3	100x100x100mm -Hubless centrifugally cast (spun) iron epoxy coated inside & outside	Each	40	503.40	20,136.00	-	-
b)	NS	150x150x150-Hubless centrifugally cast (spun) iron pipes epoxy coated inside & outside	Each	-	-	-	751.00	-
2.07	NS	Providing and fixing single unequal plain junction of required degree		-	-	-	-	-
a)		150x150x100 mm-H.L.C.C.I	Each	20	-	-	791.45	15,829.00
2.08	17. 55	Providing and fixing door piece , insertion rubber washer 3mm thick, bolts and nuts complete		-	-	-	-	-
a)	17.55.1.2	100 mm CI	Each	34	512.65	17,430.10	-	-
2.09	17. 56	Providing and fixing terminal guard .		-	-	-	-	-
a)	17.56.1.3	100 mm-Hubless centrifugally cast (spun) iron epoxy coated inside & outside as per IS:15905	Each	42	355.85	14,945.70	-	-
2.10	17. 57A	Providing and fixing shielded coupling for Hubless centrifugally cast iron pipe of same manufactureing.		-	-	-	-	-
a)	17.57A.1.1	100 mm dia-SS 304 grade coupling with EPDM rubber gasket	Each	470	360.50	169,435.00	-	-
b)	NS	150 mm dia	Each	60	-	-	444.00	26,640.00

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Sl. No.	Item no. (DSR-16)	Description of Item	Unit	Total QTY.	DSR 16 Rate (Rs)	DSR Amount	Market Rate	Market Amount
1	2.00	3	4	5	6	7	8	9
2.11	17.59	Providing and fixing M.S. stays and clamps for sand cast iron / centrifugally cast (spun) iron pipes of diameter :		-		-		-
a)	17.59.1	100 mm	Each	27	62.00	1,674.00		-
c)	NS	150 mm dia	Each	5		-	71.00	355.00
				-		-		-
2.12	17.60	Providing and fixing Trap of self cleansing design with screwed down or hinged grating with or without vent arm complete, including cost of cutting and making good the walls and floors:		-		-		-
a)	17.60.1.3	100 mm inlet and 100 mm outlet-Hubless centrifugally cast (spun) iron epoxy coated inside & outside	Each	57	677.60	38,623.20		-
				-		-		-
2.13	17.61	Cutting chases in brick masonry walls for following diameter sand cast iron/centrifugally cast (spun) iron pipes and making good the same with cement concrete 1:3:6 (1 cement:3 coarse sand:6 graded stone aggregate 12.5 mm nominal size) including necessary plaster and pointing in cement mortar 1:4 (1 cement: 4 coarse sand):		-		-		-
a)	17.61.1	100 mm diameter pipe	Metre	70	355.70	24,899.00		-
				-		-		-
2.14	17.65	Painting sand cast iron / centrifugally cast (spun) iron soil, waste vent pipes and fittings with paint of any colour such as chocolate, grey, or buff etc. over a coat of primer (of approved quality) for new work:		-		-		-
a)	17.65.1	100 mm diameter pipe	Metre	470	40.65	19,105.50		-
				-		-		-
2.15	17.77	Providing and fixing M.S. holder bat clamp of approved design to sand cast iron/ cast iron (spun) pipes comprising of M.S. flat brackets made of 50x5 mm flat of specified shape, projecting 75 mm outside the wall surface and fixed on wall with 4nos, 6mm dia expansion hold fasteners, including drilling necessary holes in brick wall/ CC/ RCC surface and the cost of bolts etc. The pipes shall be fixed to the already fixed brackets with the help of 30 mm x1.6 mm galvanised M.S. flats of specified shape and of total length 420 mm and shall be fixed with M.S. nuts, bolts, & washers of size 25x6 mm, one bolts on each side of the pipe.		-		-		-
a)	17.77.1	Total bracket length 580 mm of approved shape and design (for single 100/150 mm dia pipe)	Each	27	179.40	4,843.80		-
b)	17.77.2	Total bracket length 810 mm of approved shape and design (for two 100/150 mm dia pipes or 150mmm)	Each	10	216.30	2,163.00		-
c)	17.77.3	Total bracket length 1040 mm of approved shape and design (for three 100/150 mm dia pipes)	Each	9	253.15	2,278.35		-
d)	NS	Total bracket length 1540 mm of approved shape and design (for three 200/150 mm dia pipes)	Each	9	-	-	450.00	4,050.00
				-		-		-

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Sl. No.	Item no. (DSR-16)	Description of Item	Unit	Total QTY.	DSR 16 Rate (Rs)	DSR Amount	Market Rate	Market Amount
1	2.00	3	4	5	6	7	8	9
2.16	18.10	Providing and fixing GI pipes complete with GI fittings and clamps, i/c cutting and making good the walls etc and making good the same for waste water disposal complete as per direction of engineer incharge.		-		-		-
a)	18.10.4	32 mm dia nominal bore (Wash basin to floor trap/floor drain)	Metre	52	308.35	16,034.20		-
b)	18.10.5	40 mm dia nominal bore (Sink,Urinal to floor trap)	Metre	12	394.15	4,729.80		-
c)	18.10.6	50 mm dia nominal bore (Floor Drain to Floor Trap)	Metre	18	472.40	8,503.20		-
				-		-		-
2.17	NS -1	Providing and fixing floor drain & balcony drain made of 100 x 50 mm dia elbow / tee as applicable connected with 50 mm dia GI pipe painted with primer, two coats of black bituminastic paint,wrapping 1 mm thick PVC tape and final coat of black bituminastic paint B109 complete in all complete including cutting and making good the walls and floor wherever required	Each	39			883.08	34,439.97
				-				-
2.18	NS -2	Providing and laying cement concrete 1:2:4 (1 cement:2 coarse sand:4 graded stone aggregate 20 mm nominal size) 80 mm thick all-round the SCI/centrifugally S&S pipe diameter.		-				-
a)		100/150 mm dia	Metre	200			345.00	69,000.00
				-				-
2.19	NS -3	Providing and fixing dash fastner made of rust proof plated steel for holding the soil/waste supply pipes complete in all respect		-				-
a)		Dash fastner for pipe more than 25 mm dia to 150 mm dia pipe of size 25 mm dia and 75 mm long minimum & shall be capable of taking 6 tonnes load and also include the supporting angles 35x35x5 mm/ of required size or MS bars steel structures as per drawing.	Each	470			379.46	178,347.16
				-				-
2.20	NS-4	Providing and fixing SS floor trap (FD+FT) grating 143x143x5 mm thick screwable with SS fixed framed of 150x150 mm size as per approved make and model	Each	37			278.00	10,286.00
				-				-
2.21	NS	Providing and laying Laboratory/hospital effluent waste pipe and fitting of high density polyethelene (HDPE),CLASS -PE 80 ,pressure rating PN-6,conforming to IS :4427, electric fusion joints/flanged joints , fittings which includes bends,,junctions,cowls,offsets,access pieces.etc. complete including jointing.		-				-
a)		25 mm dia	meter	100			780.00	78,000.00
b)		80 mm dia	meter	100			1,800.00	180,000.00
c)		110 mm dia	meter	100			3,360.00	336,000.00
				-				-
2.22	NS -5	Providing and fixing floor clean out plug consist of CI bend & GI socket heavy class with Brass cap & key for opening male threaded cap etc. including lead caulked to CI pipescomplete in all respects as per drawing/ sample approved by Engineer -in -ChargeFCO (floor clean out plug shall be flushed with floor finish		-				-

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Sl. No.	Item no. (DSR-16)	Description of Item	Unit	Total QTY.	DSR 16 Rate (Rs)	DSR Amount	Market Rate	Market Amount
1	2.00	3	4	5	6	7	8	9
a)		100 mm dia/150/200 mm dia	Each	14		-	3,418.95	47,865.30
				-		-		-
2.23	NS -6	Providing and fixing G.I EXTENSION PIECE for 100 mm dia floor trap formed out of main pipe(Type A) with multiple side inlets, suitable for various dia pipes, side connections, including all fixtures and fittings as per site conditions and as per standard details and water tight sealing of joints and area surrounding the grating and as directed.	Each	62		-	1,194.00	74,028.00
				-		-		-
2.24	NS-7	Providing and fixing WC connector socket(for vitreous china & CI pipe) of EDPM good quality with polypropelene body 100x150/100x250 of approved quality and make complete in all respect.	Each	48		-	350.00	16,800.00
				-		-		-
		SUB TOTAL(SOIL, WASTE AND VENT PIPES)		-		873,076.70		1,140,280.44
				-		-		-
3.00		WATER SUPPLY		-		-		-
				-		-		-
3.01	18.70	Providing and fixing Chlorinated Polyvinyl Chloride (CPVC) pipes , having thermal stability for hot & cold water supply, including all CPVC plain & brass threaded fittings, including fixing the pipe with clamps at 1.00 m spacing. This includes jointing of pipes & fittings with one step CPVC solvent cement and testing of joints complete as per direction of Engineer in Charge. INTERNAL WORK - EXPOSED ON WALL		-		-		-
		Internal work – Exposed on wall		-		-		-
a)	18.7.1	15 mm nominal outer dia Pipes(SDR-11)	Metre	40	142.95	5,718.00		-
b)	18.7.2	20 mm nominal outer dia Pipes(SDR-11)	Metre	100	175.95	17,595.00		-
c)	18.7.3	25 mm nominal outer dia Pipes(SDR-11)	Metre	230	216.20	49,726.00		-
d)	18.7.4	32 mm nominal outer dia Pipes(SDR-11)	Metre	160	289.05	46,248.00		-
e)	18.7.5	40 mm nominal outer dia Pipes(SDR-11)	Metre	80	385.50	30,840.00		-
f)	18.7.6	50 mm nominal outer dia Pipes(SDR-11)	Metre	50	548.55	27,427.50		-
g)	NS	62.5 mm nominal inner dia Pipes(SCH-80)	Metre	40		-	784.00	31,360.00
				-		-		-
				-		-		-
3.02	18.80	Providing and fixing Chlorinated Polyvenyl Chloride(CPVC)pipes having thermal stability for hot & cold water supply including all CPVC plain & brass threaded fittings i/c fixing the pipe with clamps at 1.0 m spacing.This includes jointing of pipes & fittings with one step CPVC solvent cement and the cost of cutting chases and making good the same including testing of joints complete as per direction of Engineer in charge.		-		-		-
				-		-		-
		Concealed work including cutting chases and making good the walls etc.		-		-		-
a)	18.8.1	15 mm nominal outer dia pipes (SDR-11)	Metre	20	246.20	4,924.00		-
b)	18.8.2	20 mm nominal outer dia pipes (SDR-11)	Metre	40	284.85	11,394.00		-

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Sl. No.	Item no. (DSR-16)	Description of Item	Unit	Total QTY.	DSR 16 Rate (Rs)	DSR Amount	Market Rate	Market Amount
1	2.00	3	4	5	6	7	8	9
c)	18.8.3	25 mm nominal outer dia pipes (SDR-11)	Metre	110	333.60	36,696.00		-
d)	18.8.4	32 mm nominal outer dia pipes (SDR-11)	Metre	70	412.90	28,903.00		-
e)	NS	40mm nominal outer dia pipes (SDR-11)	Metre	11		-	580.00	6,380.00
3.03	18. 9	Providing and fixing Chlorinated Polyvinyl Chloride (CPVC) pipes , having thermal stability for hot & cold water supply including all CPVC plain & brass threaded fittings i/c fixing the pipe with clamps at 1.00 m spacing. This includes jointing of pipes & fittings with one step CPVC solvent cement and the cost of cutting chases and making good the same including testing of joints complete as per direction of Engineer in Charge.						-
		External Work						-
a)	18.9.4	32 mm nominal outer dia pipes (SDR-11)	Metre	50	250.55	12,527.50		-
b)	18.9.5	40 mm nominal outer dia pipes (SDR-11)	Metre	100	321.15	32,115.00		-
c)	18.9.6	50 mm nominal outer dia Pipes (SDR-11)	Metre	120	484.20	58,104.00		-
d)	18.9.7	62.5 mm nominal inner dia Pipes (SCH-80)	Metre	90	1,081.75	97,357.50		-
e)	18.9.8	75 mm nominal inner dia Pipes (SCH-80)	Metre	75	1,201.05	90,078.75		-
f)	18.9.9	100 mm nominal inner dia Pipes (SCH-80)	Metre	125	1,618.10	202,262.50		-
g)	18.9.10	150 mm nominal inner dia Pipes (SCH-80)	Metre	75	2,408.75	180,656.25		-
3.04	18.13	Making connection of G.I./CPVC distribution branch with G.I./D.I main of following sizes by providing and fixing tee, including, cutting and threading the pipe etc. complete including obtaining approval for connection from Municipal corporation , if required						-
a)	18.13.2	25 to 150 mm nominal bore	Each	4	771.20	3,084.80		-
3.05	18. 17	providing and fixing Gun metal gate valve with C.I. wheel of approved quality (screwed end)						-
a)	18.17.1	25 mm nominal bore	Each	8	428.20	3,425.60		-
b)	18.17.1A	20 mm nominal bore	Each	8	396.55	3,172.40		-
c)	18.17.2	32 mm nominal bore	Each	8	500.75	4,006.00		-
d)	18.17.3	40 mm nominal bore	Each	8	584.70	4,677.60		-
e)	18.17.4	50 mm nominal bore	Each	4	749.90	2,999.60		-
f)	18.17.5	65 mm nominal bore	Each	4	1,286.80	5,147.20		-
g)	18.17.6	80 mm nominal bore	Each	4	1,919.50	7,678.00		-
3.06	18. 18	Providing and fixing Ball valve (brass) of approved quality, High or low pressure with plastic floats complete						-
a)	18.18.1	15 mm	Each	4	287.25	1,149.00		-
b)	18.18.2	20mm.	Each	4	327.05	1,308.20		-
3.07	18. 19	Providing and fixing Gun metal non-return valve of approved quality (screwed end)						-
	18. 19.1	25 mm nominal bore						-
a)	18. 19.1.1	Horizontal	Each	4	410.45	1,641.80		-

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Sl. No.	Item no. (DSR-16)	Description of Item	Unit	Total QTY.	DSR 16 Rate (Rs)	DSR Amount	Market Rate	Market Amount
1	2.00	3	4	5	6	7	8	9
	18.19.3	40 mm nominal bore		-		-		-
b)	18.19.3.1	Horizontal	Each	4	682.85	2,731.40		-
	18.19.4	50 mm nominal bore		-		-		-
c)	18.19.4.1	Horizontal	Each	4	987.70	3,950.80		-
	18.19.6	80 mm nominal bore		-		-		-
d)	18.19.6.1	Horizontal	Each	4	2,503.10	10,012.40		-
				-		-		-
3.08	18.20	Providing and fixing brass Ferrule with C.I. mouth cover including boring and tapping the main		-		-		-
a)	18.20.3	25 mm nominal bore or as per required size	Each	4	363.70	1,454.80		-
b)	ns	40mm to 65 mm dia bore	Each	4			1,050.00	4,200.00
				-		-		-
3.09	18.21	Providing and fixing unplasticised PVC connection pipe with brass unions:		-		-		-
a)	18.21.2	45 cm length		-		-		-
a i)	18.21.2.1	15 mm nominal bore	Each	49	67.80	3,322.20		-
				-		-		-
3.10	18.32	Constructing masonry chamber 30x30x50 cm, inside with 75 class designation brick work in cement mortar 1:4 (1 cement: 4 coarse sand) for stop cock, with C.I. surface box 100x100x75 mm (inside) with hinged cover fixed in cement concrete slab 1:2:4 mix (1 cement: 2 coarse sand:4 graded stone aggregate 20 mm nominal size) necessary excavation foundation concrete 1:5:10 (1 cement:5 fine sand: 10 graded stone aggregate 40 mm nominal size) and inside plastering with cement mortar 1:3 (1 cement :3 coarse sand) 12 mm thick finished with a floating coat of neat cement complete as per standard design		-		-		-
a)	18.32.1	With F.P.s bricks	Each	5	1,195.35	5,976.75		-
				-		-		-
3.11	18.48	Providing and placing on terrace (at all floor levels) polyethylene water storage tank ISI:12701 marked with cover and suitable locking arrangement and making necessary holes for inlet, outlet and overflow pipes but without fittings and the base support for tank		-		-		-
a)		Treated water Tank and Untreated water tank	per litre	25,000	7.25	181,250.00		-
				-		-		-
3.12	18.49	Providing and fixing C.P brass Bib Cock of approved quality.(Jaquar or other equivalent model as per approved make)		-		-		-
a)	18.49.1	15 mm nominal bore	Each	53	371.70	19,700.10		-
				-		-		-
3.13	18.51	Providing and fixing C.P. brass long body bib cock of approved quality conforming to IS standards and weighing not less than 690 gms. Code FLR-CHR-5021N From Jaquar or other equivalent make.		-		-		-
a)	18.51.1	15 mm nominal bore	Each	20	492.55	9,851.00		-
				-		-		-

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Sl. No.	Item no. (DSR-16)	Description of Item	Unit	Total QTY.	DSR 16 Rate (Rs)	DSR Amount	Market Rate	Market Amount
1	2.00	3	4	5	6	7	8	9
3.14	18.53	Providing and fixing C.P. brass Angle Valve for basin mixer and geyser/cisterns points of approved quality conforming to IS:8931.(jaquar or other equivalent model as per approved make)		-		-		-
a)	18.53.1	15 mm nominal bore	Each	53	475.70	25,212.10		-
				-		-		-
3.15	18.53A	Providing and fixing C.P. Brass extension nipple (size 15mmx50mm) of approved make and quality as per direction of Engineer-in-charge.	Each	108	58.10	6,274.80		-
				-		-		-
3.16	18.59	Providing and fixing C.I. double acting air valve of approved quality with bolts, nuts, rubber insertions etc. complete (The tail pieces, tapers etc. if required will be paid separately):		-		-		-
a)	18.59.1	50 mm dia	Each	5	4,662.45	23,312.25		-
b)	18.59.2	80 mm dia	Each	4	5,649.75	22,599.00		-
				-		-		-
3.17	18.60	Providing and fixing enclosed type water meter (bulk type) conforming to IS : 2373 and tested by municipal board complete with bolts,nuts rubber, insertions etc. (the tail plases if required will be paid seperatly)		-		-		-
a)	18.60. 1	80mm dia nominal bore (25 to 80 mm)	Each	4	3,104.90	12,419.60		-
				-		-		-
3.18	18.62	Providing and fixing PTMT ball cock of approved quality, colour and make complete with Epoxy coated aluminium rod with L.P./H.P.H.D. plastic ball.		-		-		-
a)	18.62.4	40 mm nominal bore, 206 mm long weighin not less than 690 gms	Each	4	646.70	2,586.80		-
b)	18.62.5	50 mm nominal bore, 242 mm long weighin not less than 1240 gms	Each	4	1,125.25	4,501.00		-
				-		-		-
3.19	18.76	Cutting holes upto 30x30 cm in walls including making good the same		-		-		-
a)	18.76.1	with F.P.S bricks	Each	44	219.20	9,644.80		-
				-		-		-
3.20	18.77	Cutting holes up to 15x15 cm in R.C.C. floors and roofs for passing drain pipe etc. and repairing the hole after insertion of drain pipe etc. with cement concrete 1:2:4 (1 cement:2 coarse sand: 4 graded stone aggregate 20 mm nominal size) including finishing complete so as to make it leak proof	Each	53	209.25	11,090.25		-
				-		-		-
3.21	NS-4	Providing and fixing Ball valve (SS) as per specifications of PN 10 rating.		-		-		-
a)		25 mm	Each	10		-	1,100.00	11,000.00
b)		32 mm	Each	10		-	1,300.00	13,000.00
c)		40 mm	Each	6		-	1,800.00	10,800.00
d)		50 mm	Each	6		-	2,000.00	12,000.00
3.22	NS-5	Supply, installation, Testing & Commissioning of PN10 rated Solenoid valves including High / Low switches, and all necessary electric wiring, cabling complete		-		-		-

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Sl. No.	Item no. (DSR-16)	Description of Item	Unit	Total QTY.	DSR 16 Rate (Rs)	DSR Amount	Market Rate	Market Amount
1	2.00	3	4	5	6	7	8	9
a)		Size of valve 25 mm dia	Each	4		-	5,850.00	23,400.00
b)		Size of valve 32 mm dia	Each	4		-	6,363.00	25,452.00
c)		Size of valve 40 mm dia	Each	4		-	7,004.00	28,016.00
d)		Size of valve 50 mm dia	Each	4		-	8,190.00	32,760.00
				-		-		-
3.23	NS-6	Providing and fixing Indian make CP brass air valves with gunmetal isolation valve fixed on pipe lines.		-		-		-
a)		15mm n.b air vent with 15mm isolation valve.	Each	4		-	1,040.00	4,160.00
b)		20mm n.b air vent with 20mm isolation valve.	Each	4		-	1,404.00	5,616.00
		40mm n.b air vent with 20mm isolation valve.	Each	4		-	1,965.60	7,862.40
				-		-		-
3.24	NS-8	Providing and Fixing concealed Bath & Shower Mixer and diverter cutting and making good the wall complete as per instructions of the engineer-in-charge.	Each	12		-	2,500.00	30,000.00
				-		-		-
3.25	NS-9	Providing and Fixing Over head shower 100 mm dia having aerators/flow restrictor to achieve the desired flowrate with Shower Arm complete as per instructions of the engineer-in-charge (Flowrate : 8.4 LPM at 45 Psi pressure)	Each	12		-	1,650.00	19,800.00
				-		-		-
3.26	NS-10	Providing and Fixing CP Bath spout with wall flange having aerators/flow restrictor to achieve the desired flowrate complete as per instructions of the engineer-in-charge or as per equivalent make. (Flowrate : 8.4 LPM at 45 Psi pressure)	Each	8		-	1,200.00	9,600.00
				-		-		-
3.27	NS -15	Providing fixing testing and commissioning of CP brass wall/counter mounted sink mixer with C.P. wall flange, overhead swinging spout/goose neck complete as required having aerator/flow restrictor to achieve the desired flow rate and making good including necessary wall cutting/chasing and making as required as per direction of engineer in _charge(flowrate:6.4 LPM at Psi Pressure)	Each	4		-	1,625.00	6,500.00
				-		-		-
3.28	NS-11	Providing and fixing CP Brass single lever basin mixer with Swinging spout (Table Mounted) with 450 mm long braided hoses of approved quality confirming to IS :8931. Code no. FLR-CHR-5173B from Jaquar or equivalent make.	Each	4		-	12,500.00	50,000.00
				-		-		-

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Sl. No.	Item no. (DSR-16)	Description of Item	Unit	Total QTY.	DSR 16 Rate (Rs)	DSR Amount	Market Rate	Market Amount
1	2.00	3	4	5	6	7	8	9
3.29	NS-13	Providing and fixing closed cell polyolefin tube type thermal insulation over hot water pipes with thermal conductivity not exceeding 0.034 w/mk. At an average temp of 0 degree c , having density of material as 30 kg/m3 , with operating range of -80 degree C to +95 degree C, hcfc- free including all required accessories complete as per manufactur"s specifications for the following pipe sizes and finishing it as per site requirement.(Hot water supply/return pipes)		-		-		-
a)		15 mm dia	Metre	8		-	85.00	680.00
b)		20 mm dia	Metre	16		-	100.00	1,600.00
c)		25 mm dia	Metre	90		-	125.00	11,250.00
d)		32 mm dia	Metre	62		-	135.00	8,370.00
e)		40 mm dia	Metre	50		-	150.00	7,500.00
f)		50 mm dia	Metre	50		-	165.00	8,250.00
				-		-		-
3.30	NS -14	Providing and fixing double seal type D.I. Manhole cover of 560 mm clear internal diameter of over all heavy duty with locking arrangement complete in all respects.	Each	24		-	3,500.00	84,000.00
								-
	NS -15	Supply, installation, testing and commissioning of heavy duty Pop-up type irrigation sprinkler with working pressure range of 2-6 Bar	Each	20		-	12,250.00	245,000.00
								-
3.31	NS-16	Supplying, fixing, testing and commissioning of storage type water heater (Geyser)-Horizontal Type etc. with outer body of ABS, 2 MM Thick Mild Steel inner Tank with glass line coating,option of 1/2/3 KW electrically operated single phase 230V, including Glass Lined Double Heating Element,Digital Display, Multifunction Safety Device, ELCB, Anode Rod System, and Brackets for fixing on wall with connecting Wire & plug etc. conforming to IS: 2082 and energy efficient star rated model.		-		-		-
a)		15 Litre Capacity	Each	3		-	4,550.00	13,650.00
b)		25 Litre Capacity	Each	11		-	6,783.00	74,613.00
c)		35 litre capacity	Each	3		-	8,072.00	24,216.00
								-
3.32	NS-17	Providing & fixing water storage cooler of approved make and brand with SS body Complete in respects-230V Single Phase. (Voltas/Shriram/BLUE-STAR)		-		-		-
a)		minimum flow rate of 40 ltrs. Per hour and storage capacity 80 ltrs.	Each	4		-	30,500.00	122,000.00
								-

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Sl. No.	Item no. (DSR-16)	Description of Item	Unit	Total QTY.	DSR 16 Rate (Rs)	DSR Amount	Market Rate	Market Amount
1	2.00	3	4	5	6	7	8	9
3.33	NS-18	Providing and fixing approved make & suitable model of R.O. plant 100 ltrs. Per hour flow rate having capacity to treat the raw water having TDS 1200 ppm and not less than 40%. The treated water should have TDS less than 100 ppm and hardness less than 50 ppm. The operating voltage to 230 volt AC +/- 10% alongwith required capacity pump and solenoid valves, dry run protection of pump, automatic tank level control, inbuilt auto flush timer for periodic flushing of membranes, hydro pneumatic tank, over voltage and over current protection with switch mode power supply system antiscaling dosing system complete in all respects including installation and fittings with the following provisions: (IONIEXCHANGE/ KENT/AQUAPROCESS/Pantair)		-		-		-
a)		10 micron polypropylene sediment pre filter		-		-		-
b)		10 micron bacteriostatic activated carbon block on line micron filter with 5 micron rating		-		-		-
c)		3 Nos. of reverse osmosis memberane with 0.0001 micron pore size energy saving poly amide type		-		-		-
d)		UV lamp of minimum capacity 100 LPM and minimum lamp wattage 9W	Each	4		-	95,000.00	380,000.00
				-		-		-
3.34	NS-19	Providing and fixing approved make & suitable model of R.O. plant (fully automatic operation) 600ltrs. Per hour flow rate having capacity to treat the raw water and average recovery not less than 35% . The operating voltage to 230 volt AC +/- 10% alongwith required capacity on line SS pump of approved make (3HP minimum) and solenoid valves, dry run protection of pump, automatic tank level control, inbuilt auto flush timer for periodic flushing of membranes, storage tank (3.0 mm (minimum) thick S.S. 304 sheet) 1500 lts of suitable size and ita supporting structure, over voltage and over current protection with switch mode power supply system complete in all respects including installation and fittings with the following provisions: (IONIEXCHANGE/ KENT/AQUAPROCESS,Pantair)		-		-		-
		10 micron polypropylene sediment pre filter		-		-		-
		10 micron bacteriostatic activated carbon block on line micron filter with 5 micron rating		-		-		-
		Required Nos. and size of reverse osmosis memberane with 0.0001 micron pore size energy saving poly amide type		-		-		-
		UV lamp of minimum capacity 600LPH and minimum lamp wattage 15W		-		-		-

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Sl. No.	Item no. (DSR-16)	Description of Item	Unit	Total QTY.	DSR 16 Rate (Rs)	DSR Amount	Market Rate	Market Amount
1	2.00	3	4	5	6	7	8	9
		MS powder coated frame efficient of TDS removal more than 90%. Antiscalant dosing and acid dosing system for self flushing/cleaning.Pressure switches and gauges, pH correction dosing system, Digital TDS meter, Digital pH meter, electric panel and necessary instrumentation included Rotameter.MS structure and fibre glass sheet weather protection cover as per site condition.	Each	1		-	248,885.00	248,885.00
				-		-		-
3.35	NS-20	Supplying, installing, testing and commissioning vertical on line multi stage centrifugal pumping set(including electrical panel) with mechanical seal, C.I. volute and SS impeller & SS shaft connected to a TEFC induction motor of suitable HP for 415 volts, 3 phase, 50 cycles A.C. supply with 150 mm dia pressure gauge with SS/gunmetal isolation cock, vibration eliminating pads, base plate wiring upto panel and equipment for water level controller to start and stop the pump automatically at predecided levels of the water in the tank with provision of protection for dry run etc. complete in all respect. The efficiency of the pump shall be more than 60% (The shop drawing or the pumps along with its characteristics curves, model and technical data etc. are to be submitted for approval before purchase of pump)- (Including Electrical Panel)		-		-		-
	a)	Treated Water Pump		-		-		-
		Capacity : 50 lpm (Each)		-		-		-
		Head 35 m		-		-		-
		Power :1 HP(minimum)		-		-		-
		with 100% standby pumps		-		-		-
		complete pump set as above	SET	2		-	65,600.00	131,200.00
				-		-		-
	b)	Raw Water Pump		-		-		-
		Capacity : 40 lpm (Each)		-		-		-
		Head 35 m		-		-		-
		Power :1 HP(minimum)		-		-		-
		with 100% standby pumps		-		-		-
		complete pump set as above	SET	2		-	50,200.00	100,400.00
				-		-		-

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Sl. No.	Item no. (DSR-16)	Description of Item	Unit	Total QTY.	DSR 16 Rate (Rs)	DSR Amount	Market Rate	Market Amount
1	2.00	3	4	5	6	7	8	9
3.36	NS-21	Supply, installing, testing and commissioning vertical fully floodable type Submersible drainage pump of non-corrosive material (including electrical panel) in close coupled design single stage, suitable for handling minimum 10 mm dia solids for transferring waste water from sump to outside the building with float switch for automatic start and stop arrangement with panel and wiring, chain and pulley, mechanical seal complete in all respect as per instruction of the Engineer in charge. (The shop drawing or the pumps along with its characteristics curves, model and technical data etc. are to be submitted for approval before purchase of pump).Star delta suitable starter complete in all respect for automatic/manual operation of pump, start and stop push button contactor with required overload protection and single phase preventer.		-		-		-
		Material of Construction (M.O.C): Corrosion Resistant in general : Casing — Cast Iron		-		-		-
		: Impeller — SS		-		-		-
		: Bearings — Anti friction, prelubricated ball bearings, packed with grease for life.		-		-		-
		Motor: — Dry Motor with built in over load protection		-		-		-
		Protection - IP68.		-		-		-
		Insulation Class - F		-		-		-
		Duty of each pump		-		-		-
		100 LPM against 15 M head - For Pump Room Drainage	Each	1		-	90,000.00	90,000.00
				-		-		-
		SUB TOTAL(Water Supply)		-		1,326,753.25		1,883,520.40
				-		-		-
4.00		SEWORAGE & DRAINAGE		-		-		-
4.01	19.10	Providing laying and jointing glazed stoneware pipes grade 'A' with stiff mixture of cement mortar in the pro-portion of 1:1 (1 cement : 1 fine sand) including testing of joints etc. complete.		-		-		-
a)	19.1.1	100 mm diameter	Metre	45	216.25	9,731.25		-
				-		-		-
4.02	19.20	Providing and laying cement concrete 1:5:10 (1 cement : 5 coarse sand : 10 graded stone aggregate 40 mm nominal size) all-round S.W. pipes including bed concrete as per standard design:		-		-		-
a)	19.2.1	100 mm diameter S.W. pipe/RCC NP2	Metre	45	622.95	28,032.75		-
b)	19.2.2	150 mm diameter S.W. pipe/RCC NP2	Metre	230	761.85	175,225.50		-
b)	19.2.4	250 mm diameter S.W. pipe/RCC NP2	Metre	250	1,027.00	256,750.00		-
				-		-		-

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Sl. No.	Item no. (DSR-16)	Description of Item	Unit	Total QTY.	DSR 16 Rate (Rs)	DSR Amount	Market Rate	Market Amount
1	2.00	3	4	5	6	7	8	9
4.03	19. 4	Providing and fixing square-mouth S.W. gully trap grade 'A" complete with C.I. grating, brick masonry chamber with water tight C.I. cover with frame of 300x300 mm size (inside) the weight of cover to be not less than 4.50 kg and frame to be not less than 2.70 kg as per standard design:.		-		-		-
a)	19.4.2	150x100mm size P type		-		-		-
a.i)	19.4.2.1	F.P.S. Bricks class designation 75	Each	25	1,623.25	40,581.25		-
				-		-		-
4.04	19. 6	Providing and laying non-pressure NP2 class (light duty) R.C.C. pipes with collars jointed with stiff mixture of cement mortar in the proportion of 1:2 (1 cement:2 fine sand) including testing of joints etc. complete		-		-		-
a)	19.6.2	150 mm dia R.C.c. pipe	Metre	230	356.70	82,041.00		-
b)	19.6.3	250 mm dia R.C.c. pipe	Metre	250	482.05	120,512.50		-
	19.6.4	300 mm dia R.C.c. pipe	Metre	250	518.55	129,637.50		-
	19.6.5	450 mm dia R.C.c. pipe	Metre	30	720.95	21,628.50		-
				-		-		-
4.05	19. 9			-		-		-
a)	19.9.1	0.91 m deep with S.F.R.C. cover and frame (heavy duty, HD-20 grade designation) 560mm internal diameter conforming to I.S. 12592, total weight of cover and frame to be not less than 182kg., fixed in cement concrete 1:2:4 (1 cement: 2 coarse sand: 4 graded stone aggregate 20 mm nominal size) including centering shuttering all complete. (Excavation, foot rests and 12mm thick cement plaster at the external surface shall be paid for separately) :		-		-		-
a i)	19.9.1.1	With F.P.S. bricks class designation 75	Each	22	8,683.75	191,042.50		-
				-		-		-
4.06	19. 10	Extra depth for circular type manhole 0.91m dia (at bottom) with beyond 0.91m to 1.67 m		-		-		-
a)	19.10.1	With F.P.S. bricks class designation 75	Metre	4	4,911.80	19,647.20		-
				-		-		-
4.07	19. 7	Constructing brick masonry manhole in cement mortar 1:4 (1 cement : 4 coarse sand), R.C.C. top slab with 1:2:4 mix (1cement : 2 coarse sand : 4graded stone aggregate 20 mm nominal size), foundation concrete 1:4:8 (1cement : 4 coarse sand : 8graded stone aggregate 40 mm nominal size), inside plastering 12mm thick with cement mortar 1:3 (1 cement : 3 coarse sand) finished with a floating coat of neat cement, and making necessary channels in cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20mm nominal size) finished with a floating coat of neat cement all complete as per standard design.		-		-		-

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Sl. No.	Item no. (DSR-16)	Description of Item	Unit	Total QTY.	DSR 16 Rate (Rs)	DSR Amount	Market Rate	Market Amount
1	2.00	3	4	5	6	7	8	9
a)	19.7.1	Inside size 90x80 cm and 45 cm deep including C.I. cover with frame (light duty) 455x610 mm internal dimensions total weight of cover and frame to be not less than 38 kg (weight of cover 23 kg and weight of frame 15 kg):		-		-		-
a i)	19.7.1.1	With F.P.S. bricks with class designation 75	Each	8	8,634.10	69,072.80		-
				-		-		-
4.08	19. 8	Extra depth for manholes		-		-		-
a)	19.8.1	Size 90 x 80 cm		-		-		-
a i)	19.8.1.1	With F.P.S. bricks class designation 75	Metre	1	5,718.60	5,718.60		-
				-		-		-
4.09	19. 16	Providing and fixing orange colour safety foot rest of minimum 6 mm thick plastic encapsulated as per IS: 10910 on 12 mm dia steel bar conforming to IS: 1786 having minimum cross section as 23 mm x 25 mm and over all minimum length 263 mm and width as 165 mm with minimum 112 mm space between protruded legs having 2 mm tread on top surface by ribbing or chequering besides necessary and adequate anchoring projections on tail length on 138 mm as per standard drawing and suitable to with stand the bend test and chemical resistance test as per specification mark to be visible even after fixing, including fixing in manholes with 30x20x15 cm cement concrete block 1:3:6 (1 cement : 3 coarse sand : 6 graded stone aggregate 20 mm nominal size) complete as per design.	Each	22	327.90	7,213.80		-
				-		-		-
4.10	19. 21	Making connection of drain or sewer line with existing manhole including breking into and making good the walls, floors with cement concrete 1:2:4 mix (1 cement:2 coarse sand:4 graded stone aggregate 20 mm nominal size) cement plastered on both sides with cemnet mortar 1:3 (1 cement:3 coarse sand) finished with a floating coat of neat cement and making necessary channels for the drain etc. complete (including obtaining approval from DJB/Municipal corporation		-		-		-
a)	19.21.1	For pipes 100 to 250 mm dia	Each	4	391.15	1,564.60		-
		SUB TOTAL(Sewerage , Storm & Drainage)		-		1,158,399.75		-
				-		-		-
5.00		RAIN WATER PIPING		-		-		-
				-		-		-
5.01	12. 44	Providing and fixing to the inlet mouth of rain water pipe cast iron grating 15/25 cm diameter and weighing not less than 440 grams	Each	12	40.90	490.80		-
				-		-		-
5.02	17.35	Providing and fixing rain water ,soil, waste and vent pipes.		-		-		-
a)	17.35.1	100 mm dia.		-		-		-
a i)	17.35.1.2	Centrifugally cast (spun) iron socketed pipe as per IS:3989	Metre	60	921.65	55,299.00		-
b)	NS	150 mm dia pipe as per IS:3989	Metre	15			2,151.70	32,275.44
				-		-		-

Name of Work : Renovation & New Construction works of Gandhi Memorial Hospital at Rewa

Sl. No.	Item no. (DSR-16)	Description of Item	Unit	Total QTY.	DSR 16 Rate (Rs)	DSR Amount	Market Rate	Market Amount
1	2.00	3	4	5	6	7	8	9
5.03	17.37	Providing and fixing M.S holder-bat clamps of approved design to Sand Cast iron/ cast iron (spun) pipe embedded in and including cement concrete blocks 10x10x10 cm of 1:2:4 mix (1 cement : 2 coarse sand : 4 graded stone aggregate 20mm nominal size) including cost of cutting holes and making good the walls etc.		-		-		-
a)	17.37.1	for 100 mm dia. pipe	Each	18	167.35	3,012.30		-
b)	NS	for 150 mm dia pipe	Each	6		-	200.00	1,200.00
				-		-		-
5.04	17.39	Providing and fixing plain bend of required degree.		-		-		-
a)		100 mm	Each	12	334.95	4,019.40		-
a ii)	17.39.1.2	Sand cast iron S&S as per IS:3989		-		-		-
b)	NS	150 mm	Each	3		-	1,191.79	3,575.38
				-		-		-
5.05	17.40	Providing and fixing heel rest sanitary bend.		-		-		-
a)	17.40.1	100 mm dia		-		-		-
a.ii)	17.40.1.2	sand cast iron S&S as per IS-3989	Each	12	370.95	4,451.40		-
b)	NS	150 mm dia	Each	3		-	925.20	2,775.59
				-		-		-
5.06	17.57	Providing and fixing collar		-		-		-
a)	17.57.1	100 mm	Each	12	351.20	4,214.40		-
a.ii)	17.57.1.2	Sand cast iron S&S as per IS-3989		-		-		-
b)	NS	150 mm	Each	3		-	935.83	2,807.48
				-		-		-
5.07	17.58	Providing lead caulked joints to sand cast iron /centrifugally cast (spun) iron pipes and fittings of diameter:		-		-		-
a)	17.58.1	100 mm	Each	60	309.95	18,597.00		-
b)	NS	150 mm	Each	15		-	401.00	6,015.00
				-		-		-
5.08	17.65	Painting sand cast iron / centrifugally cast (spun) iron soil, waste vent pipes and fittings with paint of any colour such as chocolate, grey, or buff etc. over a coat of primer (of approved quality) for new work:		-		-		-
a)	17.65.1	100 mm diameter pipe	Metre	60	40.65	2,439.00		-
b)	NS	150 mm diameter pipe	Metre	15		-	45.00	675.00
				-		-		-
		SUB TOTAL(Rain Water pipe & fitting)		-		92,523.30		49,323.88
				-		-		-
6.00		BOREWELL		-		-		-
				-		-		-
6.01	18.17	Providing and fixing gun metal gate valve with C.I. wheel of approved quality (screwed end)		-		-		-

Name of Work : Renovation & New Construction works of Gandhi Memorial Hospital at Rewa

Sl. No.	Item no. (DSR-16)	Description of Item	Unit	Total QTY.	DSR 16 Rate (Rs)	DSR Amount	Market Rate	Market Amount
1	2.00	3	4	5	6	7	8	9
	18.17.6	80 mm dia(horizontal)	Each	1	1919.50	1,919.50		-
				-		-		-
6.02	18.19	Providing and fixing gunmetal non return valve of approved make tested to a pressure of 21kg/sqcm.		-		-		-
	18.19.6.1	80 mm dia(horizontal)	Each	1	2503.10	2,503.10		-
				-		-		-
		Submersible pumps		-		-		-
		Providing and installing submersible pump and electrical panel suitable for 100 mm dia casing of bore with SS impeller, high tensile SS shaft, copper wound squirrel cage wet type induction motor 2880 rpm, 415 V, 50 Hz,3 phase A.C. supply, conforming to ISS: 8034-1976, capacity 100 LPM at 50-80 m head along with a directly coupled submersible type squirrel cage electric induction 2 H.P(minimum) . motor suitable for operation on 400 V, 3 phase, 50 c.p.s. A.C. supply, water lubricated bearings and provided with pivoted segment type thrust bearings to withstand non-vertical lead with minimum wear and tear and duly fitted with device to take up the expansion of water with heating of motor, including supply, testing and commissioning of electrical panel from the same manufacturer, complete with all accessories in all respects. The contractor to obtain approval for model and make of pumpset & suitable Electrical panel after having yield report of fully developed tube well and submit actual bore strata chart.		-		-		-
		including supplying laying and fixing water proof PVC insulated flat submersible cable 3x10 sqmm with end termination with its accessories. complete in all respect as required. 1 No. 3 Phase, fully automatic star-delta starter, type - II of 15 HP with thermal overload relay, contactor, Timer, Push Buttons and Auto-manual selector switch etc complete as required.	set	1		-	150000.00	150,000.00
6.03	NS	Carrying out Electrical logging of Borewell before lowering of pipe for analysing of water quality including Electrical logging report, calculation etc. including carry out hydrological survey report before boring & getting the approval based on Hydrogeological survey before start of the work.Also getting approval from local authority if any required	Job	1		-	30000.00	30,000.00
6.04	23.1	Boring/drilling bore well 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, upto 90 metre depth below ground level		-		-		-
		All types of soil		-		-		-
	23.1.1.1	300mm	metre	70	370.70	25,949.00		-

Name of Work : Renovation & New Construction works of Gandhi Memorial Hospital at Rewa

Sl. No.	Item no. (DSR-16)	Description of Item	Unit	Total QTY.	DSR 16 Rate (Rs)	DSR Amount	Market Rate	Market Amount
1	2.00	3	4	5	6	7	8	9
	23.1.2	Rocky strata including Boulders		-		-		-
	23.1.2.1	300 mm dia	metre	10	855.10	8,551.00		-
				-		-		-
6.05	23.2	Boring/drilling bore well 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.		-		-		-
	23.2.1	All types of soil		-		-		-
	23.2.1.1	300 mm dia	metre	10	432.45	4,324.50		-
	23.2.2	Rocky strata including Boulders		-		-		-
	23.2.2.1	300 mm dia	metre	2	927.10	1,854.20		-
				-		-		-
6.06	23.8	Gravel packing in tubewell construction in accordance with IS: 4097, including providing gravel fine/ medium/ coarse, in required grading & sizes as per actual requirement, all complete as per direction of Engineer-in-charge.	cum	5	1175.60	5,878.00		-
6.07	23.10	Supplying, assembling, lowering and fixing in vertical position in bore well, ERW (Electric Resistance Welded) FE 410 mild steel screwed and socketed/ plain ended casing pipes of required dia, conforming to IS: 4270, of reputed & approved make, including painted with outside surface with two coats of anticorrosive paint of approved brand and manufacture, including required hire & labour charges, fittings & accessories, all complete, for all depths, as per direction of Engineer-in-charge.		-		-		-
	23.10.1	100 mm nominal size dia having minimum wall thickness 5.00 mm	metre	60	890.10	53,406.00		-
6.08	23.11	Supplying, assembling, lowering and fixing in vertical position in bore well, ERW (Electric Resistance Welded) FE 410 plain slotted (having slot of size 1.6/3.2 mm) mild steel threaded and socketed/ plain bevel ended pipe (type A) of required dia, conforming to IS: 8110, of reputed and approved make, having wall thickness not less than 5.40 mm, including painted with outside surface with two coats of anticorrosive bitumestic paint of approved brand and manufacture, including hire & labour charges, fittings & accessories, all complete, for all depths, as per direction of Engineer -in-charge		-		-		-
	23.11.1	100 mm nominal size dia	metre	40	950.75	38,030.00		-

Name of Work : Renovation & New Construction works of Gandhi Memorial Hospital at Rewa

Sl. No.	Item no. (DSR-16)	Description of Item	Unit	Total QTY.	DSR 16 Rate (Rs)	DSR Amount	Market Rate	Market Amount
1	2.00	3	4	5	6	7	8	9
				-				-
6.09	23.12	Development of tube well in accordance with IS : 2800 (part I) and IS: 11189, to establish maximum rate of usable water yield without sand content (beyond permissible limit), with required capacity air compressor, running the compressor for required time till well is fully developed, measuring yield of well by "V" notch method or any other approved method, measuring static level & draw down etc. by step draw down method, collecting water samples & getting tested in approved laboratory, i/c disinfection of tubewell, all complete, including hire & labour charges of air compressor, tools & accessories etc.,all as per requirement and direction of Engineer-in-charge..	hour	50	542.20	27,110.00		-
				-				-
6.10	23.13.	Providing and fixing suitable size threaded mild steel cap or spot welded plate to the top of bore well housing/ casing pipe, removable as per requirement, all complete for borewell of:		-				-
	23.13.1	100 mm dia	each	1	146.35	146.35		-
				-				-
6.11	23.14	Providing and fixing M.S. clamp of required dia to the top of casing/ housing pipe of tubewell as per IS: 2800 (part I), including necessary bolts & nuts of required size complete.		-				-
	23.14.1	100 mm clamp	each	1	962.05	962.05		-
				-				-
6.12	4.1	Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering - All work up to plinth level :Providing and laying cement concrete 1:2:4 mix (for sanitary sealing of well at top.)	Cum	-				-
	4.1.3	"1:2:4 (1 cement : 2 coarse sand (zone-III) : 4 graded stone aggregate 20 mm nominal size).	cum	1	5481.95	5,481.95		-
				-				-
6.13	23.15	Providing and fixing Bail plug/ Bottom plug of required dia to the bottom of pipe assembly of tubewell as per IS:2800 (part I).		-				-
	23.15.1	100 MM DIA	Each	1	184.30	184.30		-
				-				-
6.14	18.12	Providing and fixing G.I. pipes complete with G.I. fittings including trenching and refilling etc		-				-
	18.12.7	65 mm dia nominal bore	metre	30	451.70	13,551.00		-
	18.12.8	80 mm dia nominal bore	metre	50	576.30	28,815.00		-
				-				-
		SUBTOTAL (BOREWELL)		-		218,665.95		180,000.00
				-				-
7.00		RAIN WATER HARVESTING		-				-

Name of Work : Renovation & New Construction works of Gandhi Memorial Hospital at Rewa

Sl. No.	Item no. (DSR-16)	Description of Item	Unit	Total QTY.	DSR 16 Rate (Rs)	DSR Amount	Market Rate	Market Amount
1	2.00	3	4	5	6	7	8	9
7.01	23.10	Boring/drilling bore well of required dia for casing/ strainer pipe, by suitable method prescribed in IS: 2800 (part I), including collecting samples from different strata, repairing 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, upto 90 metre depth below ground level		-		-		-
		All types of soil		-		-		-
a)	23.1.1.3	300mm	Metre	30	518.95	15,568.50		-
	23.1.2	Rocky strata including Boulders		-		-		-
b)	23.1.2.3	300 mm dia	Metre	30	1,034.50	31,035.00		-
				-		-		-
7.02	23.30	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.		-		-		-
a)	23.3.2	150 mm dia	Metre	15	572.30	8,584.50		-
				-		-		-
7.03	23.40	Supplying, assembling, lowering and fixing in vertical position in bore well unplasticized PVC medium well screen (RMS) pipes with ribs, conforming to IS: 12818, including hire & labour charges, fittings & accessories etc. all complete, for all depths, as per direction of Engineer-in-charge.		-		-		-
a)	23.4.2	150 mm nominal size dia	Metre	3	529.35	1,588.05		-
				-		-		-
7.04	23.50	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	Cum	3	921.90	2,765.70		-
				-		-		-
7.05	23.60	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.	Cum	3	1,038.05	3,114.15		-
				-		-		-
7.06	23.70	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 -incharge.	Cum	3	1,038.05	3,114.15		-
				-		-		-
7.07	23.80	Gravel packing in tubewell construction in accordance with IS: 4097, including providing gravel fine/ medium/ coarse, in required grading & sizes as per actual requirement, all complete as per direction of Engineer-in-charge	Cum	1	1,175.60	705.36		-
				-		-		-

Name of Work : Renovation & New Construction works of Gandhi Memorial Hospital at Rewa

Sl. No.	Item no. (DSR-16)	Description of Item	Unit	Total QTY.	DSR 16 Rate (Rs)	DSR Amount	Market Rate	Market Amount
1	2.00	3	4	5	6	7	8	9
7.08	23.90	Providing and fixing factory made precast RCC perforated drain covers, having concrete of strength not less than M-25, of size 1000 x 450x50 mm, reinforced with 8 mm dia four nos longitudinal & 9 nos cross sectional T.M.T. hoop bars, including providing 50 mm dia perforations @ 100 to 125 mm c/c, including providing edge binding with M.S. flats of size 50 mm x 1.6 mm complete, all as per direction of Engineerin-charge	Each	6	959.35	5,756.10		-
7.09	NS-1	Constructing bar screen / settling tank, of sizes 4500x2500 with suitable depth up to 2.0 m in 1: 4 Cement Mortar (one cement : 4 coarse sand) height as per site requirement, in brick masonry 350mm thick walls upto water level and 230mm thick walls above water level & upto ground level, including all excavation, 20 cm thick bed concrete in 1:4:8 (one cement 4 fine sand 8 stone aggregate 40 mm), cement plaster 1:3 (one cement :3 coarse sand) with a floating coat of neat cement as inside finish , top slab in RCC 1:2:4, including centring, shuttering and steel work, also providing and fixing D.I. manhole cover & frame of size 605mm x 450mm of weight not less than 38 kg (frame + cover) and cost of 100mm dia C.I. vent pipe with C.I. Ventilating Cowl and suitable wire mesh provision for inlet, 115mm baffle walls extending 2/3 the width spaced@500mm c/c including finishing with 1:3 cement plaster 15mm thick with floating coat of neat cement slurry , all complete in every respect as per drawing and as directed to да басым түрде жалпыл	Each	3			80,000.00	240,000.00
				-		-		-
		SUBTOTAL (RAIN WATER HARVESTING)		-		72,231.51		240,000.00
		Total						#REF!
8.00		EARTH WORK		-		-		-
8.01	2.6	Earth work in excavation by mechanical means (Hydraulic excavator)/ manual means over areas (exceeding 30 cm in depth,1.5 m in width as well as 10 sqm on plan) including disposal of excavated earth, lead up to 50 m and lift up to 1.5 m , disposed earth to be levelled and neatly dressed.		-		-		-
a)	2.6.1	All kinds of soil	Cum	45	125.95	5,667.75		-
				-		-		-
8.02	2.10	Excavating trenches of required width for pipes, cables, etc including excavation for sockets, and dressing of sides, ramming of bottoms, depth up to 1.5 m including getting out the excavated soil, and then returning the soil as required, in layers not exceeding 20 cm in depth including consolidating each deposited layer by ramming, watering, etc. and disposing of surplus excavated soil as directed, within a lead of 50 m:		-		-		-
a)	2.10.1	All kinds of soil		-		-		-
	a.i	Pipes, cables etc. exceeding 80 mm dia but not exceeding 300 mm dia	Metre	900	225.45	202,905.00		-
				-		-		-

Name of Work : Renovation & New Construction works of Gandhi Memorial Hospital at Rewa

Sl. No.	Item no. (DSR-16)	Description of Item	Unit	Total QTY.	DSR 16 Rate (Rs)	DSR Amount	Market Rate	Market Amount
1	2.00	3	4	5	6	7	8	9
8.03	2. 25	Filling available excavated earth (excluding rock) in trenches, plinth, sides of foundations etc. in layers not exceeding 20 cm in depth, consolidating each deposited layer by ramming and watering, lead up to 50 m and lift up to 1.5 m	Cum	19	125.75	2,389.25		
		SUB TOTAL(EARTH WORK)		-		210,962.00		
9.00	NS	WATER TREATMENT PLANT (/Domestic use)				-		-
9.01		Planning, Designing, Detailing, Manufacturing, Supplying, Erection, Testing and Commissioning of Water treatment plant for supply of treated water for use of domestic purpose comprising of filter and pumps. The plant is to be installed in pump room and Raw water supply is available in UGT including design and execution of all Civil, Structural, Electrical, Mechanical, Plumbing and processing, ancillary equipments & works etc required to complete the package, getting approval from HSCC/client etc.				-		-
	a)	The shop drawings & design of WTP shall also be prepared in such a way that it comprise of the following units of required size as per detail design requirements. The work has to be carried through authorised vendor, dealer/representative of approved make.				-		-
		Providing and fixing vertical on line SS raw water filter feed pumps with CI volute and SS impellar and with stainless steel shaft, mechanical seal and chrome steel shaft sleeve, connected to a TEFC induction motor suitable for 400/440 volts,1500 RPM, 3 phase 50 cycles A.C. supply having IP 55 protection enclosure. complete with base frame, vibration eliminating pads, nuts and bolts etc. with suction stainer (Necessary RCC foundations as per requirement and as per instructions shall be provided by the agency)				-		-
i)		Raw water , filter feed pumps(only for domestic use).				-		-
	b)	Capacity : 250 lpm (Each)				-		-
		Head 35 m				-		-
	c)	Power : 7.5 HP or as required				-		-
		with 100% standby pumps(1W+1S)				-		-
ii)		Providing and fixing C.I. "Y" Type suction strainer with stainless steel perforated sheet screen,flangfd ends iner installed outside water tanks.				-		-
		100/80 mm dia (min.) or required size and required number				-		-
	NS					-		-

Name of Work : Renovation & New Construction works of Gandhi Memorial Hospital at Rewa

Sl. No.	Item no. (DSR-16)	Description of Item	Unit	Total QTY.	DSR 16 Rate (Rs)	DSR Amount	Market Rate	Market Amount
1	2.00	3	4	5	6	7	8	9
iii)		Providing and fixing gun metal or bronze ball valves/butterfly valve/NRV/Rotameter, tested to 15.00 Kg / cm2, screwed end connections complete .				-		-
		80/65 mm NB (min.) or required size and number				-		-
						-		-
iv)		Filtration Plant : Vertical Downflow Multigrade Pressure Sand Filter in MS Welded construction fabricated in accordance with IS 2825 from minimum 6 mm thick M.S. plate on shell and minimum 8 mm thick M.S. plate on dished ends as per applicable IS standards. The filter shall have :				-		-
		a) One no pressure tight manhole and at least one no. pressure tight side hole for maintenance purposes.				-		-
		b) Initial charge of Filter Media.				-		-
		c) Complete underdrain system and raw water distributor as per manufacturer's design.				-		-
		d) M.S. heavy class fabricated - epoxy coated / post galvanised face piping comprising of connections with CI Butterfly Valves of required size for inlet, outlet, backwash inlet, backwash drain and rinse drain. Air release line with GM Ball Valve of required size.				-		-
		e) Pressure gauges (100 mm dia bourdon type pressure gauge) / Sampling points with SS isolation cocks at inlet and outlet.				-		-
		f) All internal parts of the filtration plant shall be coated with two coats of food grade epoxy paint after thorough sand blasting. All external surfaces of the plant including piping shall be coated with two coats of red iron oxide / zinc chromate primer followed by two coats of high gloss enamel paint .				-		-
		g) The filter shall be complete with all gaskets / fasteners of standard quality as required.				-		-

Name of Work : Renovation & New Construction works of Gandhi Memorial Hospital at Rewa

Sl. No.	Item no. (DSR-16)	Description of Item	Unit	Total QTY.	DSR 16 Rate (Rs)	DSR Amount	Market Rate	Market Amount
1	2.00	3	4	5	6	7	8	9
		h) The filter shall be designed to give rated output at given raw water quality and flow rate without any operational problem and should not get any loss of performance as long as the operating pressure remains within the given range. Any additional provision is required to make the item complete, the same should be included herein. The work has to be carried through authorised vendor. The filter water will be supplied to treated water tank through U.V. water steriliser.				-		-
		Capacity - 250 lpm				-		-
	NS	Filtration rate - 20,000 lph/sqm (min.)				-		-
		Filter dia approx. 900 mm (min.)				-		-
		Filter HOS Min. : 1650 mm (min.)				-		-
		Working pressure : 3.0 Kg/sq cm.				-		-
		Test pressure : 4.5 Kg/sq cm				-		-
		UV WATER STERILISERS(between filter &clear water tank)				-		-
v)		High performance on line UV water sterilisers of capacity250lpm designed on at least 250 J/Sq. M. UV dosage, comprising of glass UV chamber in SS 316 housing, UV lamp and electrical circuit, wall mounted model / line mounted model, capacity 300lpm, minimum lamp rating :120 watts - (min.)Nos. UV Dosage 66,000 u watt-sec/cm2 (minimum)- Alfa or equivalent approved make.				-		-
						-		-
vi)		Providing and fixing G.I.pipes/CPVC pipes to I.S. 3589/1239 (Heavy class) with G.I./CPVC Fittings e.g., Tee, elbow reducers, unions, end cap etc., flanges & clamps, including supporting the pipes with G.I. supports, cutting and making good the walls etc. complete. For Suction & Delivery headers.				-		-
		65 mm dia (min.) (Interconnection between units)/ Drain lines etc. as per plant room requirement. (All piping and fitting of required size inside the plant room included in the item)				-		-
						-		-
vii)		Painting G.I./CPVC pipes with two or more coats of synthetic enamel paint of approved quality and shade over a coat of approved priming coat as directed by the Project-in-charge (shade as per pipe colour code).				-		-
		65 mm dia (min.) (as per required length)				-		-
						-		-

Name of Work : Renovation & New Construction works of Gandhi Memorial Hospital at Rewa

Sl. No.	Item no. (DSR-16)	Description of Item	Unit	Total QTY.	DSR 16 Rate (Rs)	DSR Amount	Market Rate	Market Amount
1	2.00	3	4	5	6	7	8	9
		Complete W.T.P as mentioned above including testing, training and trial run till comissioning of W.T.P.	Job	1.00		-	1,225,000.00	1,225,000.00
						-		-
9.02		Providing and fixing of OxiLyte (Mixed Oxidant)Generation System , based on ECA technology, producing non toxic mixed oxidant solution at 1000 ppm of Oxidant concentration with auto flushing system . The solution should be at a pH 3+-0.5 suitable for 24x7 operations should produce 720 L per day. The system should be supplied complete with appropriate dosing pumps, valves, piping, fittings, chemical dosing tank etc. complete in all respect(shope drawing model and technical data etc. are to be submitted for approval before purchase). The system shall install to dose the oxylite solution in the treated water transfer pumping main and synchronised with the operation of transfer pump	Lot	2.00		-	1200000.0	2,400,000.00
						-		-
9.03		STRUCTURAL STEEL WORK				-		-
i)		Supply, fabrication, erection, painting of pipe supports of structural steel, for piping work in the production areas and anchoring them. 2 coats of zinc chromate primer and one coat of finishing paint	Kgs.	100.00		-	700.0	70,000.00
		Subtotal (Water treatment Plant,Pump and Equipment)				-		3,695,000.00

ABSTRACT			
Name of Work : Renovation & New Construction works of Gandhi Memorial Hospital at Rewa			
S.No.	DESCRIPTION	DSR Amount (Rs)	TOTAL
A	INTERNAL PLUMBING		
1	SANITARY FIXTURES	546,934	1,632,790
2	SOIL, WASTE AND VENT PIPES	873,077	1,140,280
3	WATER SUPPLY	1,326,753	1,883,520
4	SEWERAGE AND DRAINAGE(Around Building)	1,158,400	0.0
5	RAIN WATER PIPING	92,523	49,324
	EXTERNAL PLUMBING		
6	BOREWELL	218,666	180,000
7	RAIN WATER HARVESTING	72,232	240,000
8	EARTH WORK(Plumbing work)	210,962	0.0
9	WTP		3,695,000
	Total	4,499,547	8,820,915
	Market based item (Rs)	8820915	
	Grand total	13,320,462.00	

COST ESTIMATE OF HVAC WORKS FOR GANDHI MEMORIAL HOSPITAL, REWA (M.P.)						
Item No.	DSR/ NDSR	Description	Total Qty	Unit	Rate in Rs. (in Figure)	Amount (Rs.)
1	2	3	4	5	6	8
The prices shall include the supply, installation, testing & commissioning at site of all the equipments, ancillary materials as specified and all such items what so ever which may be required to fulfill the intent and purpose as laid down in the specifications and or the drawings.						
A)		<u>EQUIPMENTS</u>				
1.0		<u>WATER CHILLING UNITS.</u>				
1.1		Supply, installation, testing & commissioning of 100 TR (actual) capacity air cooled water chilling units as specified and shown in equipment schedule complete as per specifications with-				
		a. Scroll Compressors with motor.				
		b. Drive package.				
		c. Mounting frames for all components				
		d. Air cooled condenser with accessories.				
		e. Chiller with accessories.				
		f. Refrigerant piping, fittings, accessories and valves etc.				
		g. Insulation of chiller and suction line.				
		h. First charge of refrigerant and oil.				
		i. Base frame with Vibration isolators.				
		j. Bellows in suction and discharge line for vibration isolation of suitable capacity.				
		k. Automatic capacity control arrangement.				
		l. Lot Safety controls, flow switches, pressure gauge, thermometer etc. as per specifications.				
		m. Suitable capacity motor with necessary insulation, starter panel complete with all necessary switchgears and control complete as required.				
		n. Necessary water drain & air purge valves wherever required.				
		o. Necessary lubrication device as per specifications complete.				

Item No. 1	DSR/ NDSR 2	Description 3	Total Qty 4	Unit 5	Rate in Rs. (in Figure) 6	Amount (Rs.) 8
		p. Microprocessor based control panel complete with accessories as per specifications.				
		q. COP as per ECBC and ASHRAE 90.1(Latest).				
		Chilled Water Leaving temp. 44 deg. F				
		Chilled Water Entering temp. 54 deg. F				
		Chiller fouling factor = 0.0005 (FPS units)				
		Ambient Temperature = 110 deg. F				
		Complete water chilling machine as above.	3	Nos	2,157,400	6472200
2.0		WATER CIRCULATION PUMPS				
2.1		Primary Chilled Water Pumps				
		Supply, installation, testing and commissioning of split casing end suction type centrifugal chilled water pump sets factory assembled and tested for rated efficiency mounted on a common base frame etc each capable of delivering specified flow rate complete with following as per specifications & schedule of equipments.				
		a. Pump with IP 55 TEFC induction motor with class F insulation, IE-3.				
		b. Channel base with vibration isolators, coupling, coupling guard etc.				
		c. Cladded insulation and anti corrosive coating inside and outside casing etc. of chilled water pump.				
		d. 2 Nos.- 150 mm dia dial type pressure gauge				
		e. Pumps shall be suitable for operation on 415+/- 10% Volts/ 3ph / 50 Hz/ AC power supply.				
		f. Bellows in suction and discharge line for vibration isolation of suitable capacity.				
		The pump characteristic shall be as follows:				

Item No. 1	DSR/ NDSR 2	Description 3	Total Qty 4	Unit 5	Rate in Rs. (in Figure) 6	Amount (Rs.) 8
2.1.1		Water flow rate= 240 USGPM Head = 25 Metre WC				
		Primary chilled water pumps as described above.	3	Nos	117,000	351000
3.0		Hot Water Generator				
		Supply, installation, testing & commissioning of Electric Hot Water Generator for winter heating/monsoon reheating system. Hot water generator shall be with IP 55 protection and complete with controls, sensors, controll cabling ,piping and fittings, thermal insulation, base frame etc. as per specifications. HWG shall be BMS compatible with RS 485 communication.				
3.1		Capacity : 75 KW Status : (1W)				
		Temp IN/OUT : 110/125 DegF	1	Nos.	185,665	185665
4.0		AIR HANDLING UNITS				
4.1		Supply, installation, testing and commissioning of sectional construction draw through type Air Handling Units (double skin type) of horizontal /2-tier as specified & shown in schedule of equipment complete with the following :-				
		a. Fan Section and canvas connection, Mixing Box, Thermal break profile. (double skin type)				
		b. Centrifugal blower				
		c. Coil section with cooling coil, heating coils as per specifications, <u>minimum 2 bend GSS/PVC eliminators.</u>				
		d. Pre filters with filter section in all AHUs.				

Item No. 1	DSR/ NDSR 2	Description 3	Total Qty 4	Unit 5	Rate in Rs. (in Figure) 6	Amount (Rs.) 8
		e. Fine and hepa filters with filter section wherever specifically specified as per AHU schedule .Wherever fine/hepa filters are specified, item shall include factory fabricated double skin plenum of same specifications as AHU panels and complete with filter frameworks. Fine/hepa filter section along with discharge plenum shall be part of AHU in upper tier.				
		f. Drain pan, drain connection.				
		g. Squirrel cage induction IP 55 TEFC , Insulation class 'F', Duty S1 , IE-3 drive motor, drive arrangement, guard etc.				
		h. Necessary vibration isolators & supporting arrangement.				
		i. Fresh air intake arrangement, necessary water drain & air purge valves wherever required etc.				
		j. Canvass connections, necessary foundations, 2 nos pressure gauge, 2 nos thermometer etc				
		k. Controls for AHUs comprising of a set of PN-16 rating 3-Way mixing cum diverting valve of required size having manual override facility on each AHU alongwith proportional thermostat & wiring for interconnections with 1.5 sq. mm Cu Conductor multicore armoured complete as required				
		l. Pre Filter : 90% down to 10 micron, Fine filter : 99% down to 3 micron (MERV-14), HEPA filter 99.97% down to 0.3 micron (MERV-17).				
4.1.1		AH-GF-01 - 2000cfm/ 4RD Cooling Coil/80 mm static (with pre & fine filter)	1	Nos.	190,057	190057
4.1.2		AH- FF-05, FF-06 - 11000cfm/ 6RD Cooling Coil/80 mm static (with pre & fine filter)	2	Nos.	402,474	804948
4.1.3		AH-GF-04 - 3000cfm/ 6RD Cooling Coil/80 mm static (with pre & fine filter)	1	Nos.	218,007	218007
4.1.4		AH-GF-05 - 12500cfm/ 6RD Cooling Coil/80 mm static (with pre & fine filter)	1	Nos.	458,373	458373

Item No. 1	DSR/ NDSR 2	Description 3	Total Qty 4	Unit 5	Rate in Rs. (in Figure) 6	Amount (Rs.) 8
4.1.5		AH-GF-06, GF-09 - 7000cfm/ 6RD Cooling Coil/80 mm static (with pre & fine filter)	2	Nos.	318,625	637251
4.1.6		AH-GF-07 - 4000cfm/ 6RD Cooling Coil/80 mm static (with pre & fine filter)	1	Nos.	245,956	245956
4.1.7		AH-GF-10, GF-11 - 2500 cfm/ 6RD Cooling Coil/135 mm static (with pre, fine) hepa filter on terminal by other agency	2	Nos.	279,496	558992
4.1.8		AH-GF-12 - 3000 cfm/ 6RD Cooling Coil/135 mm static (with pre, fine) hepa filter on terminal by other agency	1	Nos.	178,877	178877
4.1.9		AH-FF-01 - 8000cfm/ 6RD Cooling Coil/80 mm static (with pre & fine filter)	1	Nos.	346,575	346575
4.1.10		AH-FF-02 - 5500cfm/ 6RD Cooling Coil/80 mm static (with pre & fine filter)	1	Nos.	262,726	262726
4.1.11		AH-FF-03, FF-04 - 6500cfm/ 6RD Cooling Coil/80 mm static (with pre & fine filter)	2	Nos.	324,215	648431
4.2		CEILING SUSPENDED UNITS				
		Supply, installation, testing and commissioning of draw through type Air Handling Units (double skin type) of ceiling suspended type as specified & shown in schedule of equipment complete with the following :-				
		a. Fan Section and canvas connection, Thermal break profile. (double skin type)				
		b. Centrifugal blower				
		c. Coil as per specifications.				
		d. Pre filters as required				
		e. Drain pan, drain connection.				
		f. Squirrel cage induction drive motor IP 55, TEFC , Insulation class 'F', duty S1, IE-3 drive arrangement, guard etc.				
		g. Necessary vibration isolators & supporting arrangement.				
		h. Fresh air intake arrangement,necessary water drain & air purge valves wherever required etc.				

Item No. 1	DSR/ NDSR 2	Description 3	Total Qty 4	Unit 5	Rate in Rs. (in Figure) 6	Amount (Rs.) 8
		i. Canvass connections,suspension arrangement, 2 nos pressure gauge, 2 nos thermometer etc				
		j. Controls for AHUs comprising of a set of PN-16 rating 3-Way mixing cum diverting valve of required size having manual override facility on each AHU alongwith proportional thermostat & wiring for interconnections with 1.5 sq. mm Cu Conductor multicore armoured complete as required.				
		k. Pre Filter : 90% down to 10 micron, Fine filter : 99% down to 3 micron (MERV-14), HEPA filter 99.97% down to 0.3 micron (MERV-17).				
4.2.1		FF-08 - 2000 cfm/ 4RD Cooling Coil / 65 mm static (with pre & fine filter)	1	Nos.	72,222	72222
5.0	NDSR	FAN COIL UNITS				
5.1		Supply, installation, testing and commissioning of horizontal type ceiling suspended FCU, each complete with 3 row deep chilled water cooling coil of copper tubes aluminium fins construction, centrifugal fan, 3 speed motor, aluminium cleanable filters insulated condensate drain pan, coil piping connections, condensate drain connection. Complete controls comprising solenoid valve, three speed selector switch, room thermostat with display and on-off switch in chilled water lines at each fan coil unit. FCU shall be complete with vibration isolator, wiring complete as required, with ball valve, ball valve with strainer as required as per specification & drawings with the following capacities:-				
5.1.1		1.5 TR	2	Nos.	20,358	40716

Item No. 1	DSR/ NDSR 2	Description 3	Total Qty 4	Unit 5	Rate in Rs. (in Figure) 6	Amount (Rs.) 8
5.1.2		2.0 TR	2	Nos.	22,237	44474
6.0		SPLIT AIR CONDITIONERS				
		Supply , installation , testing and commisioning of HI wall split air conditioner comprising of the following.				
		a) Outdoor condensing Units				
		b) Indoor Evaporative Units				
		c) Interconnecting Refrigerant and drain piping with insulation wherever required, refrigerant and oil. The unit shall include refrigerant piping, power cabling and drain piping.				
		c) Safety and operational controls				
		e) Hi-wall splits shall be suitable for single phase power supply and complete with suitable rating voltage stablizer.				
		f) Mounting arrangement and structural supports for outdoor unit are included.				
		g) The units should have 3 star rating from BEE.				
6.1		Capacity : 2.0 TR	2	Nos.	55,216	110432
6.2		Capacity : 1.5 TR	2	Nos.	44,597	89194
6.3		Extra for supply and installation of copper pipinng with fittings complete with nitrile rubber insulation for connecting indoor and outdoor Units	20	Rmt	632	12640
6.4		Extra for supply and installation of drain water PVC pipe from indoor unit to outdoor drain point.	20	Rmt	180	3600
7.0		Inline Fans/ Ventilation fans				

Item No. 1	DSR/ NDSR 2	Description 3	Total Qty 4	Unit 5	Rate in Rs. (in Figure) 6	Amount (Rs.) 8
7.1		Supply, installation, testing and commissioning of Inline Fans as shown in drawings and as per equipment schedule .Each fan shall be complete with centrifugal blowers, totally enclosed fan cooled motor. Fan motor shall be suitable for single phase, 220 +/- 6% V, 50 Hz AC supply. Item shall be complete with starter & cabling.				
		Inline Fans				
7.1.1		Duty: Exhaust				
		Air Quantity :550 CFM	4	Nos.	21,723	86892
		Static Pressure :20 mm wg				
7.1.2		Duty: Exhaust				
		Air Quantity :250 CFM	1	Nos.	16,000	16000
		Static Pressure :20 mm wg				
		Ventilation Fans				
7.3		Tube Axial Flow Fans				
		Supply, installation,testing and commissioning of tube axial flow fans as shown in drawings, Each fan shall be direct driven. Fan motor shall be suitable for 3 Phase, 415+/- 10% V, 50Hz AC supply with IP 55 protection, class 'F' insulation and IE-3 class. Fan shall be complete with gravity louvers, vibration isolators				
		Floor / Services ventilation (Fresh Air Supply/ Exhaust)				
7.3.1		Air Quantity : 3500 CFM, 25 mm st. pr.	5	Nos.	52,911	264555
7.3.2		Air Quantity : 4000 CFM, 25 mm st. pr.	2	Nos.	52,911	105822

Item No. 1	DSR/ NDSR 2	Description 3	Total Qty 4	Unit 5	Rate in Rs. (in Figure) 6	Amount (Rs.) 8
7.3.3		Air Quantity : 5000 CFM, 25 mm st. pr.	2	Nos.	54,330	108660
7.3.4		Air Quantity : 6000 CFM, 25 mm st. pr.	1	Nos.	59,653	59653
7.4	NDSR	Tube Axial Fans (Fire rated)				
		Supply, installation, testing and commisioning of tube axial flow fans as shown in drawings, Each fan shall be direct driven.. Fan motor shall be suitable for 3 Phase, 415+/- 10% V, 50Hz AC supply with IP 55 protection, class H insulation and IE-3 class. Fan shall be complete with vibration isolators, gravity louvers. Fan shall be 250 deg C, 2hrs fire rated				
		Smoke exhaust on floors				
7.4.1		Air Quantity : 3500 CFM, 25 mm st. pr.	5	Nos.	56,237	281185
7.4.2		Air Quantity : 4000 CFM, 25 mm st. pr.	2	Nos.	56,237	112474
7.4.3		Air Quantity : 5000 CFM, 25 mm st. pr.	2	Nos.	57,968	115936
7.4.4		Air Quantity : 6000 CFM, 25 mm st. pr.	1	Nos.	65,000	65000
8.0	NDSR	Pan type Humidifier				

Item No. 1	DSR/ NDSR 2	Description 3	Total Qty 4	Unit 5	Rate in Rs. (in Figure) 6	Amount (Rs.) 8
		Supply, installation, testing and commissioning of electric pan type humidifiers in each Air Handling Rooms to provide humidification during winter months heating operation. The humidifier shall evaporate 12 liters water per hour and complete with all required water valves incoming MCB, humidistat and, electrical & control wiring and earthing as required.				
8.1		6 KW	3	Sets	46,251	138752
9.0	NDSR	MONSOON REHEAT ARRANGEMENT FOR OTs AND ICUs				
		Supply, installation, testing & commissioning of monsoon reheating arrangements fixed in ducts/ plenums complete with strip heaters, fixing frame work, insulators, fire protection insulation in duct, controls such as heating thermostats, humidistats etc. The heaters banks shall be controlled by independent thermostats/ humidistats through electro magnetic type contactors and safety thermostats/ geysers as specified complete with wiring for interconnections with 1.5 sq.mm copper conductor multi core armoured cable. The heater capacity shall be as per schedule of equipment and specifications, drawing etc.				
9.1		3Kw(1.5 KW x 2 banks)	5	Sets	22,915	114576
10.0		EXPANSION TANK				

Item No. 1	DSR/ NDSR 2	Description 3	Total Qty 4	Unit 5	Rate in Rs. (in Figure) 6	Amount (Rs.) 8
		Supply, installation, testing and commissioning of 1000 litres capacity expansion tank fabricated from 3mm MS sheet and having 19 mm thick aluminium foil faced nitrile rubber foam insulation covered with 28 Ga Aluminium sheet with man hole cover, drain, overflow, quick fill, water supply connections, valves and complete in all respects as per drawings and specification.				
10.1		1000 ltrs.	1	No.	39,848	39848
	B)	<u>PIPING</u>				
11.0	DSR	INSULATED CHILLED WATER PIPING (Nitrile Rubber Insulation)				
11.1	16.2	Supplying, laying/ fixing, testing and commissioning of following nominal sizes of chilled water piping inside the building (with necessary clamps, vibration isolators and fittings but excluding valves, strainers, gauges etc.) duly insulated with following closed cell elastometric nitrile rubber of minimum 45 Kg / m ³ density, thermal conductivity 0.037 W/MK or better at 20 deg mean temperature class 'O' insulation applied by suitable adhesive complete including repairing of damage to building etc. as per specifications and as required complete in all respect. Note:-The Pipes of sizes 150 mm & below shall be M.S. 'C' class as per IS : 1239 and pipes size above 150 mm shall be welded black steel pipe heavy class as per IS: 3589, from minimum 6.35 mm thick M.S. Sheet for pipes upto 350 mm dia. and from minimum 7mm thick MS sheet for pipes of 400 mm dia and above				

Item No. 1	DSR/ NDSR 2	Description 3	Total Qty 4	Unit 5	Rate in Rs. (in Figure) 6	Amount (Rs.) 8
11.1.1	16.2.5	200mm dia. (32 mm thick insulation)	20	RM	3,504	70080
11.1.2	16.2.6	150mm dia. (32 mm thick insulation)	50	RM	2,439	121950
11.1.3	16.2.7	125mm dia. (32 mm thick insulation)	280	RM	2,142	599760
11.1.4	16.2.8	100mm dia. (32 mm thick insulation)	80	RM	1,709	136720
11.1.5	16.2.9	80mm dia. (32 mm thick insulation)	380	RM	1,255	476900
11.1.6	16.2.10	65mm dia. (32 mm thick insulation)	400	RM	1,030	412000
11.1.7	16.2.11	50mm dia. (32 mm thick insulation)	160	RM	881	140960
11.1.8	16.2.12	40mm dia. (32 mm thick insulation)	100	RM	702	70200
11.1.9	16.2.13	32mm dia. (19 mm thick insulation)	115	RM	564	64860
11.1.10	16.2.14	25mm dia. (19 mm thick insulation)	80	RM	463	37040
11.1.11	NDSR	20mm dia. (19 mm thick insulation)	50	RM	420	21000
11.2	NDSR	PIPING (Burried)				

Item No. 1	DSR/ NDSR 2	Description 3	Total Qty 4	Unit 5	Rate in Rs. (in Figure) 6	Amount (Rs.) 8
		Supply, Installation, Testing and Commissioning of following nominal sizes of Chilled water piping Outside the building burried in ground (with necessary clamps, vibration isolators and fittings but excluding valves, strainers, gauges) adequately supported on rigid supports and duly insulated with fire retardant quality expanded polysterene molded pipe sections of specified density after a thick coat of cold setting adhesive (CPRX compound) wrapping with 500 gm polythene faced hessain and secured with 0.5mm x 20mm G.I wire mesh and two coats of cement plaster (each layer not less than 10mm) as per specifications including digging and refilling the trenches and providing suitable thickness 1:2:4 cement concrete pads at 3 m intervals complete as per specifications and as required.				
11.2.1		150 mm dia	100	RM	3,500	350000
11.2.2		125 mm dia	40	RM	3,000	120000
12.0	DSR	INSULATED VALVES & STRAINERS				
		Supplying, fixing, testing and commissioning of following valves, strainers, gauges in the chilled water plumbing duly insulated to the same specifications as the connected piping and adequately supported as per specifications.				
12.1	16.7.1	Butterfly valves (Manual) : with C I body SS Disc, Nitrile Rubber Seal & O- Ring PN 16 pressure rating for chilled water/ hot water circulation as specified				

Item No. 1	DSR/ NDSR 2	Description 3	Total Qty 4	Unit 5	Rate in Rs. (in Figure) 6	Amount (Rs.) 8
12.1.1	16.7.1.2	150 mm dia.	2	Nos	6,625	13250
12.1.2	16.7.1.3	125 mm dia.	4	Nos	5,780	23120
12.1.3	16.7.1.4	100 mm dia.	12	Nos	5,330	63960
12.1.4	16.7.1.5	80 mm dia.	4	Nos	3,719	14876
12.1.5	16.7.1.6	65 mm dia	10	Nos	3,351	33510
12.1.6	16.7.1.7	50 mm dia.	6	Nos	3,050	18300
12.1.7	16.7.1.8	40 mm dia.	4	Nos	2,686	10744
12.1.8	NDSR	32 mm dia	8	Nos	2,200	17600
12.1.9	NDSR	20 mm dia	2	Nos	1,600	3200
12.2	16.7.2	Balancing valves with built in measuring facility with C I body flanged construction with EPDM coated disc with long pitch with protected out pipe insulation & PN 16 pressure rating for chilled / hot water circulation as specified.				
12.2.1	16.7.2.3	125 mm dia.	2	Nos	18,608	37216
12.2.2	16.7.2.4	100 mm dia.	3	Nos	11,945	35835
12.2.3	16.7.2.5	80 mm dia.	4	Nos	7,395	29580
12.2.4	16.7.2.6	65 mm dia.	5	Nos	7,101	35505
12.2.5	16.7.2.7	50 mm dia.	3	Nos	6,386	19158
12.2.6	16.7.2.8	40 mm dia.	2	Nos	3,175	6350
12.2.7	NDSR	32 mm dia.	4	Nos	2,500	10000

Item No. 1	DSR/ NDSR 2	Description 3	Total Qty 4	Unit 5	Rate in Rs. (in Figure) 6	Amount (Rs.) 8
12.2.8	NDSR	20 mm dia.	2	Nos	2,200	4400
12.3	16.7.3	Non return/Check valves : with duel plate of C I body SS plates vulcanized NBR seal flanged end & PN 16 pressure rating for chilled / hot water circulation including insulation as specified.				
12.3.1	16.7.3.3	100 mm dia.	3	Nos	5,163	15489
12.4	16.7.4	Y- strainers of Ductile CI Body flanged ends with stainless steel strainer for chilled / hot water circulation including insulation as specified.				
12.4.1	16.7.4.4	100 mm dia.	3	Nos	6,918	20754
12.4.2	16.7.4.5	80 mm dia.	3	Nos	5,026	15078
12.4.3	16.7.4.6	65 mm dia	5	Nos	4,434	22170
12.4.4	16.7.4.7	50 mm dia	3	Nos	3,516	10548
12.4.5	16.7.4.8	40 mm dia	2	Nos	2,478	4956
12.4.6	NDSR	32 mm dia	4	Nos	2,100	8400
12.4.7	NDSR	20 mm dia	2	Nos	1,700	3400
12.5		Providing and fixing in position the following Gate Valves duly insulated as per specifications:				
12.5.1		50 mm dia Valves	2	Nos.	2,500	5000
12.5.2		40 mm dia Valves	2	Nos.	2,000	4000

Item No. 1	DSR/ NDSR 2	Description 3	Total Qty 4	Unit 5	Rate in Rs. (in Figure) 6	Amount (Rs.) 8
12.5.3		32 mm dia Valves	2	Nos.	1,800	3600
12.6	NDSR	Auto Air Vent Valves				
12.6.1		15 mm dia	4	Nos.	850	3400
12.6.2		25 mm dia	4	Nos.	1,200	4800
12.7	NDSR	Ball Valve with strainer				
12.7.1		25 mm	4	Nos.	2,100	8400
12.7.2		20 mm	4	Nos.	2,000	8000
12.8	NDSR	Ball valve without strainer				
12.8.1		25 mm	4	Nos.	1,200	4800
13.8.2		20 mm	4	Nos.	1,000	4000
12.9		Supply, installation, testing and commissioning cooling-heating thermostats :-				
12.9.1		For AHUs	17	Nos.	4,238	72046
12.10	NDSR	DRAIN PIPING				
		Supply, laying/fixing, testing and commissioning of G.I. medium class ERW piping confirming to IS:1239 with necessary clamps, supports, anti vibration mountings, hangers and fittings such as bends, tees, reducers etc. duly insulated with nitrile rubber insulation and finally applying 0.63 mm aluminium cladding as per specifications for condensate drain from air handling units and chillers etc.				

Item No. 1	DSR/ NDSR 2	Description 3	Total Qty 4	Unit 5	Rate in Rs. (in Figure) 6	Amount (Rs.) 8
12.10.1		50 mm dia	60	RM	674	40440
12.10.2		40 mm dia	60	RM	524	31440
12.10.3		25 mm dia	40	RM	375	15000
C)		<u>AIR DISTRIBUTION</u>				
13.0	DSR	GSS DUCTING				
13.1	16.12.1	Supply, installation, balancing and commissioning of factory fabricated GSS sheet metal rectangular ducting complete with neoprene rubber gaskets, elbows, splitter dampers, vanes, hangers, supports etc. as per approved drawings and specifications of following sheet thickness complete as required.				
13.1.1	16.12.1.4	Thickness 1.25 mm sheet	150	Sqm.	1,278	191700
13.1.2	16.12.1.3	Thickness 1.00 mm sheet	100	Sqm.	1,014	101400
13.1.3	16.12.1.2	Thickness 0.80 mm sheet	1500	Sqm.	905	1357500
13.1.4	16.12.1.1	Thickness 0.63 mm sheet	1100	Sqm.	739	812900
14.0	NDSR	ALUMINIUM DUCTING				
14.1		Supply, fabrication, installation and testing of aluminium ducts in accordance with the approved shop floor drawing and specifications. Material should confirm to IS 737 latest edition.				
14.1.1		Thickness 0.80 mm sheet	500	Sqm.	765	382500
14.1.2		Thickness 1.00 mm sheet	150	Sqm.	956	143400

Item No. 1	DSR/ NDSR 2	Description 3	Total Qty 4	Unit 5	Rate in Rs. (in Figure) 6	Amount (Rs.) 8
15.0	DSR	FIRE DAMPERS				
	16.20	Supplying, Fixing,testing and commissioning of fire dampers in supply air duct/main branch and return air path as and where required of required sizes i/c control wiring,the damper shall be motorized and spring return so as to close the damper in the event of power failure automatically and open the same in case of power being restored. The spring return action shall be inbuilt mechanism and not externally mounted. The damper shall also be closed in the event of fire signal complete as required and as per specifications.				
15.1	16.20.1	Fire/smoke Damper	15	Sqm	7,103	106545
15.2	16.20.2	Actuator	34	sets	6,604	224536
16.0	DSR	VOLUME CONTROL DAMPERS				
16.1	16.13	Supply, installation, testing and commissioning of GI volume control duct damper complete with neoprene rubber gaskets, nuts, bolts, screws linkages, flanges etc. as per specifications.	20	Sqm.	5,463	109260
17.0	DSR	CEILING DIFFUSERS				
17.1	16.17	Supplying, fixing testing commissioning of supply air diffusers of powder coated aluminium with aluminium volume control dampers with anti smudge ring & removable core	10	Sqm.	8,686	86860
17.2	16.18	Supplying, fixing testing commissioning of Return air diffusers of powder coated aluminium without volume control dampers with anti smudge ring & removable core.	10	Sqm.	5,619	56190
18.0	DSR	GRILLES				

Item No. 1	DSR/ NDSR 2	Description 3	Total Qty 4	Unit 5	Rate in Rs. (in Figure) 6	Amount (Rs.) 8
		Supply, installation, testing and balancing of supply/return air grilles with/without volume control dampers of powder coated aluminium construction suitable for installation in walls, false ceiling boxing etc as per specifications and drawings.				
18.1	16.15	Supplying & fixing of powder coated extruded aluminium Supply Air Grilles with aluminium volume control dampers as per specifications.	10	Sqm.	7,132	71320
18.2	16.16	Supplying & fixing of powder coated extruded aluminium Return Air Grilles with louvers but without volume control dampers complete as required.	10	Sqm.	4,065	40650
19.0	NDSR	LINEAR GRILLES				
		Supply, installation, testing and balancing of air linear grilles of powder coated aluminium construction suitable for installation in walls/false ceiling, boxing etc as per specifications and drawings.	60	Sqm.	4,706	282360
20.0	NDSR	GRILLE DAMPERS				
		Supply, installation and balancing of aluminium construction volume control dampers for linear grilles.	25	Sqm.	3,797	94925
21.0	NDSR	LAMINAR FLOW DIFFUSERS				
		Providing & fixing of 18swg aluminium powder coated non-respiratory 100% air tight laminar flow diffusers. LFDs shall have 50% perforation. The perforated front face is openable hinge type complete with key operated opposed blade dampers from front.				
21.1		Size: 1200 x 600	24	Nos.	11,913	285919
22.0	NDSR	FRESH AIR GRILLES with bird screen				

Item No. 1	DSR/ NDSR 2	Description 3	Total Qty 4	Unit 5	Rate in Rs. (in Figure) 6	Amount (Rs.) 8
		Supply, installation, testing, commissioning and balancing of fresh air opening comprising of powder coated extruded aluminium louvers with bird screen, projection with frame and volume control damper with lever mounting arrangement etc. as per specifications and drawings.	5	Sqm.	8,300	41500
23.0		DUCT INSULATION				
23.1	16.23	Supplying and fixing of following thickness duly laminated aluminum foil of mat finish closed cell Nitrile rubber (Class "O") insulation on existing duct after applying suitable adhesive for Nitrile rubber. The joints shall be sealed with 50 mm wide and 3 mm thick self adhesive nitrile rubber tape insulation complete as per specifications and as required.				
23.1.1	16.23.1	19 mm	3500	Sqm.	821	2873500
23.1.2	16.23.2	25 mm with GC (UV protectin for outdoor application)	150	Sqm.	1,034	155100
24.0		ACOUSTIC				
24.1		DUCT ACOUSTIC LINING				
	16.21	Supply and fixing of acoustic lining of supply air duct and plenum with 25 mm thick resin bonded glass wool having density of 32 kg/m ³ , with 25 mm X 25 mm GI section of 1.25 mm thick, at 600 mm centre to centre covered with Reinforced Plastic tissue paper and 0.5 mm thick perforated aluminum sheet fixed to inside surface of ducts with cadmium plated nuts, bolts, stick pins, CPRX compound etc. complete as required and as per specifications.	20	Sqm.	551	11020

Item No. 1	DSR/ NDSR 2	Description 3	Total Qty 4	Unit 5	Rate in Rs. (in Figure) 6	Amount (Rs.) 8
		Note:- No lining inside supply / return duct or plenum shall be done if the airside system is equipped with fine, hepa filters.				
		D)				
		ELECTRICAL				
25.0	NDSR	MAIN HVAC PANEL				
		Supply, installation, testing and commissioning of A/C Panel, cubicle type, totally enclosed, free standing type, dust, damp and vermin proof panel, powder coated, made up of CRCA sheet, complete with aluminum busbars, danger notice plate, interconnections with suitable capacity aluminum leads/solid aluminum strips/rods, necessary interlocking, and having incoming and outgoing switchgears as mentioned below. Complete as per technical specifications and as required.				
		Note :				
i		All ACBs shall have spare contacts				
ii		All ACBs should have $I_{cw} = I_{cs} = I_{cu} = 50$ KA for 1 sec				
iii		All MCCBs shall have $I_{cs} = I_{cu} = 100\%$				
iv		Separate fault indication for O/L, S/C, & E/F to be provided on Panel Door for all outgoing having microprocessor based MCCB				
v		All indication Lamps will be LED Type .				
vi		All starters of this panel shall be provided with digital ampere meter with suitable CTs, thermal overload relay, inbuilt/separate single phase preventer, contactors, timers, spare NO-NC contacts, push buttons, ON, OFF, TRIP indication (LED Type) and potential free contacts and relay for interlocking to FDA etc. complete as required.				

Item No. 1	DSR/ NDSR 2	Description 3	Total Qty 4	Unit 5	Rate in Rs. (in Figure) 6	Amount (Rs.) 8
vii		100 VA transformer 220v/24v AC for control wiring with 10 no.s 6A SP MCB 10 KA in all AHU panel is also in the scope of supply				
25.1		Main/ Emergency Air-conditioning MCC in plant room				
A		INCOMER				
i		2 No. ACB Panels each having following:				
		800A , 415 V, Motorised, Fully Drawout type (EDO), Four Pole, Air Circuit Breaker with microprocessor based overload, short circuit, Instantaneous & Earth Fault trip and lockable trip push button.				
		R, Y & B Phase indicating lamps (LED type) with 6A control SP MCBs.				
		Indicating lamps (LED Type) with 6A protection MCBs to indicate OPEN, CLOSE, TRIP for ACB.				
		Push button to Close the ACB.				
		1 Digital multifunction meter with suitable CTs.				
B		BUSBARS				
		1000 Amps TPN busbars of aluminium with temperature rise of 40 degree celsius over and above ambient temperature of 45 degree celsius.				
C		Bus Coupler				
i		1 No. ACB Panels each having following:				
		800A, 415 V, Motorised, Fully Drawout type (EDO), Four Pole, Air Circuit Breaker with microprocessor based overload, short circuit, Instantaneous & Earth Fault trip and lockable trip push button.				

Item No. 1	DSR/ NDSR 2	Description 3	Total Qty 4	Unit 5	Rate in Rs. (in Figure) 6	Amount (Rs.) 8
		Indicating lamps (LED Type) with 6A protection MCBs to indicate OPEN, CLOSE, TRIP for ACB.				
		Push button to CLOSE the ACB.				
		1 Set of Digital Ammeter with ASS and CTs.				
D		OUTGOING				
i		3 Nos. MCCB feeder as per following details/ specifications: For Water Chilling Machines				
		320 Amp, 415 volts, 50 KA, Four Pole, MCCB with Microprocessor based release having variable current settings of O/L, S/C & inbuilt E/F protection				
		Extended rotary operating mechanism with door interlock, defeat feature and padlock facility. MCCB should be with spreader link and phase barriers.				
		Indicating lamps (LED Type) with 6A protection MCBs to indicate ON, OFF, TRIP.				
		Digital ammeter with selector switch with one set Suitable C.Ts.				
ii		3 Nos. MCCB feeder as per following details/ specifications: For Hot Water Generators/ AHU distribution panel				
		250 Amp, 415 volts, 50 KA, Four Pole, MCCB with Microprocessor based release having variable current settings of O/L, S/C & inbuilt E/F protection				
		Extended rotary operating mechanism with door interlock, defeat feature and padlock facility. MCCB should be with spreader link and phase barriers.				
		Indicating lamps (LED Type) with 6A protection MCBs to indicate ON, OFF, TRIP.				
		Digital ammeter with selector switch with one set Suitable C.Ts.				

Item No. 1	DSR/ NDSR 2	Description 3	Total Qty 4	Unit 5	Rate in Rs. (in Figure) 6	Amount (Rs.) 8
	iii	3 Nos. MCCB feeder as per following details/ specifications:				
		63 Amp 415 volts, ,50 KA FP MCCB with thermal magnetic release having variable current settings of O/L, S/C protection.				
		Extended rotary operating mechanism with door interlock, defeat feature and padlock facility. MCCB should be with spreader link and phase barriers.				
		3 Phase, fully automatic Star Delta Starter for 10 HP primary chilled water pumps.				
	iv	2 Nos. MCCB feeder as per following details/ specifications:				
		32 Amp 415 volts, ,50 KA FP MCCB with thermal magnetic release having variable current settings of O/L, S/C protection.				
		Extended rotary operating mechanism with door interlock, defeat feature and padlock facility. MCCB should be with spreader link and phase barriers.				
		Indicating lamps (LED Type) with 6A protection MCBs to indicate ON, OFF, TRIP.				
		Digital ammeter with selector switch with one set Suitable C.Ts.				
		Main HVAC panel Complete as above	1	Panel	1,600,000	1600000
25.2	NDSR	AHU Distribution Panels				

Item No. 1	DSR/ NDSR 2	Description 3	Total Qty 4	Unit 5	Rate in Rs. (in Figure) 6	Amount (Rs.) 8
		Supply, installation, testing and commissioning of following M.V. cubicle type totally enclosed, wall mounted/Free standing type, powder coated, dust, damp and vermin proof, indoor type Distribution Board/Panel complete with busbars, M.V. danger notice plate, interconnections with suitable capacity aluminium leads/solid aluminium strips/rods, connection of incoming and outgoing cables with thimbles, and having following incoming and outgoing switchgears complete as per technical specification and as required.				
		NOTE				
	i	All MCCBs shall have Ics=Icu=100%				
	ii	100 VA transformer 220v/24v AC for control wiring with 10 no.s 6A SP MCB 10 KA in all AHU panel is also in the scope of supply				
	iii	All starters shall be provided with digital ampere meter with suitable CTs, thermal overload relay, inbuilt/separate single phase preventer, contactors, Timers, spare NO-NC contacts, Push Buttons ON, OFF, TRIP indication (LED Type) and potential free Contact & relays for interlocking to FIDA etc. complete as required.				
	iv	All indication Lamps will be LED Type.				
	v	All MCCBs shall have extended rotary operating mechanism with door interlocking with defeat feature and padlock facility. MCCB should have spreader links & phase barriers.				
	25.2.1	AHP DB- GF/FF				
		INCOMER :				
		1 no 250 Amp, 415 volts, 35 KA, Four Pole MCCB Microprocessor based release with variable current settings of O/L, S/C, E/F.				
		Extended rotary operating mechanism with door interlocking with defeat feature and padlock facility. MCCB should have spreader links & phase barriers.				

Item No. 1	DSR/ NDSR 2	Description 3	Total Qty 4	Unit 5	Rate in Rs. (in Figure) 6	Amount (Rs.) 8
		R,Y&B phase indicating lamp (LED type) with 6A control SP MCB & ON, OFF, TRIP Indication.				
		1 No. 0 to 500 V Digital voltmeter with selector switch.				
		Digital ammeter with selector switch with one set Suitable C.Ts.				
		Bus Bar				
		300 A TPN Aluminium bus bar 415V , 50 Hz.				
		OUTGOINGS :				
i		6 Set- 100 Amp 415 volts, 35 KA FP MCCB with thermal magnetic release having variable current settings of O/L, S/C protection.				
		Extended rotary operating mechanism with door interlocking with defeat feature and padlock facility. MCCB should have spreader links & phase barriers				
		Indicating lamps (LED Type) with 6A protection MCBs to indicate ON, OFF, TRIP.				
ii		2 Set- 63 Amp 415 volts, 35 KA FP MCCB with thermal magnetic release having variable current settings of O/L, S/C protection.				
		Extended rotary operating mechanism with door interlocking with defeat feature and padlock facility. MCCB should have spreader links & phase barriers				
		Indicating lamps (LED Type) with 6A protection MCBs to indicate ON, OFF, TRIP.				
		Complete panel as above	2	Panel	150,000	300000
25.2.2		AHP- FF-01, FF- 04				
		INCOMER :				

Item No. 1	DSR/ NDSR 2	Description 3	Total Qty 4	Unit 5	Rate in Rs. (in Figure) 6	Amount (Rs.) 8
		1 nos. 100 Amp 415 volts, 35 KA FP MCCB with thermal magnetic release having variable current settings of O/L, S/C /E/F protection.				
		R,Y&B phase indicating lamp (LED type) with 6A control SP MCB & ON, OFF, TRIP Indication.				
		1 No. 0 to 500 V Digital voltmeter with selector switch.				
		Digital ammeter with selector switch with one set Suitable C.Ts.				
		Bus Bar				
		300 A TPN Aluminium bus bar 415V , 50 Hz.				
		OUTGOINGS :				
i		1 set - 63 A, 415 volts, 10 KA C- Curve, Four Pole, Miniature Circuit Breaker.				
		3 Phase, fully automatic Stardelta Starter for 10/12.5 HP AHU motor as required.				
ii		3 set - 16 A, 415 volts, 35 KA C- Curve, Four Pole, Miniature Circuit Breaker.				
		3 Phase, fully automatic DOL Starter for 1/1.5 HP Ventilation fan motor as required.				
		Complete panel as above	2	Panel	55,000	110000
25.2.3		AHP-FF-02, FF-03, GF-05				
		INCOMER :				
		1 nos. 63 Amp 415 volts, 35 KA FP MCCB with thermal magnetic release having variable current settings of O/L, S/C/E/F protection.				
		R,Y&B phase indicating lamp (LED type) with 6A control SP MCB & ON, OFF, TRIP Indication.				

Item No. 1	DSR/ NDSR 2	Description 3	Total Qty 4	Unit 5	Rate in Rs. (in Figure) 6	Amount (Rs.) 8
		1 No. 0 to 500 V Digital voltmeter with selector switch.				
		Digital ammeter with selector switch with one set Suitable C.Ts.				
		Bus Bar				
		300 A TPN Aluminium bus bar 415V , 50 Hz.				
		OUTGOINGS :				
i		2 set - 32 A, 415 volts, 35 KA C- Curve, Four Pole, Miniature Circuit Breaker.				
		3 Phase, fully automatic DOL Starter for 5/7.5 HP AHU motor as required.				
ii		4 set - 16 A, 415 volts, 35 KA C- Curve, Four Pole, Miniature Circuit Breaker.				
		3 Phase, fully automatic DOL Starter for 1/1.5/2 HP Ventilation fan motor as required.				
		Complete panel as above	3	Panel	65,000	195000
25.2.4		AHP-GF-02				
		INCOMER :				
		1 nos. 100 Amp 415 volts, 35 KA FP MCCB with thermal magnetic release having variable current settings of O/L, S/C/E/F protection.				
		R,Y&B phase indicating lamp (LED type) with 6A control SP MCB & ON, OFF, TRIP Indication.				
		1 No. 0 to 500 V Digital voltmeter with selector switch.				
		Digital ammeter with selector switch with one set Suitable C.Ts.				

Item No. 1	DSR/ NDSR 2	Description 3	Total Qty 4	Unit 5	Rate in Rs. (in Figure) 6	Amount (Rs.) 8
		Bus Bar				
		300 A TPN Aluminium bus bar 415V , 50 Hz.				
		OUTGOINGS :				
i		1 set - 63 A, 415 volts, 35 KA C- Curve, Four Pole, Miniature Circuit Breaker.				
		3 Phase, fully automatic Stardelta Starter for 10 HP AHU motor as required.				
ii		1 set - 16 A, 415 volts, 35 KA C- Curve, Four Pole, Miniature Circuit Breaker.				
		3 Phase, fully automatic DOL Starter for 3 HP AHU motor as required.				
iii		3 set - 16 A, 415 volts, 10 KA C- Curve, Four Pole, Miniature Circuit Breaker.				
		3 Phase, fully automatic DOL Starter for 2 HP Ventilation fan motor as required.				
		Complete panel as above	1	Panel	100,000	100000
25.2.5		AHP- OT Panel				
		INCOMER :				
		1 nos. 125 Amp 415 volts, 35 KA FP MCCB with thermal magnetic release having variable current settings of O/L, S/C/E/F protection.				
		R,Y&B phase indicating lamp (LED type) with 6A control SP MCB & ON, OFF, TRIP Indication.				
		1 No. 0 to 500 V Digital voltmeter with selector switch.				
		Digital ammeter with selector switch with one set Suitable C.Ts.				

Item No. 1	DSR/ NDSR 2	Description 3	Total Qty 4	Unit 5	Rate in Rs. (in Figure) 6	Amount (Rs.) 8
		Bus Bar				
		300 A TPN Aluminium bus bar 415V , 50 Hz.				
		OUTGOINGS :				
i		1 Set- 32 Amp 415 volts, ,35 KA FP MCCB with thermal magnetic release having variable current settings of O/L, S/C/E/F protection.				
		3 Phase, fully automatic Star Delta Starter for 5 HP AHU motor as required.				
ii		1 set - 32 A, 415 volts, 10 KA C- Curve, Four Pole, Miniature Circuit Breaker.				
		3 Phase, fully automatic DOL Starter for 7.5 HP AHU motor as required.				
iii		2 set - 32 A, 415 volts, 10 KA C- Curve, Four Pole, Miniature Circuit Breaker for Humidifier/ Monsoon Reheater as required.				
iv		2 set - 16 A, 415 volts, 10 KA C- Curve, Four Pole, Miniature Circuit Breaker.				
		3 Phase, fully automatic DOL Starter for 1.5/2 HP Ventilation fan motor as required.				
		Complete panel as above	3	Panel	143,600	430800
26.0		CABLING				
26.1	NDSR	LT CABLES				

Item No. 1	DSR/ NDSR 2	Description 3	Total Qty 4	Unit 5	Rate in Rs. (in Figure) 6	Amount (Rs.) 8
		Supply of following sizes of 1.1 kV grade multicore aluminium conductor PVC sheathed armoured XLPE cable as per IS 7098.				
26.1.1		3.5 Core 25 Sqmm.	700	Metre	232	162400
26.1.2		3.5 Core 35 Sqmm.	50	Metre	287	14350
26.1.3		3.5 Core 50 Sqmm.	400	Metre	369	147600
26.1.4		3.5 Core 95 Sqmm.	200	Metre	622	124400
26.1.5		3.5 Core 185 Sqmm.	150	Metre	1,146	171900
26.1.6		3.5 Core 300 Sqmm.	200	Metre	1,771	354200
26.1.7		4 Core 16 Sq mm	100	Metre	189	18900
26.1.8		4 Core 10 Sq mm	100	Metre	166	16600
26.1.9		4 Core 6 Sq mm	200	Metre	132	26400
26.1.10		4 Core 4 Sqmm.	200	Metre	114	22800
26.1.11		3 Core 4 Sqmm.	300	Metre	100	30000
26.2	7.8	Laying and fixing of one number PVC insulated and PVC sheathed/ XLPE powe cable of 1.1 KV grade of following size on cable tray as required.				
26.2.1	7.8.1	Up to 35 sq.mm (clamped with 1mm thick saddle)	900	Metre	20	18000
26.2.2	7.8.2	Above 35 Sq mm and upto 95 Sq mm (clamped with 25 X 3mm MS flat clamp).	550	Metre	48	26400
26.2.3	7.8.3	Above 95 Sq mm and up to 185 Sq mm (clamped with 25/40x3mm MS flat clamp).	250	Metre	59	14750
26.2.4	7.8.4	Above 185 Sq mm and up to 400 Sq mm (clamped with 40x3mm MS flat clamp).	150	Metre	91	13650

Item No. 1	DSR/ NDSR 2	Description 3	Total Qty 4	Unit 5	Rate in Rs. (in Figure) 6	Amount (Rs.) 8
26.3	9.1	Supplying and making end termination with brass compression gland and Aluminium lugs for following sizes of PVC insulated and PVC sheathed / XLPE aluminium conductor cable of 1.1 KV grade as required.				
26.3.1	9.1.20	3.5 Core 25 Sqmm.	25	Each	247	6175
26.3.2	9.1.22	3.5 Core 50 Sqmm.	50	Each	342	17100
26.3.3	9.1.24	3.5 Core 95 Sqmm.	25	Each	466	11650
26.3.4	9.1.27	3.5 Core 185 Sqmm.	15	Each	784	11760
26.3.5	9.1.29	3.5 Core 240 Sqmm.	10	Each	969	9690
26.3.6	9.1.30	3.5 Core 300 Sqmm.	16	Each	1,086	17376
26.3.7	9.1.21	3.5 Core 35 Sqmm.	50	Each	270	13500
26.3.8	9.1.33	4 Core 16 Sq mm	10	Each	245	2450
26.3.9	9.1.32	4 Core 10Sq mm	20	Each	193	3860
26.3.10	NDSR	4 Core 6 Sq mm	20	Each	170	3400
26.3.11	NDSR	4 Core 4 Sqmm.	20	Each	165	3300
26.3.12	NDSR	3 Core 4 Sqmm.	30	Each	145	4350
27.0	NDSR	CABLE TRAYS				

Item No. 1	DSR/ NDSR 2	Description 3	Total Qty 4	Unit 5	Rate in Rs. (in Figure) 6	Amount (Rs.) 8
		Supply & installation of following sizes of perforated MS cable trays including horizontal & vertical bends, reducers, tees, cross members and other accessories as required and duly supported from the ceiling/wall/floor with MS suspenders/supports and including painting etc. as required.				
27.1		300 mm widthx50 mm deep x1.6 mmthickness	200	Mtr	1,329	265800
27.2		200 mm widthx50 mm deep x1.6 mmthickness	100	Mtr	1,101	110100
27.3		150 mm widthx50 mm deep x1.6 mmthickness	300	Mtr	880	264000
28.0		EARTHING				
28.1	5.4	Earthing with GI plate 600mmX600mmX6mm thick including accessories, and providing masonry enclosure with cover plate having locking arrangement and watering pipe of 2.7 meter long etc. with charcoal/coke and salt as required.	4	Set	4,490	17960
28.2	5.15	Providing and fixing 25mmX5mm GI strip on surface or in recess for connections etc. as required.	200	Mtr	142	28400
28.3	NDSR	Providing and fixing GI earth strip on walls/ trenches complete as per specifications and as required.				
28.3.1		50mmx 5mm	80	Mtr	140	11200
28.3.2		25mm x 3mm	80	Mtr	125	10000
28.4		Providing and fixing earth wire of complete as per specifications as required.				

Item No. 1	DSR/ NDSR 2	Description 3	Total Qty 4	Unit 5	Rate in Rs. (in Figure) 6	Amount (Rs.) 8
28.4.1	5.18	6 SWG wire	100	Mtr	23	2300
28.4.2	NDSR	8 SWG wire	300	Mtr	60	18000
29.0	NDSR	CONTROL CABLING				
		Supply, laying, effecting proper connections, testing & commissioning of 1.5 sq.mm. PVC insulated copper multicore cables .				
29.1		10 core cable	200	Mtr	452	90313
29.2		8 core cable	500	Mtr	336	167873
29.3		3 core cable	200	Mtr	255	51000
29.4		2 core cable	400	Mtr	255	102000
30.0		DISMENTLING AND RENOVATION WORKS				
30.1		Dismantling of existing split AC Units (Indoor & Outdoor Units with Refrigerant and Drain Piping) and accessories from the building and to be stored at specified place	25	nos.	1,200	30000
30.2		Installation, testing and commissioning of split AC Units (Indoor & Outdoor Units with Refrigerant and Drain Piping) and accessories inside the building at specified places.	15	nos.	2,000	30000
		TOTAL FOR HVAC WORKS				29376277

	GANDHI MEMORIAL HOSPITAL, REWA (M.P.)		
	SUMMARY SHEET FOR HVAC WORKS		
SECTION	DESCRIPTION OF WORK		AMOUNT(Rs.)
A	EQUIPMENTS		13441691
B	PIPING		3303795
C	AIR DISTRIBUTION		7429085
D	ELECTRICAL		5201706
	GRAND TOTAL		29376277

COST ESTIMATE OF ELECTRICAL WORKS FOR CONSTRUCTION OF GERIATRICS WARD, MATERNITY WARD, EYE WARD AND RENOVATION WORKS OF GMH, REWA, M.P.

S.No.	Description.	Unit.	Total Qty.	Rate (Rs) in Figures	Amount (Rs)
1.00	SUB HEAD 1:HT SUBSTATION				
1.01	HT PANEL				
	Supply, erection, testing and commissioning of 3 panel, 630A, 33 kV, 3 Phase, 50 Hz., metal clad, dead front, 500 MVA (26.3 KA) rupturing capacity Vacuum Circuit Breaker Incoming & Outgoings as per the detailed specifications and drawings including connections etc. including door interlocking and expendable type as per technical specifications and as required.				
	a) INCOMER:				
	i) 1 No. VCB each having the following:				
	1 No. 630A, 33kV, 3 Phase, 50Hz., metal clad, dead front, 500 MVA rupturing capacity, Fully Draw out type, Vacuum Circuit Breaker (VCB).				
	1 set of 33kV/110V -110 V Potential Transformers with HRC fuses for metering & protection.				
	1 Set of Phase indicating lamps with HRC fuses.				
	1 No. Digital voltmeter.				
	1 set of indicating lamps to indicate OPEN, CLOSE, TRIP, SPRING CHARGED, TRIP CIRCUIT HEALTHY.				
	Push button for ON, OFF & TRIP circuit healthy.				
	1 set of 50/5-5A Current Transformer for metering and protection.				
	1 No. digital Ammeter with selector switch to select R, Y or B phase current.				
	1 Set of Microcontroller based numerical relay having 4 element relay (30/C+1E/F). Relay should have display of phase current and trip history.				
	Digital frequency meter, Digital Tri vector meter.				
	1 Set of undervoltage relay and Overvoltage relay.				
	Trip circuit supervision relay, Auxiliary relays with shunt trip coil (WTI & Door open trip).				
	1 No. Master Trip relay.				
	1 No. Digital Power factor meter.				
	8 window annunciator.				
	1 no. Phase reversal Relay.				
	b) BUSBARS:				
	33kV, 500 MVA, 630 Amps Three Phase busbars of copper.				
	c) OUTGOINGS:				
	i) 2 No. VCB each having the following:				
	1 No. 630A, 33kV, 3 Phase, 50Hz., metal clad, dead front, 500 MVA rupturing capacity, Fully Drawout type, Vacuum Circuit Breaker (VCB).				
	1 set of 33kV/110V-110 V Potential Transformers with HRC fuses for metering & protection.				
	1 Set of Phase indicating lamps with HRC fuses.				
	1 No. Digital voltmeter.				
	1 set of indicating lamps to indicate OPEN, CLOSE, TRIP, SPRING CHARGED, TRIP CIRCUIT HEALTHY.				
	Push button for ON, OFF, TRIP & TRIP circuit healthy.				
	1 No. Digital ammeter with selector switch and one set of C.T 30/5-5 A, For measurement & protection.				

S.No.	Description.	Unit.	Total Qty.	Rate (Rs) in Figures	Amount (Rs)
	1 Set of Microcontroller based numerical relay having 4 element relay (3O/C+1E/F). Relay should have display of phase current and trip history. Digital frequency meter.Digital Tri vector meter.				
	1 Set of undervoltage relay and Overvoltage relay.				
	Trip circuit supervision relay,Auxiliary relays with shunt trip coil.				
	8 window annunciator.				
	1 No. Master Trip relay.				
	1 No. Digital Power factor meter.				
	HT PANEL - AS MENTIONED ABOVE	Set	1	1250000	1250000
1.02	TRANSFORMER				
a)	Supply, installation, testing and commissioning of 1250 KVA, 33kV/0.433 kV, 3 Phase, 4 wire, 50 Hz., ON-AN Transformer, Dyn11 Vector group, copper bound Class A insulation with outdoor duty type, On load tap changer on HV Side range -15%, 0, +5% in the steps of 2.5% per step, type transformer with RTCC+AVR inclusive of all control cable. Cable box connection including cable adapter box at primary and secondary end (LT side) shall be connected through busduct/ cable, CT complete with all accessories including first filling of oil, double float buchholz relay protection, high winding temperature, oil temperture sensors and gauges etc. as per to IS 1180 ammended upto date, interconnection of control cables and accessories etc complete including Foundation .	Each	2	2200000	4400000
	BATTERY CHARGER PANEL				
1.03	Supply, erection, testing and commissioning of battery charger panel with 24 Volts DC continuous out put for control supply of HT panel complete with battery, control cabling etc. as required. Capacity of battery charger panel should be suitable for above mentioned HT Panels.				
	2 numbers battery of minimum 180 AH ampere hour capacity.				
	Boost and Trickle charger suitable for above items.				
	1 No. AC Voltmeter (0-500Volt).				
	1 No. DC Voltmeter.				
	1 No. DC Ammeter.				
	1 set of AC and DC indicating lamps.				
	1 No. DC Battery charging position indicator.				
	DC distribution board suitable for above application to incoming & outgoing MCBs include tripping, closing and indication etc.				
	Control cabling between DC Distribution panel to the HT panel of the Substation with suitable core 1.5 sqmm copper cable.	Each	1	125000	125000
	HT CABLE				

S.No.	Description.	Unit.	Total Qty.	Rate (Rs) in Figures	Amount (Rs)
1.04	Supply of following sizes of 11 kV grade multicore aluminum conductor XLPE armoured power cable as per IS : 7098.				
i)	3 Core, 300 sq mm	Mtrs.	200.00	1828	365600
1.05	Laying of one number PVC insulated and PVC sheathed/ XLPE power cable of 33 KV grade of following size direct in ground including excavation, sand cushioning, protective covering and refilling the trench etc as required.				
i)	upto 400 Sq mm	Meter	100.00	214	21400
1.06	Laying of one number PVC insulated and PVC sheathed/ XLPE power cable of 33 KV grade of following size in the existing RCC/ HUME/ METAL pipe as required.				
i)	upto 400 Sq mm	Metre	50	68	3400
1.07	Laying of one number PVC insulated and PVC sheathed/ XLPE power cable of 33 KV grade of following size in the existing masonry open duct/cable tray as required.				
i)	upto 400 Sq mm	Metre	50	58	2900
1.08	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 33kV grade as required.				
i)	300 sqmm 3 core (Heat Shrink Type) Indoor Type	Each	4	6437	25748
ii)	300 sqmm 3 core (Heat Shrink Type) Outdoor Type	Each	4	9464	37856
1.09	Providing, laying and fixing following dia RCC pipe NP2 class (light duty) in ground complete with RCC collars, jointing with cement mortar 1:2 (1 cement : 2 fine sand) including trenching (75 cm deep) and refilling etc as required.				
i)	300 mm dia	Metre	50	592	29600
ii)	150 mm dia	Metre	50	405	20250
	SAFETY EQUIPMENT				
1.10	i) Providing and fixing HT (33 kV) danger notice plate of 250 x 150 mm made of mild steel, atleast 2 mm thick and vitreous enameled white on both sides and with inscription in signal red colour on front side as required.	Each	1	141	141
	ii) Providing and fixing MV danger notice plate of 200 x 150 mm made of mild steel, atleast 2 mm thick and vitreous enamelled white on both sides and with inscription in signal red colour on front side as required.	Each	5	155	775
	iii) Supply & erection of the following Safety and testing Equipment including miscellanoes items like Clamps, nuts & Bolts, rawl plugs etc. at suitable places in the Substation building as				

S.No.	Description.	Unit.	Total Qty.	Rate (Rs) in Figures	Amount (Rs)
a)	GI buckets, 4 nos of 5 Litres Capacity duly painted white inside and red oxide paint out side and with 'FIRE' witten in white paint & Filled with Dry sand and mounted on MS angel iron bracket of Size 50 x 50 x 6 mm thick and 1200 mm long including grouting in wall / floor etc as	Each	2	1200	2400
b)	Supplying, storing, handling and fixing in position First Aid Medical Box complete as per technical specifications as required.	Each	1	1136	1136
c)	Shock Treatment Chart duly glazed mounted on Aluminum Frame with Sheet Glass as required.	Each	1	687	687
d)	Supplying and laying of 36 kV grade 1 metre wide anti skid chequered type rubber mat.	Metre	10	2500	25000
e)	Supplying and laying of 1.1 kV grade 1 metre wide anti skid chequered type rubber mat.	Metre	5	1800	9000
f)	Supply rubber hand gloves 33 kV grade as per I.S. Code.	Set	1	400	400
g)	Supplying of digital Earth Tester complete with probes etc as required	Set	1	6000	6000
h)	Supplying of Telesscopic folding Aluminium ladder folding double with sitting stand 6 M etc as	Each	1	5000	5000
1.11	Providing and fixing of M.S Slotted angle iron with fixing materials and painting for cable racks in trenches/ on wall etc. as required.	KG	50.00	120	6000
1.12	Providing and fixing of M.S Slotted angle 'C' channel/ Ladder type rack/ tray including fixing material grouted in wall or haning with M.S rod hanger from ceiling including 2 coat synthetic enamel painting over 1 coat of red oxide primer etc. as required.	KG	50	150	7500
TOTAL SUBHEAD 1: HT Panel AS MENTIONED ABOVE					6345793
2.0	SUB HEAD 2: MAIN LT PANEL				
2.01	MAIN LT PANEL				
	Supply, installation, testing and commissioning of LT Panel, Type Tested Assembly (TTA), panel cubicle type, totally enclosed, free standing type, dust ,damp and vermin proof panel , powder coated, made up of CRCA sheet, complete with aluminum busbars, danger notice plate, interconnections with suitable capacity aluminum leads/solid aluminum strips/rods, necessary interlocking, and having incoming and outgoing switchgears as mentioned below.Complete as per technical specifications and as required.				
	Note :				
i	Automatic Change over of DG on LT Panel at the time of power failure and visa versa.				
ii	All ACBs shall have spare contacts				
iii	All relays to operate at 240Volts, Single phase, 50Hz., AC supply through UPS. UPS of suitable Rating is also in the scope of Supply				
iv	Intellignet Panel Meter: Flush mounting, 96 x 96 mm size class 1 accuracy and LCD display. Panel meter should be suitable for true RMS reading. Meter should measure line and phase voltage, current of all 3 phasees and neutral, HZ, PF, KW, KWH, KVAR, KVARH, KVA, KVAH, Voltage and current including one set of CT and Meter shall have RS 485 port for BMS connectivity or any other port for connection to BMS. Meter should be EMI/ EMC complaint.				
v	All ACBs shall have 50 KA for 1 second.				
vi	All ACBs should have Ics=Icu=100%				
vii	All MCCBs shall have Ics=Icu=100%				

S.No.	Description.	Unit.	Total Qty.	Rate (Rs) in Figures	Amount (Rs)
	a) INCOMER:				
	i) 2 No. ACB Panels each having following:				
	2000 A, 415 V, Motorised, Fully Drawout type (EDO), Four Pole, Air Circuit Breaker with microprocessor based overload, short circuit , Instantaneous & Earth Fault trip including under voltage release and lockable trip push button. ACB should have Icw=Ics=Icu=50KA for 1 sec.				
	Indicating lamps (LED Type) with 6A protection MCBs to indicate OPEN, CLOSE, TRIP for ACB.				
	Push button to Close the ACB.				
	R, Y & B Phase indicating lamps (LED type) with 6A control SP MCBs.				
	Intelligent Panel Meter as mentioned above with one set of CTs				
	One set of dual core dual ratio CT of 3200/1600/5/5A for capacitor panel.				
	b) BUSBARS:				
	2000 Amps TPN busbars of aluminium with temperture rise of 40 degree celsius over and above ambient temperture of 45 degree Celsius 50kA for 1 sec.				
	c) BUS COUPLER:				
	i) 1 No. ACB Panels each having following:				
	2000 A, 415 V, Motorised, Fully Drawout type (EDO), Four Pole, Air Circuit Breaker with microprocessor based overload, short circuit , Instantaneous & Earth Fault trip including and lockable trip push button. The ACB should have Icw=Ics=Icu=50 KA for 1 sec.				
	Indicating lamps (LED Type) with 6A protection MCBs to indicate OPEN, CLOSE, TRIP for ACB.				
	Push button to CLOSE the ACB.				
	Intelligent Panel Meter as mentioned above with one set of CTs				
	d) OUTGOING:				
	i) 3 Nos. ACB Panels each having following:				
	800 A, 415 Volts, Fully Motorised, Fully Drawout type (EDO), 50 KA, Four Pole, Air Circuit Breaker with microprocessor based overload, short circuit, Instantaneous , Earth fault trip and lockable trip push button.				
	Indicating lamps (LED Type) with 6A protection MCBs to indicate OPEN, CLOSE, TRIP for ACB.				
	Push button to CLOSE the ACB.				
	Intelligent Panel Meter as mentioned above with one set of CTs				
	ii) 4 Nos. MCCB feeder as per following details/ specifications:				
	630 Amp, 415 volts, 50 KA, Four Pole, Microprocessor release based MCCB with variable current settings and having O/L, S/C & inbuilt E/F protection.				
	Extended rotary operating mechanism with door interlock, defeat feature and padlock facility. MCCB should be with spreader link and phase barriers.				
	Indicating lamps (LED Type) with 6A protection MCBs to indicate ON, OFF, TRIP.				
	Intelligent Panel Meter as mentioned above with one set of CTs				
	iii) 4 Nos. MCCB feeder as per following details/ specifications:				

S.No.	Description.	Unit.	Total Qty.	Rate (Rs) in Figures	Amount (Rs)
	400 Amp, 415 volts, 50 KA, Four Pole, Microprocessor release based MCCB with variable current settings and having O/L, S/C & inbuilt E/F protection. Extended rotary operating mechanism with door interlock, defeat feature and padlock facility. MCCB should be with spreader link and phase barriers. Indicating lamps (LED Type) with 6A protection MCBs to indicate ON, OFF, TRIP. Intelligent Panel Meter as mentioned above with one set of CTs				
	viii) 5 Nos. MCCB feeder as per following details/ specifications: 160 Amp, 415 volts,50 KA, Four Pole,Thermal magnetic based MCCB with variable current settings and having O/L, S/C protection. Extended rotary operating mechanism with door interlock, defeat feature and padlock facility. MCCB should be with spreader link and phase barriers. Indicating lamps (LED Type) with 6A protection MCBs to indicate ON, OFF, TRIP. Intelligent Panel Meter as mentioned above with one set of CTs				
	ix) 6 Nos. MCCB feeder as per following details/ specifications: 125 Amp, 415 volts,50 KA, Four Pole,Thermal magnetic based MCCB with variable current settings and having O/L, S/C protection. Extended rotary operating mechanism with door interlock, defeat feature and padlock facility. MCCB should be with spreader link and phase barriers. Indicating lamps (LED Type) with 6A protection MCBs to indicate ON, OFF, TRIP. Intelligent Panel Meter as mentioned above with one set of CTs				
	Main LT Panel as mentioned above.	Set	1	4314000	4314000
2.02	CAPACITOR PANEL (375 KVAR at 415V) Supply, installation, testing and commissioning of LV cubicle type totally enclosed free standing type, powder coated, dust, damp and vermin proof Capacitor Panel complete with busbars, MV danger notice plate, ammeter, ammeter selector switch, indicating lamps, CTs, heavy duty, MPP resin filled, type Capacitors suitable for non linear loads upto 15% with Copper wound 14% D-tunned filters with linearity should not be less then 143%, total operating losses of capacitor shall not more than 0.5 W/ KVAR, Contactors suitable for capacitor switching or Capacitor duty switching contactor with current limiting contactor circuit to suppress switching inrush current interconnections with suitable capacity aluminium leads/ solid aluminium strips, rods, connection of incoming and outgoing cables with thimbles, and having following incoming and outgoing switchgears complete as per technical Specifications as required.				
	a) INCOMER: 800 A, 415 Volts, Fully Motorised, Fully Drawout type (EDO), 50 KA, TP, Air Circuit Breaker with microprocessor based overload, short circuit & Instantaneous Earth fault trip including lockable trip push button. Indicating lamps with 6A protection MCBs to indicate OPEN, CLOSE, TRIP. R, Y & B Phase indicating lamps (LED type) with 6A control SP MCBs. Day & Night mode selector Switch. 14 steps Intelligent microprocessor based Automatic Power factor Correction relay having measurement sensitivity of 1 % or better. Extension of incoming busbars for connection of multicore armoured aluminium cables. ON/ OFF delay timers for switching capacitor circuit.				

S.No.	Description.	Unit.	Total Qty.	Rate (Rs) in Figures	Amount (Rs)
b)	METERING: 1 set of Digital Amp. Meter, Digital Power factor meter and Digital voltmeter.				
c)	BUSBARS: 800 Amps TP busbars of aluminum with temperture rise of 40 degree celsius over and above Ambient temperture of 45 degree celsius.				
d)	OUTGOINGS:				
i)	1 Nos.100KVAR at 415V Delta connected step as per following details/ specification: 200 Amps, 415 volts, 50 KA TP MCCB with Thermal Magnetic release having variable current settings. Extended rotary operating mechanism with door interlock, defeat feature and padlock facility. MCCB should be with spreader link and phase barriers. 415 volts, TP Capacitor duty Contactor Suitable for capacitive switching including current limiting contactor circuit to supress switching inrush current and suitable for 100KVAR step. Indicating lamps (LED Type) with 6A protection MCBs to indicate ON, OFF, TRIP. 100 KVAR heavy duty MPP type resin filled capacitors suitable for non linear loads upto 15% & total operating losses not more than 0.5 W per KVAR. 415Volts, 14% copper wound D-tuned reactor suitable for 50KVAR step .This 50KVAR further connect parallel (2x50KVAR) to make physicaly 100KVAR steps for effective heat dissipation.				
ii)	3 Nos. 50Kvar at 415V Delta connected step as per following details/ specification: 100 Amps, 415 volts, and having O/L, S/C & inbuilt E/F protection. TP MCCB with Thermal Magnetic release having variable current settings. Extended rotary operating mechanism with door interlock, defeat feature and padlock facility. MCCB should be with spreader link and phase barriers. 415 volts, TP Capacitor duty Contactor Suitable for capacitive switching including current limiting contactor circuit to supress switching inrush current and suitable for50KVAR step. Indicating lamps (LED Type) with 6A protection MCBs to indicate ON, OFF, TRIP. 50 KVAR heavy duty MPP type resin filled capacitors suitable for non linear loads upto 15% & total operating losses not more than 0.5 W per KVAR. 415Volts, 14% copper wound D-tuned reactor suitable for 50KVAR step.				
iii)	5 Nos. 25Kvar at 415V Delta connected step as per following details/ specification: 63 Amps, 415 volts, and having O/L, S/C & inbuilt E/F protection. TP MCCB with Thermal Magnetic release having variable current settings. Extended rotary operating mechanism with door interlock, defeat feature and padlock facility. MCCB should be with spreader link and phase barriers. 415 volts, TP Capacitor duty Contactor Suitable for capacitive switching including current limiting contactor circuit to supress switching inrush current and suitable for50KVAR step. Indicating lamps (LED Type) with 6A protection MCBs to indicate ON, OFF, TRIP. 10 KVAR heavy duty MPP type resin filled capacitors suitable for non linear loads upto 15% & total operating losses not more than 0.5 W per KVAR. 415Volts, 14% copper wound D-tuned reactor suitable for 10KVAR step.				
	CAPACITOR PANEL AS MENTIONED ABOVE	Set	2	900000	1800000

S.No.	Description.	Unit.	Total Qty.	Rate (Rs) in Figures	Amount (Rs)
	TOTAL SUBHEAD 2: LT Panel AS MENTIONED ABOVE				6114000
3.00	SUB HEAD 3 :MV PANELS				
	Supply, installation, testing and commissioning of following M.V. cubicle type totally enclosed, wall mounted/Free standing type, powder coated, dust, damp and vermin proof, indoor type Distribution Board/Panel complete with busbars, M.V. danger notice plate, interconnections with suitable capacity aluminium leads/solid aluminium strips/rods, connection of incoming and outgoing cables with thimbles, and having following incoming and outgoing switchgears complete as per technical specification and as required.				
	NOTE:				
	i All MCCBs shall have Ics=Icu=100%				
	ii MCB Should be connected through terminal Strip of suitable rating				
3.01	MV PANEL-Renovation of GMH				
	a) INCOMER:				
	250 Amp 415 volts, 35 KA FP MCCB with microprocessor based release having variable current settings of O/L, S/C & inbuilt E/F protection release.				
	R,Y&B phase indicating lamp (LED type) with 6A control SP MCB & ON, OFF, TRIP Indication (LED type).				
	Extended rotary operating mechanism with door interlocking with defeat feature and padlock facility. MCCB should have spreader links & phase barriers.				
	1 No. 0 to 500 V Digital voltmeter with selector switch.				
	Digital ammeter with selector switch with one set Suitable C.Ts.				
	b) BUSBARS:				
	400 Amp TPN Aluminium busbars				
	c) OUTGOING:				
	i) 28 no. 40 Amps , 415 volts, 9 KA ,Four Pole, Miniature Circuit Breaker.				
	ii) 28 no. 63 Amps , 415 volts, 9 KA ,Four Pole, Miniature Circuit Breaker.				
	MV PANEL-Renovation of GMH AS MENTIONED ABOVE	Each	3	247800	743400
3.02	Normal Power Panel for (Geriatric Ward, Maternity ward & Eye Ward)				
	a) INCOMER:				

S.No.	Description.	Unit.	Total Qty.	Rate (Rs) in Figures	Amount (Rs)
	160 Amp 415 volts, 35 KA FP MCCB with thermal magnetic release having variable current settings of O/L, S/C protection with earth fault module.				
	R,Y&B phase indicating lamp (LED type) with 6A control SP MCB & ON, OFF, TRIP Indication (LED type).				
	Separate fault indication for O/L, S/C, & E/F to be provided on Panel Door.				
	Extended rotary operating mechanism with door interlocking with defeat feature and padlock facility. MCCB should have spreader links & phase barriers.				
	1 No. 0 to 500 V Digital voltmeter with selector switch.				
	Digital ammeter with selector switch with one set Suitable C.Ts.				
	b) BUSBARS:				
	300 Amp TPN Aluminium busbars				
	c) OUTGOING:				
	j) 12 no. 63 Amps , 415 volts, 9 KA ,Four Pole, Miniature Circuit Breaker.				
	Normal Power Panel for (Geriatric Ward, Maternity ward & Eye Ward) AS MENTIONED ABOVE	Set	3	83500	250500
3.03	Emergency Panel for (Geriatric Ward, Maternity ward & Eye Ward)				
	a) INCOMER:				
	125 Amp 415 volts, 35 KA FP MCCB with thermal magnetic release having variable current settings of O/L, S/C protection with earth fault module.				
	R,Y&B phase indicating lamp (LED type) with 6A control SP MCB & ON, OFF, TRIP Indication (LED type).				
	Separate fault indication for O/L, S/C, & E/F to be provided on Panel Door.				
	Extended rotary operating mechanism with door interlocking with defeat feature and padlock facility. MCCB should have spreader links & phase barriers.				
	1 No. 0 to 500 V Digital voltmeter with selector switch.				
	Digital ammeter with selector switch with one set Suitable C.Ts.				
	b) BUSBARS:				
	300 Amp TPN Aluminium busbars				
	c) OUTGOING:				

S.No.	Description.	Unit.	Total Qty.	Rate (Rs) in Figures	Amount (Rs)
i)	12 no. 40 Amps , 415 volts, 9 KA ,Four Pole, Miniature Circuit Breaker.				
ii)	4 no. 40 Amps , 415 volts, 9 KA ,Double Pole, Miniature Circuit Breaker.				
	Emergency Panel for (Geriatric Ward, Maternity ward & Eye Ward) AS MENTIONED ABOVE	Set	3	86000	258000
	TOTAL SUB HEAD 3: MV PANELS AS MENTIONED ABOVE				1251900
	SUB HEAD 4: MCB DISTRIBUTION BOARDS.				
4.00	MCB DISTRIBUTION BOARD				
4.01	Supplying & fixing following way, three pole and neutral sheet steel, MCB distribution board, 415 volts, on recess/surface complete with loose wire box, terminal blocks, tinned copper busbar, neutral link, earth bar, din bar, detachable gland plate, interconnections, phosphatized and powder coated including earthing connection bolt etc. as per technical specifications and as required. (but without MCB & RCCB).				
i	4 way (8+12), Double door	Each	10	2198	21980
ii	6 way (8+18) Double door	Each	16	2659	42544
iii	8 way (8+24), Double door	Each	132	3171	418572
4.02	Supplying & fixing following way, single pole and neutral, sheet steel, MCB distribution board, 240 volts, on recess/surface complete with loose wire box, terminal blocks, tinned copper busbar, neutral link, earth bar, din bar, detachable gland plate, interconnections, phosphatized and powder painted including earthing etc. Before procurement of DB the contractor has to take approval of DB schedule/ drawing of each DB from the Electrical Engineer, HSCC, as per technical specifications and as required. (but without MCB & RCCB),				
i	8 way Double door	Each	8	1061	8488
4.03	Supplying & fixing 6 Amps to 32 Amps rating, 240 volts, 'B' series, miniature circuit breaker suitable for lighting & other loads of following poles in the existing MCB DB complete with connections, testing & commissioning etc. as per technical specifications & as required.				
i	Single pole	Each	3624	173	626952
4.04	Supplying & fixing following rating, four pole, 415 volts, Miniature Circuit Breaker (MCB), in the existing MCB DB complete with connections, testing & commissioning etc. as per technical specifications and as required.				
i	25 Amps	Each	10	995	9950
ii	40 Amps	Each	66	1400	92400
iii	63 Amps	Each	72	1400	100800
4.05	Supplying & fixing following rating, four pole, 415 volts, Residual Current Circuit Breaker (RCCB) having a sensitivity current upto 300 mA in the existing MCB DB complete with connections, testing & commissioning etc. as per technical specifications and as required.				

S.No.		Description.	Unit.	Total Qty.	Rate (Rs) in Figures	Amount (Rs)
	i	25 Amps	Each	10	2067	20670
	ii	40 Amps	Each	66	2094	138204
	iii	63 Amps	Each	72	2402	172944
4.06		Supplying and fixing following rating, double pole, 240 volts, MCB (B/C/D/ Curve) in the existing MCB DB complete with connections, testing and commissioning etc. as required.				
	i	32 amps	Each	8	729	5832
4.07		Supplying & fixing following rating, Double pole, 240 volts, Residual Current Circuit Breaker (RCCB) having a sensitivity current upto 300 mA in the existing MCB DB complete with connections, testing & commissioning etc. as per technical specifications and as required.				
	i	32amp	Each	8	1570	12560
4.08		Supplying and fixing Single pole Blanking plate in the existing MCB DB complete as required.	Each	40	7	280
		TOTAL SUB HEAD 4: MCB DISTRIBUTION BOARDS AS MENTIONED ABOVE				1672176
		SUB HEAD 5: WIRING				
5.00		WIRING				
5.01	i	Wiring for light point/fanpoint/ exhaust fan point/call bell point with 1.5 sq.mm. PVC insulated, fire retardant low smoke (FRLS) copper conductor cable, single core/ multi strand, in PVC conduit (Including supplying & recess laying of Heavy duty FRLS PVC conduit as per IS 9537 Part-III ammended upto date and accessories) including the following and complete as required.				
	ii	Supplying and Fixing Modular type switches (modular Bell push in case of call bell points) in suitable size modular metal boxes, base plate & modular cover plates, space for fixing electronic fan regulator in case of fan point wiring & space for fixing 5A socket on the board etc.				
	iii	Supplying and fixing Hexagonal fan Boxes with 3 mm thick hylem sheet covers in case of Fan Points				
	iv	Supplying & Fixing Ceiling Rose in case of Exhaust Fan Points etc.				
		Note :				
		i) Unless otherwise specified all the conduiting work to be done in recess				
		Point wiring as mentioned above Group C	Point	1150	757	870550
5.02	i	Wiring for twin control light points with 1.5 sq.mm. PVC insulated, FRLS copper conductor cable in PVC conduit (including supplying and recess laying of Heavy duty FRLS PVC conduit as per IS 9537 Part-III ammended upto date conduit and accessories) including the following and complete as required.				

S.No.	Description.	Unit.	Total Qty.	Rate (Rs) in Figures	Amount (Rs)
	ii) Supplying and Fixing Modular type two numbers 2 Way switches in suitable size modular metal boxes, base plate & modular cover plates etc.				
	Note :				
	i) Unless otherwise specified all the conduiting work to be done in recess				
	Wiring for twin control light points as mentioned above	Point	10	809	8090
5.03	Rewiring for light point/ fan point/ exhaust fan point/ call bell point with 1.5 sq.mm FRLS PVC insulated copper conductor single core cable and 1.5 sq.mm. FRLS PVCe insulated copper conductor single core cable as earth wire in existing surface/ recessed steel /PVC conduit including dismantling as required.	Point	300	452	135600
5.04	Wiring for Submain/ circuit wiring with following size of PVC insulated FRLS copper conductor single core/multi strand cable in recessed / Surface medium Class Heavy duty FRLS PVC conduit as per IS 9537 Part-III ammended upto date as required.				
	i) 2X1.5 Sqmm with 1 No. 1.5 sqmm PVC FRLS insulated, copper conductor for earthing.	Metre	5900	112	660800
	ii) 2X2.5 Sqmm with 1 No. 2.5 sqmm PVC FRLS insulated, copper conductor for earthing.	Metre	8599	137	1178029
	iii) 2X4 Sqmm with 1 No. 4 sqmm PVC insulated FRLS copper conductor for earthing	Metre	6250	168	1050000
	iv) 2X6 Sqmm with 1 No. 6 sqmm PVC insulated FRLS copper conductor for earthing	Metre	1000	227	227000
	v) 2X10 Sqmm with 1 No. 6 sqmm PVC insulated FRLS copper conductor for earthing	Metre	100	299	29900
	vi) 4X4 Sqmm with 2 No. 4 sqmm PVC insulated FRLS copper conductor for earthing	Metre	120	281	33720
	vii) 4X6 Sqmm with 2 No. 6 sqmm PVC insulated FRLS copper conductor for earthing	Metre	150	395	59250
	viii) 4X10 Sqmm with 2 No. 6 sqmm PVC insulated FRLS copper conductor for earthing	Metre	100	536	53600
	ix) 4X16 Sqmm with 2 nos 6 sq mm PVC insulated FRLS copper conductor for earthing.	Metre	100	733	73300
5.05	Supplying and drawing following sizes of FRLS PVC insulated copper conductor, single core cable in the existing surface/ recessed steel / PVC conduit as required				
	i) 1x1.5 Sq.mm	Metre	1200	23	27600
	ii) 2x2.5 Sq.mm	Metre	600	53	31800
	iii) 2x4 Sq.mm	Metre	300	79	23700
	iv) 2x6 Sq.mm	Metre	200	115	23000

S.No.	Description.	Unit.	Total Qty.	Rate (Rs) in Figures	Amount (Rs)
5.06	Supply and fixing of following medium class FRLS PVC conduit as per IS 9537 Part-III ammended upto date along with accessories in surface /recess including cutting the wall and				
	i 20mm	Meter	200	57	11400
	ii 25mm	Meter	200	69	13800
	iii 32mm	Meter	300	89	26700
5.07	Supplying and fixing suitable Module GI box on surface or in recess including providing and fixing 3 pin 5/6 amps. modular socket outlet with shutters and 5/6 amps. modular type switch with indicator type, base plate, modular cover plate, connections etc. and all civil works 'complete as required.	Each	110	313	34430
5.08	Supplying and fixing suitable modular GI box on surface or in recess including providing and fixing 6 pin 15/16 A modular socket outlet with shutters and 15/16 A modular switch with indicator, base plate, modular cover plate, connections, etc. and all civil works complete as required.	Each	160	406	64960
5.09	Supplying and fixing suitable Modular metal box on surface or in recess including providing and fixing three nos 3 pin 5/6 amps. modular socket outlet with shutters and one no. 10 amps. modular type switch, base plate, modular cover plate, connections etc. and all civil works 'complete as required. (For computer Points)	Each	40	824	32960
5.10	Supplying and fixing suitable Module metal box on surface or in recess including providing and fixing two nos 3 pin 5/6 amps. with 2 no 5A modular switch on 6 Module modular plate & two 6 pin 15/16 amp modular socket outlet with 2 no. 16A/15A modular switch on 6 Module modular plate . , base plate, modular cover plate, connections etc. and all civil works 'complete as required. (For Comb-1/ Bed Point)	Each	150	968	145200
5.11	Supplying and fixing suitable Module metal box on surface or in recess including providing and fixing two nos 3 pin 5/6 amps. & one 6 pin 15/16 amp modular socket outlet with shutters and one no. 15 amps. modular Indicating type switch, base plate, modular cover plate, connections etc. and all civil works 'complete as required. (Combo-2)	Each	20	732	14640
5.12	Supplying and fixing suitable Modular metal box surface or in recess including providing and fixing two nos 3 pin 5/6 amps. modular socket outlet with shutters and one no. 5 amps. modular type switch, base plate, modular cover plate, connections etc. and all civil works 'complete as required. (COMBO POINT3)	Each	20	542	10840
5.13	Supplying and fixing suitable module modular GI box on surface or in recess including providing and fixing 3 pin 20 A modular socket outlet with shutters and 20 AMP SP MCB, base plate, modular cover plate, etc. on surface or recess complete with all accessories including connections, testing and commissioning etc. as required.	Each	25	793	19825

S.No.	Description.	Unit.	Total Qty.	Rate (Rs) in Figures	Amount (Rs)
5.14	Supply and fixing following 63/100 Amps, 240 volts, 2P+E, Industrial Socket Outlet (with plugs) in a metal box with 63/100 SP MCB in a sheet steel cover on surface or recess complete with all accessories including connections, testing and commissioning etc. as required.	Each	7	2000	14000
5.15	Supply and fixing following FP MCCB, 415 volts, 35 KA (Isc), Four Pole with thermal magnetic release having variable current setting (0.8 to 1.0 In) with Extended rotary operating mechanism including door interlocking with defeat feature and padlock facility in a sheet steel enclosure on surface complete with all accessories including , connections, testing and commissioning etc. as required.				
	i 63 Amp	Each	2	7000	14000
	ii 160 Amp	Each	1	12000	12000
5.16	Supply and fixing of following piano type switch socket on the existing switch box including cover and connections etc as required.				
	i 5/6A switch	Each	1000	33	33000
	ii 15/16A Switch	Each	100	72	7200
	iii 3 Pin 5/6A Socket	Each	100	41	4100
	iv 3 Pin 15/16A Socket	Each	100	83	8300
	TOTAL SUBHEAD 5: WIRING AS MENTIONED ABOVE				4953294
	SUB HEAD 6: LIGHT FIXTURE AND FANS				
6.00	LIGHT FIXTURES AND FANS				
6.01	Supply of following light fixture with high efficiency electronic ballast, starter, tubes/lamps, capacitor, reflector, diffuser, MS body/housing holder etc. complete with all fixing accessories as required.				
	i 1 x 20 W LED box type light fixture (Crompton DIJB12LT8-20 with 20W T-8 LED including Mounting Accessories, with minimum system lumen 2100 or approved equivalent from list of Makes)(120b/ 120bw)	Each	430	500	215000
	ii 2 x 20 W LED box type fluorescent light fixture (Philips BN108C LED 40S PSU CDL WH including Mounting Accessories, with minimum system lumen 2100 or approved equivalent from list of Makes)(220b/ 220bw)		5	2733	13665
	iii LED Recessed flush mounted light fixture (Full Glow (1200mm), Philips RC380B G2 LED-34S 6500 L120W30 PSU OD or Crompton LCTLR-40-CDL as per requirement with minimum system lumen 3000 or approved equivalent from list of Makes)(RMSQ3, ICU)	Each	60	4142	248520

S.No.	Description.	Unit.	Total Qty.	Rate (Rs) in Figures	Amount (Rs)
iv	LED recessed flush mounted light fixture (Full Glow (600mm), Philips RC380B G2 LED34S-6500 PSU OD WH or Crompton LCTRLN-36-FO-CDL per requirement with minimum system lumen 3000 or approved equivalent from list of Makes)(RMSQ3, ICU)	Each	330	3160	1042800
v	LED Surface mounted light fixture (Philips SP824P LED 29S-5000 GR OD or Crompton LCTLS-40-CDL as per requirement with minimum system lumen 3000 or approved equivalent from list of Makes)(236SM01)	Each	20	6832	136640
vi	1 x 10 W Bulk Head light fixture (Philips WT202 W LED 6S CW PSU S1 PC or approved equivalent from list of Makes)(BH)	Each	15	1366	20490
vii	Mirror top with diffuser in 2ft variant (Crompton Greaves LINNET # LCL-14-CDL or approved equivalent from list of Makes)(wtoilet)	Each	80	1324	105920
viii	Surface mounted Batten holder (Plastic) with 9 watt LED	Each	10	400	4000
ix	LED Recessed flush mounted down light fixture (Crompton LCDN-18-CDL/TL or approved equivalent from list of Makes)(DL1)	Each	175	1238	216650
x	1 x 18 W LED Surface mounted down light fixture (Crompton LCD SPLN-R-18-CDL or approved equivalent from list of Makes)	Each	90	1281	115290
xi	1X3 / 5 W LED Surface /Recessed flush mounted light fixture to be used as night lamp Ceiling mounted (NLCM)	Each	10	600	6000
xii	1X3 / 5 W LED Recessed flush mounted light fixture to be used as night lamp wall mounted (NLWM)	Each	10	800	8000
6.02	Supply of following ceiling fans (BEE -5 Star Rated) complete with double ball bearing, motor, blades, downrod, canopies, capacitor, modular type electronic fan regulator, suitable for operation on 230 volts, 50 Hz., 1 phase, AC supply complete as required.				
i	1200 mm sweep	Each	120	2210	265200
ii	900mm Sweep	Each	3	2140	6420
6.03	Supply of 900 RPM, 300 mm (Crompton Greaves Trans Air or approved equivalent) exhaust fan suitable for single phase 230 volts, 50 Hz., AC supply complete with motor, louvers/shutters etc. complete as required.	Each	45	1868	84060
6.04	Supply of 400 mm sweep, Crompton greaves model high flow 16" wall mounted fan complete with double ball bearing, motor, blades, capacitor etc suitable for single phase 230 volts, 50 Hz., AC supply, complete as required.	Each	4	2102	8408

S.No.	Description.	Unit.	Total Qty.	Rate (Rs) in Figures	Amount (Rs)
6.05	Installation, testing and commissioning of wall bracket /ceiling fittings of all sizes and shapes containing LED lamps per fitting, complete with all accessories including connections etc. as required.	Each	1235	91	112385
6.06	Installation, testing and commissioning of ceiling fan and modular type electronic fan regulator(Electronic regulator to be fixed in switch board) including wiring the down rod and connection with 1.5 sqmm FR PVC insulated, copper conductor single core/multi strand cable including providing & fixing phenolic laminated sheet cover on the fan box, etc. as required.	Each	123	272	33456
6.07	Installation, testing and commissioning of exhaust fan up to 400 mm sweep in the opening, including making the hole to suit the size of the above fan including , fixing of louvers/ shutters with frame making good the damages etc. as required.	Each	45	294	13230
6.08	Installation, testing and commissioning of wall mounted fan up to 400 mm sweep including supply and fixing wall bracket arrangement complete as required.	Each	4	294	1176
TOTAL SUBHEAD 6: LIGHT FIXTURE & FANS AS MENTIONED ABOVE					2657310
SUB HEAD 7: CONDUITING FOR TELEPHONE SYSTEM					
7.00	TELEPHONE SYSTEM				
7.01	Supplying drawing, connecting and testing of 0.5mm dia annealed copper conductor PVC insulated PVC sheathed telephone Wire/cables in Existing M.S/ PVC conduit or racks as required.				
	i 2 pair Telephone cable. (0.5 sq mm)	Meter	525	19	9975
7.02	Supplying and fixing of following sizes of medium class FRLS PVC Conduit along with accessories in surface/recess including painting in case of surface conduit, or cutting the wall and making good the same in case of recessed conduit as required.				
	i 20 mm	Metre	420	69	28980
	ii 25 mm	Metre	100	57	5700
7.03	Supply, fixing, connecting and testing of telephone modular sockets modular plate anodised MS box and blanking plate in surface / recessed including connectionetc as required.				
	i Telephone socket outlet (RJ-11 telephone Jack Single with Shutter)	Each	20	228	4560
	ii Telephone socket outlet (RJ- 11 telephone Jack double with Shutter)	Each	1	264	264

S.No.	Description.	Unit.	Total Qty.	Rate (Rs) in Figures	Amount (Rs)
7.04	Supplying, Installation, testing and commissioning of following sizes of telephone distribution board in M.S. hinged type lockable box duly painted complete with Krone type tag block etc. including terminations of cable as required.				
	i 20 Pair	Each	1	1000	1000
	ii 10 Pair	Each	2	500	1000
7.05	Supplying and drawing of following pairs 0.5mm dia annealed bare copper conductor Polythene insulated, core twisted into pairs armoured telephone cable on surface/tray with saddels including termination of cables at both sides in Krone Tag Block etc. complete as required.				
	i 20 Pair	Metre	100	217	21700
	ii 10 Pair	Metre	150	113	16950
7.06	Supplying and drawing of following pairs 0.5 mm dia annealed bare copper conductor Polythene insulated, core twisted into pairs armoured jelly filled telephone cable in the existing trench/ hume pipe/ GI pipe etc with saddels etc. including termination of cables in both sides at krone tag block complete as required.				
	i 100 Pair	Meter	100	1950	195000
	TOTAL SUBHEAD 7: TELEPHONE SYSTEM AS MENTIONED ABOVE				285129
	SUBHEAD 8: CONDUITING FOR COMPUTER SYSTEM .				
8.00	CONDUITING FOR COMPUTER SYSTEM .				
8.01	Supplying and fixing of following sizes of medium class FRLS PVC Conduit along with accessories in surface/recess including painting in case of surface conduit, or cutting the wall and making good the same in case of recessed conduit as required.				
	i 20 mm dia	Metre	900	57	51300
	ii 25 mm dia	Metre	50	69	3450
8.02	Supplying and fixing two module modular plate in recess flush mounted with RJ-45 computer socket with GI box complete as required.	Each	30	437	13110
	TOTAL SUBHEAD 8: CONDUITING FOR COMPUTER SYSTEM AS MENTIONED ABOVE				67860
	SUB HEAD 9: CONDUITING FOR TV OUTLETS				
9.00	CONDUITING FOR TV OUTLETS				
9.01	Supplying and fixing of following sizes of medium class FRLS PVC Conduit along with accessories in surface/recess including painting in case of surface conduit, or cutting the wall and making good the same in case of recessed conduit as required.				

S.No.	Description.	Unit.	Total Qty.	Rate (Rs) in Figures	Amount (Rs)
	i 20 mm dia	Metre	250	57	14250
	ii 25 mm dia	Metre	100	69	6900
9.02	Supplying and fixing 2 module modular metal box in recess flush mounted with clear acrylic cover with modular cover plate including fixing 1 no. coaxial TV outlet connection and all accessories complete as required	Each	10	223	2230
9.03	Supply and drawing Coaxial TV Cable RG - 6 grade, 0.7 mm solid copper conductor PE insulated, shielded with fine tinned copper braid and protected with PVC sheath in the existing surface/ recessed steel/ PVC conduit as required.	Metre	300	29	8700
	TOTAL SUB HEAD 9: CONDUITING FOR TV OUTLETS AS MENTIONED ABOVE				32080
10.00	SUB HEAD 10: CONDUITING FOR CCTV SURVEILLANCE SYSTEM				
10.01	Supplying and fixing of following sizes of medium class FRLS PVC Conduit along with accessories in surface/recess including painting in case of surface conduit, or cutting the wall and making good the same in case of recessed conduit as required.				
	i) 25 mm	Mtr	200	69	13800
	TOTAL SUBHEAD 10: CONDUITING FOR CCTV SURVEILLANCE SYSTEM AS MENTIONED ABOVE				13800
	SUB HEAD 11: LT CABLES				
11.00	LT CABLES				
11.01	Supply of following sizes of 1.1 kV grade multicore aluminium conductor PVC sheathed armoured XLPE cable as per IS 7098.				
	I 3.5 Core 25 Sqmm.	Metre	3700	126	466200
	ii 3.5 Core 70 Sqmm.	Metre	200	282	56400
	iii 3.5 Core 120Sqmm.	Metre	1000	425	425000
	II 3.5 Core 240Sqmm.	Metre	400	791	316400
	III 3.5 Core 300Sqmm.	Metre	100	970	97000
	IV 4 Core 16 Sq mm	Metre	600	106	63600
	V 4 Core 10 Sq mm	Metre	3200	72	230400
11.02	Laying of one number PVC insulated and PVC sheathed power cable 1.1kV grade direct in ground including excavation, sand cushioning, protective covering and refilling the trench etc. as required				
	i Up to 35 sq.mm	Metre	1110	206	228660
	ii Above 35 Sq mm and upto 95 Sq mm	Metre	140	214	29960
	iii Above 95 Sq mm and up to 185 Sq mm	Metre	700	223	156100
	iv Above 185 Sq mm and up to 400 Sq mm	Metre	310	248	76880
11.03	Laying of one number PVC insulated and PVC sheathed power cable 1.1kV grade direct in the existing RCC/ Hume/Stoneware/Metal pipe as required				
	i Up to 35 sq.mm	Metre	780	18	14040

S.No.	Description.	Unit.	Total Qty.	Rate (Rs) in Figures	Amount (Rs)
ii	Above 35 Sq mm and upto 95 Sq mm	Metre	30	28	840
iii	Above 95 Sq mm and up to 185 Sq mm	Metre	150	37	5550
iv	Above 185 Sq mm and up to 400 Sq mm	Metre	95	65	6175
11.04	Laying of one number PVC insulated and PVC sheathed power cable 1.1kV grade on surface or on existing cable tray complete as required.				
i	Up to 35 sq.mm	Metre	5610	21	117810
ii	Above 35 Sq mm and upto 95 Sq mm	Metre	30	49	1470
iii	Above 95 Sq mm and up to 185 Sq mm	Metre	150	61	9150
iv	Above 185 Sq mm and up to 400 Sq mm	Metre	95	96	9120
11.05	Supplying and making end termination with suitable size Aluminium lugs including double compression glands of following sizes of 1.1 kV grade multicore aluminium conductor PVC insulated and PVC sheathed				
i	3.5 Core 25 Sqmm.	Each	138	257	35466
ii	3.5 Core 70 Sqmm.	Each	4	394	1576
iii	3.5 Core 120Sqmm.	Each	8	500	4000
iv	3.5 Core 240Sqmm.	Each	20	989	19780
v	3.5 Core 300Sqmm.	Each	12	1106	13272
vi	4 Core 16 Sq mm	Each	24	255	6120
vii	4 Core 10 Sq mm	Each	128	203	25984
11.06	Supplying and making straight through joint with heat shrinkable kit including ferrules and other jointing materials for following size of PVC insulated and PVC sheathed / XLPE aluminium conductor cable of 1.1 kV grade as required.				
i	3.5 Core 300Sqmm.	Each	1	3393	3393
ii	3.5 Core 240Sqmm.	Each	4	2678	10712
iii	3.5 Core 185Sqmm.	Each	2	2632	5264
iv	3.5 Core 150Sqmm.	Each	2	2331	4662
v	3.5 Core 120Sqmm.	Each	2	2331	4662
	TOTAL SUBHEAD 8: LT CABLES AS MENTIONED ABOVE				2445646
	TOTAL SUBHEAD 8: TELEPHONE SYSTEM AS MENTIONED ABOVE				
	SUBHEAD 12: EARTHING, AND MISC. ITEMS				
12.00	EARTHING, AND MISC. ITEMS				

S.No.	Description.	Unit.	Total Qty.	Rate (Rs) in Figures	Amount (Rs)
12.01	Supply and installation of one number earth pit with advance maintenance free Earthing System consisting of one Number, CPRI tested copper bonded steel electrode of minimum 25 mm dia. (as per IE C62561-2) With a minimum coating thickness of 250 microns and length of 3 meters, 25 kg/Electrode of earth enhancing compound (tested as per IEC-62561-7) fill the 100mm augered hole surrounding to the electrode , SS Universal Clamp of Size 175X50X3 mm for terminal Connection including Poly Propylene Heavy duty Pit cover including all accessories , excavation of earth, filling with back fill compound, and earth pit marking. The Complete installation shall be as per the drawing, technical specifications and as required	Set	6	9660	57960
12.02	Supply and installation of one number earth pit with advance maintenance free Earthing System consisting of one Number, CPRI tested copper bonded steel electrode of minimum 19 mm dia. (as per IE C62561-2) With a minimum coating thickness of 250 microns and length of 3 meters. 25 kg/Electrode of earth enhancing compound (tested as per IEC-62561-7) fill the 100mm augered hole surrounding to the electrode , SS Universal Clamp of Size 175X50X3 mm for terminal Connection including Poly Propylene Heavy duty Pit cover including all accessories , excavation of earth, filling with back fill compound, and earth pit marking. The Complete installation shall be as per the drawing, technical specifications and as required	Set	2	9016	18032
12.03	Supply and installation of one number earth pit with of advance maintenance free Earthing System consisting of one Number UL Listed CPRI tested copper bonded steel electrode of minimum 13 mm dia. (as per IE C62561-2) With a minimum coating thickness of 250 microns and length of 3 meters. 25 kg/Electrode of earth enhancing compound (tested as per IEC-62561-7) fill the 100mm augered hole surrounding to the electrode , SS Universal Clamp of Size 175X50X3 mm for terminal Connection including Poly Propylene Heavy duty Pit cover including all accessories , excavation of earth, filling with back fill compound, and earth pit marking. The Complete installation shall be as per the drawing, technical specifications and as required	Set	6	8372	50232
12.04	Supplying and laying 25mmX5mm GI strip at 0.5m below ground level as strip earth electrode, including soldering etc. as required.	Metre	200	109	21800
12.05	Providing and fixing 25mmX5mm GI strip on surface/on existing cable trench/RCC pipe/GI pipe or in recess for earth electrode as required.	Metre	300	142	42600
12.06	Supplying and laying 50mmX6mm GI strip at 0.5m below ground level as strip earth electrode, including soldering etc. as required.	Metre	50	273	13650
12.07	Providing and fixing 50mmX6mm GI strip on surface/on existing cable trench/RCC pipe/GI pipe or in recess for earth electrode as required.	Metre	100	368	36800
12.10	Supplying and laying 50mmX6mm Copper strip at 0.5m below ground level as strip earth electrode, including soldering etc. as required.	Metre	100	1883	188300
12.11	Providing and fixing 50mmX6mm Copper strip on surface/on existing cable trench/RCC pipe/GI pipe or in recess for earth electrode as required.	Metre	150	2140	321000

S.No.	Description.	Unit.	Total Qty.	Rate (Rs) in Figures	Amount (Rs)
12.13	Providing and fixing 25 mm X 5 mm G.I. strip in 40 mm dia G.I. pipe from earth electrode including connection with G.I. nut, bolt, spring, washer excavation and re-filling etc. as required.	Metre	300	421	126300
12.14	Providing and fixing 6 SWG dia G.I. wire on surface or in recess for loop earthing as required.	Metre	400	34	13600
12.15	Providing, laying and fixing following dia RCC pipe NP2 class (light duty) in ground complete with RCC collars, jointing with cement mortar 1:2 (1 cement : 2 fine sand) including trenching (75 cm deep) and refilling etc as required.				
	i) 300 mm dia	Metre	40	566	22640
	ii) 150 mm dia	Metre	40	384	15360
12.16	Fabrication and Installing following size of Ladder type M.S Cable tray including Horizontal and vertical bends, reducers,tee, crossmember and other accessories as required and duly Suspended from the ceiling with M.S 12mm rod suspenders and including painting etc. as required.				
	i) 150mmwidth x 62.5mm depth x2.0mm thickness	Metre	100	400	40000
	ii) 450mmwidth x 62.5mm depth x2.0mm thickness	Metre	100	478	47800
12.17	Cable Route Marker				
	Supplying and fixing cable route marker with 10 cm X 10 cm X 5 mm thick G.I. plate with inscription there on, bolted /welded to 35 mm X 35 mm X 6 mm angle iron, 60 cm long and fixing the same in ground as required.	Each	13	291	3783
12.18	Fabrication and Installing following size of preforted M.S Cable tray including Horizontal and vertical bends, reducers, tee, crossmember and other accessories as required and duly Suspended from the ceiling with M.S 12 mm rod suspenders and including painting etc. as required.				
	i) 150 mm width x 50 mm depth x 1.6 mm thickness	Metre	1300	393	510900
	ii) 300 mm width x 50 mm depth x 1.6 mm thickness	Metre	100	526	52600
	TOTAL SUBHEAD12: EARTHING, SAFETY EQUIPMENTS AND MISC. ITEMS AS MENTIONED ABOVE				1583357
	SUBHEAD 13: OUT DOOR LIGHTING				
13.00	OUT DOOR LIGHTING				
13.01	Supply, erection, testing and commissioning of external swaged steel tubular pole with following specifications & items :				
	i) 9.0 Mtrs. high swaged steel tubular pole with arm length around 1.5 Metre, the construction of the pole shall be as per IS:2713 - 1980 410 SP-30 with base plate 450 x 450 x 6 mm complete as per requirement with two coats of spray paints of approved shade.				

S.No.	Description.	Unit.	Total Qty.	Rate (Rs) in Figures	Amount (Rs)
ii	90 watts LED street light fixture in die cast aluminum body with 90 watts LED lamp complete with control gear, cover etc. similar to Compton Greeves s LSTN-90-CDL-A or approved equivalent including its wiring with 2X2.5 sq.mm. PVC insulated, FRLS copper conductor and 1.5 sqmm PVC insulated, FRLS copper earth wire from control box complete as required.				
iii	Suitable size 32 A DP MS Control box with 2 no. incoming and outgoing terminals and 2 nos. tap-out terminal with 6A DP MCB complete as required - 1 Set				
iv	Suitable number(s) 40mm dia Class-B GI Pipe(s) from above control box to upto 0.5 metre below ground level for power cable entry				
v	Providing foundation including excavation, shuttering, alignment of poles, casting etc. including lean concrete at the bottom as per CPWD/ BIS specifications.				
vi	The above installations shall be completed as CPWD specifications and as required				
a.	Steel Tubular Poles (9M) Single Arm as mentioned above	Set	15.00	23600	354000
b.	Steel Tubular Poles (9M) same as above but for Double Arm as mentioned above	Set	2.00	31700	63400
13.02	Supply, installation, testing and commissioning of external post top lantern with following accessories and complete as required :				
i	4m high (3.3m above ground) 80mm dia GI pole as approved, adopting socket at top for fixture mentioned below, base plate 300 x 300 x 6 mm and provision for mounting junction box etc. - 1 set.				
ii	1 x 40 LED Post top lantern with 40W LED lamp (Crompton Greeves LPTO-40-CDL or equivalent) and its wiring with 2 x 2.5 sq.mm PVC insulated copper wire and 1.5 sqmm PVC insulated copper earth wire from control box .				
iii	Suitable size 20A DP MS Control box with 2 no. incoming and outgoing terminals and 2 nos. tap-out terminal with 1 nos. 5A HRC fuses complete 1 set.				
iv	Suitable number(s) 40mm dia Class-B GI Pipe(s) from above control box to upto 0.5 metre below ground level for power cable entry				
v	Providing 400 x 400 x 1000 mm deep 1:3:6 ratio cement concrete including excavation shuttering alignment of poles casting etc. including 100mm thick lean concrete shall be provided at the bottom				
13.03	Supply, installation, testing and commissioning of external post top lantern as mentioned above	Set	10.00	13700	137000
13.04	Supply, Installation, testing and commissioning of Post top lantern 1 x 40 Watts LED Post top lantern with 40 Watt LED lamp (Crompton Greeves LPTO-40-CDL or equivalent) and its wiring with 2 x 2.5 sq.mm PVC insulated copper wire and 1.5 sqmm PVC insulated copper earth wire from control box.	set	2.00	3846	7692
11.05	Supply, installation, testing and commissioning of bollard lamps 1 x 10 Watts LED Light Fixture (Crompton Greeves LBLS1-10-CDI (LIARA) or equivalent) with control box - 1 set.	Each	20.00	4940	98800
13.06	ROAD LIGHTING PANEL Supply, installation, testing and commissioning of following outdoor type with canopy, IP-54 protected MV cubicle type totally enclosed, free standing type, dust, damp and vermin proof, MV Panel, busbars, MV danger notice plate, interconnections with suitable capacity aluminium leads/solid aluminium strips/rods, connection of incoming and outgoing cables with thimbles, stove enamelled painted and having following incoming and outgoing switchgears complete as required.				
A	INCOMER:				

S.No.	Description.	Unit.	Total Qty.	Rate (Rs) in Figures	Amount (Rs)
	63 Amps,415 volts, TP+NL, 35 KA Moulded Case Circuit Breaker with thermal magnetic release having variable current settings . R, Y & B phase indicating lamp (LED type) with 2A control SP MCB. ON, OFF, TRIP indication (LED Type) Extended rotary operating mechanism with door interlocking with defeat feature and padlock facility. MCCB should have spreader links & phase barriers. 1 Set of timer switch & 100A TP contactor with neutral link (for street lights control) .				
B	BUSBARS: 300 Amp TPN Aluminium busbars				
C	OUTGOING:				
i	10 Nos. 16 Amp 415 volts, DP MCB				
	ROAD LIGHTING PANEL AS MENTIONED ABOVE	Set	1.00	45000	45000
13.07	Providing and fixing 6 SWG dia G.I. wire on surface or in recess for loop earthing as required.	Metre	200.00	34	6800
	TOTAL SUB HEAD 13: OUTDOOR LIGHTING AS MENTIONED ABOVE				712692
14.00	SUB HEAD 14: LIFT				
	Design, manufacture, supply, installation, testing and commissioning of following 20 passenger cum hospital (1360 kg) lift , serving different floors in the lift shaft including machine room at the top. Lift should be gearless. The lift should be as per detailed specification/ drawing enclosed as required and as under:				
	- Travel: As per architectural drawing.				
	- Speed : 1 MPS				
	- Controller: A.C. variable voltage & variable frequency				
	- Automatic rescue device complete with dry maintenance free batteries as required.				
	- Operation: Microprocessor based single automatic push button/ simplex selective collective/duplex collective selective with / without attendant.				
	- All push buttons will have Brail also.				
	- 415 V, 3 phase, 50 Hz, 4 wire system				
	- Type of doors: a) Car : Power operated, Side opening, horizontal sliding stainless steel (b) Landing doors: Stainless steel Hairline Mat finish Lift landing doors shall have a fire resistance of one hour.				
	Flooring- Light weight wooden flooring as approved by site incharge				
	- Car Enclosure : stainless steel- Hairline Mat finish				
	- A hand rail guide not less than 600 mm long at 900 mm above floor level .				
	- Mirror of suitable size to be fixed inside the lift car.				
	- Voice announcement system in the car to announce the position of the elevator in the hoistway as the car passes or stops at a floor served by the elevator.				
	- Telephone with minimum two connections one at operator's room and other at guard/ security room and the emergency signal with re-chargeable batteries as source of supply be made in the lift car.				
	- Toe guard, IR curtain on full height, two phase fireman's drive control/ switch and potential free contacts etc to be provided.				
	Floors : G+1 , (2 stops & 2 openings)	Each	1.00	2415000	2415000

S.No.	Description.	Unit.	Total Qty.	Rate (Rs) in Figures	Amount (Rs)
	TOTAL SUBHEAD 14: LIFT AS MENTIONED ABOVE				2415000

SUMMARY OF WORKS FOR CONSTRUCTION OF GERIATRICS WARD ,MATERNITY WARD,EYE WARD AND RENOVATION WORKS OF GMH , REWA, M.P.		
S.No.	DESCRIPTION	Amount In Figure (In Rs.)
1	SUB HEAD 1:HT SUBSTATION	6345793
2	SUB HEAD 2: MAIN LT PANEL	6114000
3	SUB HEAD 3 :MV PANELS	1251900
4	SUB HEAD 4: MCB DISTRIBUTION BOARDS.	1672176
5	SUB HEAD 5: WIRING	4953294
6	SUB HEAD 6: LIGHT FIXTURE AND FANS	2657310
7	SUB HEAD 7: CONDUITING FOR TELEPHONE SYSTEM	285129
8	SUBHEAD 8:CONDUITING FOR COMPUTER SYSTEM .	67860
9	SUB HEAD 9: CONDUITING FOR TV OUTLETS	32080
10	SUB HEAD 10: CONDUITING FOR CCTV SURVEILLANCE SYSTEM	13800
11	SUB HEAD 11: LT CABLES	2445646
12	SUBHEAD 12: EARTHING, AND MISC. ITEMS	1583357
13	SUBHEAD 13: OUT DOOR LIGHTING	712692
14	SUB HEAD 14: LIFT	2415000
	TOTAL FOR ALL ELECTRICAL WORKS	30550037

ESTIMATED COST					
Construction of NORMAL OPERATION THEATRE and Defect Liability Period					
Item No.	Description	Unit	Qty	Unit Rate (In Rs. Figure)	Amount Rs
1.0	CEILING SYSTEM Complete with all accessories as per technical specification	SQM	270	3600.00	972000
2.0	WALL PAINTING (EPOXY) Complete as per technical specification	SQM	540	1200	648000
3.0	CORNER COVING Complete with all accessories as per technical specification	RMT	330	500	165000
4.0	OPERATION THEATRE FLOORING (ANTISTATIC CONDUCTIVE PVC ROLL) Complete with all accessories as per technical specification	SQM	270	3400	918000
5.0	HINGE DOOR (DOUBLE LEAF SS-304) Size-2100 x 1500 Complete with all accessories as per technical specification	Nos	6	135000	810000
6.0	HINGE DOOR (SINGLE LEAF SS-304) Size-2100 x 1000 Complete with all accessories as per technical specification	Nos	2	95000	190000
7.0	PERIPHERAL LIGHT CUM CLEAN ROOM LUMINARIES Complete with all accessories as per technical specification	Nos	50	7229	361450
8.0	DISTRIBUTION BOX Complete with all accessories as per technical specification	Nos	3	65000	195000
9.0	INTERNAL DUCTING Complete with all accessories as per technical specification	Lot	3	125000	375000
10.0	SCRUB STATION (2-BAY) Complete with all accessories as per technical specification	Nos	3	105000	315000
11.0	TURNKEY WORKS	Lot	3		
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